

# On the status of ‘clitics’ and their ‘doubles’ in Greek\*

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*Abstract.* This paper re-examines the doubling of pronominal clitics in Greek. It is argued that clitics are not affixes but full words which move in the syntactic component and (ultimately) target the head of T. As for their position in the phrase marker, it is claimed, following Kayne (1975) and (Philippaki-) Warburton (1977), that clitics do not head their own functional (clitic) projection (in the sense of Sportiche 1992/1996, for instance), but are merged in the internal argument position(s) of V. Being both  $X^0$  and  $X^{\max}$  (Chomsky 1995), clitics can undergo movement avoiding the Head Movement Constraint. Two alternative solutions of how this movement proceeds are examined and they are both shown to be consistent with our proposal. Furthermore, it is proposed that the relation between the clitic and its DP-double is that of coindexation, with the double occupying an adjunct position, either a remote one (clitic left/right dislocation), or a  $vP$ -internal one (doubling without comma intonation). A number of recent proposals concerning Greek clitic doubling are also discussed and some descriptive problems they present are raised.

## 1. Introduction

The structural relation between a clitic object pronoun and its corresponding DP in clitic doubling structures like (1) has been the object of research in Greek as well as in other languages for a long time.

- (1) ton kserume to jani poli kala  
him know-1pl the John-Acc very well  
‘We know John very well’

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This structure has posed a number of questions in languages like Greek in which the clitic pronoun and the corresponding DP share the same thematic role and have both Accusative case.

A great number of papers have appeared on a number of languages where the phenomenon exists (Kayne 1975, 1991, 1994, Jaeggli 1982, 1986, Borer 1984, Aoun 1985, Suñer 1988, Dobrovie-Sorin 1990) including Greek (Philippaki-Warburton 1977, 1987, Drachman 1997, Anagnostopoulou 1994, 1999, Agouraki 1992, Schneider-Zioga 1994, Androulakis 1998, 2001). The multitude of analyses are inspired not only by the interesting nature of this phenomenon but also by changes in the theory itself which, it is hoped, may provide us with more sensitive descriptive tools that enable us to reach a deeper understanding of the issues.

The purpose of the present paper is twofold: First, to present and discuss some of the questions that some new proposals on Greek clitic doubling (Anagnostopoulou 1999, Papangeli 2000, Joseph 2001, Condoravdi & Kiparsky 2001, Panagiotidis to appear) raise and second, to offer further arguments in support of the proposal made in Philippaki-Warburton (1977, 1987), whereby the clitic is analysed as a syntactically independent DP constituting the internal argument of the verb, while the doubled DP is analysed as an adjunct, used to simply provide lexical content to the clitic pronoun.

We will use the term ‘clitic doubling’ to refer to the coexistence of a clitic pronoun and the lexical DP associated with it, where the doubled DP is to the right of the verb as in (2a, b) and there is no perceptible intonation break before the doubled DP.

- (2a) ton kserume to jani poli kala  
 him know-1pl the John-Acc very well  
 ‘We know John very well’
- (2b) ton kserume poli kala to jani  
 him know-1pl very well the John-Acc  
 ‘We know John very well’

On the other hand, we will use the term ‘left dislocation’ and ‘right dislocation’ for constructions where the corresponding DP, whether to the left or to the right periphery of the sentence, is more detached, and there may be a comma intonation intervening between the doubled DP and the rest of the sentence. The example in (3) is a ‘left dislocation’ construction, while that in (4) is an example of ‘right dislocation’.

- (3) to jani ton kserume poli kala  
 the John-Acc him know-1pl very well  
 ‘John, we know him very well’
- (4) ton kserume oli mas edho poli kala, to jani  
 him know-1pl all us here very well the John-Acc  
 ‘We all know him here very well, John’

In this paper we will concentrate on the ‘clitic doubling’ construction as in (2), and we will try to answer three fundamental and interrelated questions: a) the category status of the clitic, b) its position in the clause and c) its relation with the doubled DP.

In section 2 we provide a brief overview of the base generation vs. movement approaches to clitic doubling. Section 3 outlines some recent accounts of cliticization and clitic doubling in Greek. A number of problems of these accounts are discussed in section 4. In section 5 we present our proposal for clitic doubling in Greek. In particular, we examine the position of the DP-double in the phrase marker, the movement of clitic, and the relation between these two elements. Section 6 concludes the discussion.

## ***2. Base generation vs. movement approaches to clitic doubling***

The fundamental characteristic of clitics is that they surface in a different position than the one with which they are thematically related, as illustrated in (5), that is, they appear morphologically attached to the verb, while thematically they correspond to the internal argument of the verb:

- (5a) aghapao ti maria  
 love-1sg the Mary-Acc  
 ‘I love Mary’
- (5b) tin aghapao  
 her love-1sg  
 ‘I love her’
- (5c) \*aghapao tin<sup>1</sup>  
 love-1sg her

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<sup>1</sup> This sequence is ungrammatical in standard Greek, yet grammatical in some Greek dialects (Cypriot, Cretan). The examination of such dialectal differences is beyond the scope of the present paper.

Thus, the descriptive dilemma presented by clitics is whether they are base-generated in the canonical position of the internal argument (theta-position) and then moved to a higher one, leaving a trace behind, or they are merged outside the VP, in the position in which they appear in surface structure, and they relate to the thematic position in some other way.<sup>2</sup>

In an attempt to capture this relation between the surface and the thematic position of the clitic, Kayne (1975) proposed that clitics in French are NPs/(DPs) generated in the object position of the verb. Their surface position is the result of XP movement<sup>3</sup> to a preverbal position followed by left-adjunction to the verb. This is also the position taken by Philippaki-Warburton (1977, 1987) regarding clitics in Greek.<sup>4</sup> However, in view of the fact that in some languages (e.g. Spanish, Romanian, Greek) clitics are not in complementary distribution with full DPs, but can co-occur with them in clitic doubling constructions like (6), a number of researchers proposed that clitics are base-generated in their surface position (Jaeggli 1982, 1986, Borer 1984, Suñer 1988, Dobrovie-Sorin 1990).

- (6) tin efaghe ti supa poli ghrighora  
her ate-3sg the soup very quickly  
'He/she ate the soup very quickly'

However, the advocates of a movement approach propose to treat the DP-double as an adjunct, reserving thus the thematic position for the clitic (Philippaki-Warburton 1977, 1987, Aoun 1981, 1985, Hurtado 1985).

There are two attempts in the recent literature to reconcile these opposing views, namely Sportiche (1992/1996, 1999) and Uriagereka (1995).

Sportiche proposes the following (see (7) below): (i) All clitics are functional heads, always base generated in pre-existing slots, heading their own maximal projections ('Clitic Voices'). (ii) The doubled lexical DP (when present) constitutes the internal argument of the verb. (iii) When a doubled lexical DP is absent, in the presence of a clitic, the internal

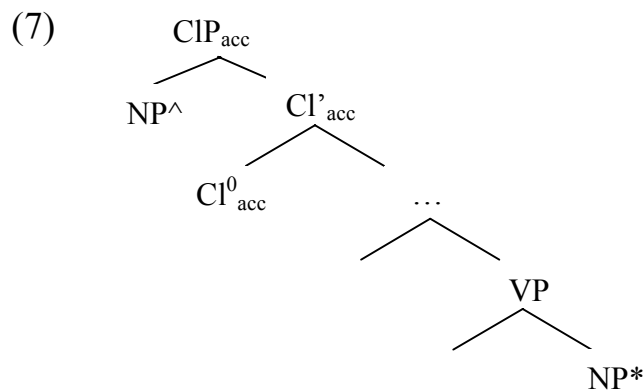
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<sup>2</sup> Another issue concerns the status of clitics, that is, whether they are syntactically independent DPs (Philippaki-Warburton & Spyropoulos 1998) or affixes (Suñer 1988). See section 4.1.

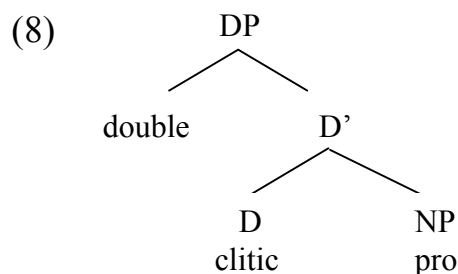
<sup>3</sup> The fact that the clitic moves initially as an XP explains the locality restrictions on clitic placement.

<sup>4</sup> In the case of Greek, the grammatical and discourse contribution of clitics was first noticed and discussed in (Philippaki-)Warburton (1975), where it was observed that there is a co-relation between the presence of the clitic, the topicality of its DP and the availability of variation in the order of the sentence constituents.

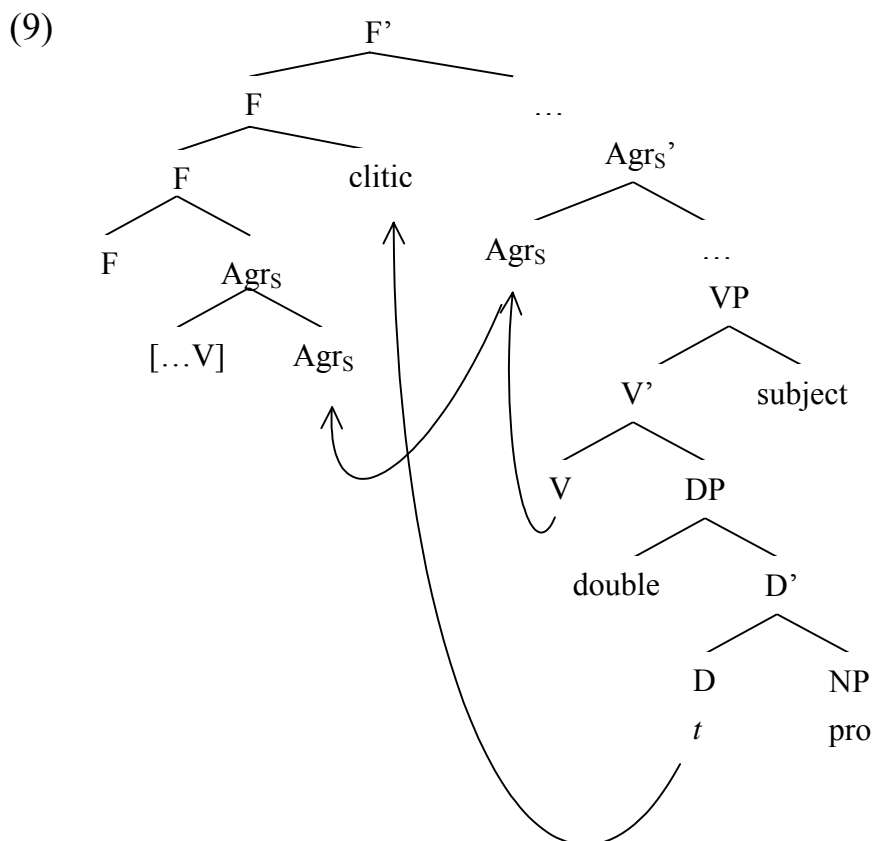
argument of the verb is *pro*. (iv) Either the doubled DP or *pro* which agrees in the features of person, number, gender and case with the clitic moves (XP movement) to the Spec of the clitic projection establishing a Spec-Head relation, which explains the agreement between the clitic and the DP-double, and the locality restrictions on cliticization. The clitic then incorporates phonologically into the following verb form. (v) Clitics are split into two classes. Members of the first class, which include Accusative clitics, are similar to [+wh] complementizer and characterise constructions resembling operator variable configurations, which license parasitic gaps. The presence of these clitics is a necessary and sufficient condition to license the property of specificity in the associated argument phrase. Members of the second class like dative clitics are not associated with specificity effects but behave more like agreement markers.



Uriagereka (1995) proposes that the clitic is the head of a DP-complement of the verb.<sup>5</sup> The DP-double, when present, occupies the Spec of this DP (8). A *pro* is the complement of the clitic/D<sup>0</sup>. The clitic eventually moves to the head of a functional projection, FP, which encodes “a speaker’s or an embedded subject’s point of view” (Uriagereka 1995:93), in order to license its dependent *pro* (9).



<sup>5</sup> It should be mentioned that Uriagereka’s proposal is based on the similarity between 3<sup>rd</sup> person clitic pronouns and determiners in Romance.



### 3. Recent accounts of clitic doubling in Greek

#### 3.1 Anagnostopoulou (1999)

Anagnostopoulou (1999) adopts the basic claims of Sportiche's (1992/1996) analysis. We must note first that Anagnostopoulou departs from Sportiche's theory with respect to the interpretative effect of clitics on the doubled DP. So, whereas Sportiche claims that an accusative clitic assigns the property of specificity to the doubled DP, Anagnostopoulou argues that in Greek the Accusative clitics 'force their associated definite DPs to fall under Heim's (1982) Prominence Condition' (Anagnostopoulou 1999:777).<sup>6</sup>

<sup>6</sup> We will not examine the arguments either way. It is clear to us that when a clitic is used on its own (without a doubled DP) it is used as a true pronoun with all the restrictions in distribution and interpretations of pronouns. Clitics are also used as resumptive pronouns (Androulakis 1998, Tsimpli 1999). Furthermore, we consider it natural that the doubled DP associated with the clitic will be affected interpretationally by its association with the clitic pronoun. Whatever the details of this semantic/pragmatic effect, the problems of the syntactic analysis of clitics and their

According to Anagnostopoulou (1999) (following Jaeggli 1986) the view that treats DP-doubles as adjuncts necessarily entails that they occupy a right-dislocated position. She then observes that DP-doubles in Greek can appear in positions where right-dislocated material cannot be tolerated, as in (10) to (13), and thus concludes that doubled-DPs cannot be adjuncts but must be arguments. We discuss these examples extensively in section 5.<sup>7</sup>

- (10) o janis tin perimeni [[ti maria] na paraponethi]  
 the John-Nom her expects the Mary-Acc prt-complain-3sg  
 ‘John expects Mary to complain’
- (11) o janis tin ekane [ti maria] na klapsi  
 the John-Nom her made the Mary-Acc prt-cry-3sg  
 ‘John made Mary cry’
- (12) o janis dhen tin theori [ti maria] eksipni  
 the John-Nom not her considers the Mary-Acc intelligent  
 ‘John does not consider Mary intelligent’
- (13) tin efaghe tin turta o janis<sup>8</sup>  
 her ate the cake-Acc the John-Nom  
 ‘John ate the cake’

### 3.2 Papangeli (2000)

Papangeli (2000) sets as one of her main goals to resolve the dilemma that on the one hand the clitic and its double appear in different positions (the clitic on the left of the verb while the DP on the right) but they share the same theta role. She attempts to resolve this by proposing that the clitic and its double form a single constituent, a CIP where the clitic occupies the head of this constituent while the doubled DP constitutes its complement.<sup>9</sup> This constituent receives the theta-role as a whole and this explains why this role is shared by the clitic and the DP. Subsequently, the clitic head-

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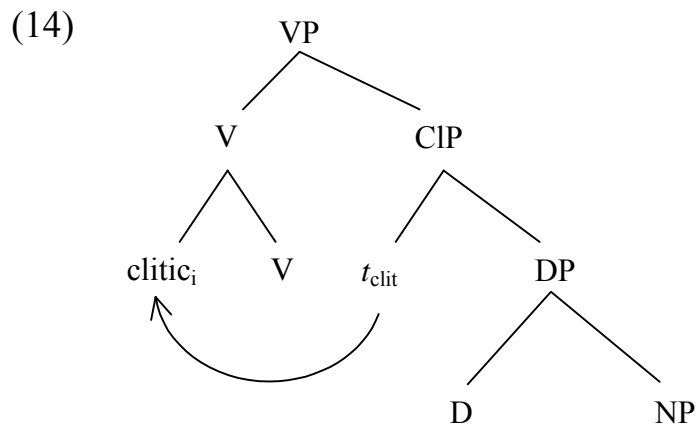
relation to the doubled DP remain the same. We will therefore leave this issue open for the time being and we will proceed to examine the syntactic analysis of clitics.

<sup>7</sup> The DP-double appears on the left of the complement clause (10, 11), small clause (12), and the informationally focused DP-subject found in the lowest position in the c-command ordering (13). Since right-dislocated material appears in the rightmost position of the clause (usually separated by an intonation break), the DP-double in these examples cannot be right-dislocated.

<sup>8</sup> This is an example of information focus and not contrastive focus. Underlining shows information focus in this paper.

<sup>9</sup> According to Papangeli (2000), the CIP is an Extended Projection of the DP in the sense of Grimshaw (1991).

moves to the left of V (incorporates to V, see (14)) in order to satisfy its (morpho-)phonological requirements. Papangeli's analysis resembles that of Uriagereka (1995) in that both the clitic and the double are generated in a single VP-internal functional projection headed by the clitic. However, Papangeli's analysis is different from Uriagereka's in that within his analysis the DP double occupies the Spec of this projection and the clitic is the head so that the two are in a Spec-Head relationship rather than in a head-complement one, as suggested by Papangeli.



Papangeli claims to adduce support for her analysis by the following observations:

a) Since a pronominal element, the clitic, is in a head-complement relationship with its DP-double, this must hold for strong pronominals, too.<sup>10</sup> So, in the construction in (15), the strong pronominal/demonstrative 'aftin' is the head while the DP 'tin kopela' is its complement. Furthermore, nothing can intervene between the two, as shown by (16):

(15) dhen thimame aftin tin kopela  
not remember-1sg this the girl  
'I do not remember this girl'

(16) \*dhen thimame aftin kala tin kopela  
not remember-1sg this well the girl

The same restriction is said to operate between the clitic and its double in spite of the fact that this cannot be easily shown since the clitic is never adjacent to its double because the clitic has to move to incorporate to V, thus leaving its double behind. The evidence that the clitic and its double

<sup>10</sup> She reaches this conclusion based on the morphological similarities between clitics and strong pronouns.



form an inseparable constituent is, however, revealed, according to Papangeli, by examples of predicates that select for an experiencer where, according to her judgement, the clitic is obligatorily present as in (17).

- (17a) tu aresi tu jani i musiki  
 him-Gen pleases the John-Gen the music-Nom  
 'Music pleases John'  
 (17b) \*aresi tu jani i musiki  
 pleases the John-Gen the music-nom

In cases as (17a), if the experiencer DP is replaced by a strong pronominal, then the clitic must go, too, as shown in (18), where the pronominal 'tu idhju' is replacing the complex 'tu...tu kaliteru mathiti':

- (18) tu aresi tu kaliteru mathiti ... ala dhen aresi tu idhju  
 him-Gen pleases the best student... but not pleases the same  
 i apotichia  
 the failure  
 '...pleases the best student...but failure doesn't please him'

The second sentence '...ala dhen aresi tu idhju i apotichia', according to Papangeli, can only be derived from a structure like (17) where both the clitic and the double are present, on the grounds that the alternative source for (18), namely one as in (17b), is not available because the clitic is obligatory with experiencer verbs.<sup>11</sup>

b) A further argument that Papangeli puts forward to support her analysis derives from some extraction facts. In particular, it is claimed that extraction is possible from the DP-double since movement from a complement position is allowed.

- (19a) tin idha tin tenia tu felini  
 her-Acc saw-1sg the movie-Acc the Felini-Gen  
 'I saw Felini's movie'

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<sup>11</sup> Papangeli (2000) observes that it is also possible to replace only the double as in (i) leaving the clitic behind:

(i) tu aresi tu kaliteru mathiti....alla dhen tu aresi tu idhju i apotichia

him-Gen pleases the best student... but not him-Gen pleases the same the failure

The explanation for (i) is that the pronominal 'o idhjos' (he himself) may replace the double because it is after all even on its own a whole constituent. The crucial example for her argument is (18).

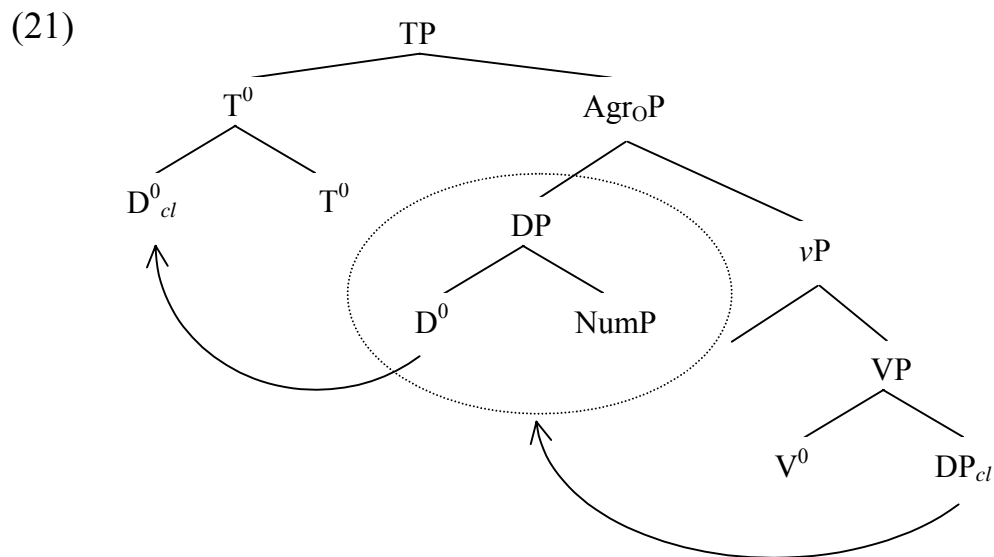
- (19b) tu felini tin idha tin tenia  
 the Felini-Gen her-Acc saw-1sg the movie-Acc  
 ‘Felini’s I saw the movie’

Furthermore, Papangeli claims that the unavailability of extraction from the DP-double of a clitic in languages without morphological case, as in (20) from Spanish, is accounted for by the fact that the double of the clitic is an adjunct associated with the clitic-argument through coreference.

- (20) \*De Juan la vimos a la hermana  
 of Juan her-Acc saw-1pl Prep the sister  
 ‘Juan’s we saw the sister’

### 3.3 Panagiotidis (to appear)

Panagiotidis (to appear) argues against the double status of clitics (i.e. as being  $D^0$  and  $D^{\max}$ ) and provides evidence that clitics head a whole DP projection with a silent NumP complement. So, instead of arguing that all the  $\phi$ -features reside in the D head, he proposes that D is the locus of referentiality, whereas number is encoded on the Num head and [gender] is a feature of the N head, which is a complement of Num. As far as the ultimate placement of clitics is concerned, Panagiotidis argues that the clitic-DP is merged in the complement position of the Verb. It then moves to the outer Spec of  $v$  (or in [Spec, Agr<sub>o</sub>P], depending on the version of Minimalism one adopts). This is the first step of clitic placement. Subsequently, the D head undergoes extraction from the DP and head-adjoins to the Verb on its left.



This account is supposed to follow Kayne’s (1975) intuition that clitic placement is a two-step movement process.

Concerning clitic doubling, Panagiotidis does not commit himself to a precise account. What we could infer from his argumentation, though, is that if the clitic-DP occupies the internal argument position of the verb, then the DP-double must be in an adjunct position (a complex-DP approach à la Uriagereka or Papangeli would not work, since DP-raising to the outer spec of  $\nu$ P would necessarily carry along this element), which would surface to the left of the verb, contrary to fact.

### 3.4 Joseph (2001, 2002), Condoravdi & Kiparsky (2001)

Let us now briefly mention two recent proposals which treat clitics as affixes. Joseph (2001, 2002), following a number of previous works (e.g. Joseph 1988), claims that morphophonological diagnostics support the analysis of clitics as affixes. So, for example, the fact that clitics ending in  $-n$  trigger nasalisation of a following stop and the ordering of clitics with respect to agreement morphemes in some varieties of Greek (that is, the fact that the clitic in these varieties appears closer to the verb stem than inflection) are supposed to support his claim.

Condoravdi & Kiparsky (2001) claim that (Standard Modern Greek) ‘clitics are affixes which subcategorize for a phonological word on their right... They attach lexically to the left of a finite verb and... move with it to TNS<sup>0</sup> (Tense)’. This claim is supposed to be based on phonological, morphological and syntactic evidence. For the first two, Condoravdi & Kiparsky (2001) refer to Joseph (1988). The syntactic arguments go as follows: First, object clitics are supposed to follow affixes in that they do not attach to non-finite verbs. Condoravdi & Kiparsky obviously take gerunds and imperatives (which are followed rather than preceded by clitics see (22)) to be non-finite forms.

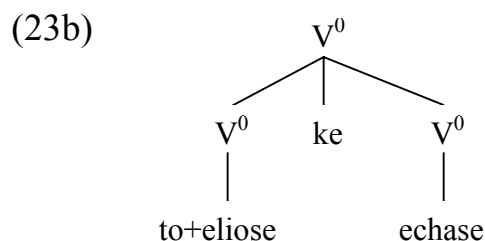
- (22a) dhose mu ena luludhi  
       give me-Gen a flower  
       ‘Give me a flower’
- (22b) leghondas mu ta nea  
       telling me-Gen the news  
       ‘Telling me the news’

If we now suppose that in dialects of type C, in their classification, (in which Standard Modern Greek belongs) clitics are always prefixes, then we have to assume that clitics in (22) are not lexically attached to the verb.

This correlation between attachment to the verb and (alleged) non-finiteness can be explained, according to Condoravdi & Kiparsky, if clitics are lexical agreement morphemes and their presence ties up with finiteness.

Second, the view that clitics are attached to the verb as affixes is supported, according to Condoravdi & Kiparsky, by the fact that conjoined finite verbs cannot share a clitic (23).

- (23a) \*to eliose ki echase  
it-Acc melted-3sg and lost-3sg  
'He/she melted it and lost it'



#### 4. Problems of previous analyses

In this section we will address some of the problems that the above analyses face. First of all, we will go through the inadequacies of the claim that clitics are affixes. Then, we will argue against the proposal that clitics and DP-doubles are hosted in a single projection which is a complement to the verb. Finally, we will discuss some problems raised by the analysis whereby cliticization involves first a step to a  $vP$ -peripheral position (object shift).

##### 4.1 Greek clitics are not affixes

Sportiche's (1992/1996) and Anagnostopoulou's (1999) accounts face a number of problems.

Within Sportiche's (1992/1996) and Anagnostopoulou's (1999) analysis, cliticization is the result of head movement of the verb to the  $Cl^0$  functional head. This analysis then presupposes that the clitic is in fact an affix and not an independent word. This is, as we said, the position that Joseph (2001) and Condoravdi & Kiparsky (2001) assume (with some differences in the implementation). However, there are good arguments that this is not so.

Philippaki-Warburton & Spyropoulos (1998) have summarised all the arguments which show conclusively that clitics are syntactically separate elements and indeed DPs. If the arguments presented there are accepted, then a clitic cannot be generated as an affix but must be generated in a DP slot and thus the slot of the object argument. We will not repeat all the arguments here but we will mention a couple.

If clitics were lexical agreement morphemes, akin to subject agreement, as Condoravdi & Kiparsky argue, then it is not clear why clitics are not always present with verbs, but they are optional. Note that the presence of all other inflectional affixes on the verb stem (tense, agreement, mood) is obligatory.

But even if we accepted that this 'affix' is somehow optionally selected, we would still have to explain which element selects it. An obvious answer is that it is optionally selected with a transitive verb. This would be a satisfactory answer if the clitic was affixed onto the verb itself on each occasion. However, the clitic gets attached on the first verbal element of the verb group. So, if an auxiliary is present, the clitic attaches to the auxiliary, as illustrated in (24):

(24a) *to eghrapsa to ghrama*

it wrote-1sg the letter

'I wrote the letter'

(24b) *to echo ghrapsi to ghrama*

it have-1sg written the letter

'I have written the letter'

(24c) *tu to edhosa to vivlio tu jani*

him-Gen it-Acc gave-1sg the book-Acc the John-Gen

'I gave the book to John'

(24d) *tu to icha dhosi to vivlio tu jani*

him-Gen it-Acc had-1sg given the book-Acc the John-Gen

'I had given the book to John'

But the auxiliary is not a transitive verb. The property of transitivity belongs to the main verb. So, the affixing of a clitic on the auxiliary will need to take into consideration the transitivity property of the main verb; a rather serious complication for the affix analysis.<sup>12</sup>

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<sup>12</sup> On the other hand, the analysis that generates the clitic in argument position has no problem accounting for these facts. The clitic is generated as a pronoun, i.e., a DP in object argument position and then either moves, adjoins to IP and then attaches to I or moves to I in one fell swoop (see section 5).

That the clitics are not functional categories or affixes but clear pronouns is also shown by the following: a) The fact that they are fully inflected in person, number, gender and case, and indeed they look morphologically like the strong forms of the pronouns. This indicates that no morphophonological reduction has taken place correlating with reduction from word to morpheme. b) The preference for open final syllable in Greek leads often to the addition of a euphonic final *e* after a word-final *-n* (dhiavazan-*e* ‘they were reading’, pedhion-*e* ‘of the children’ etc). The same process seems to apply to clitics (ton thelume → tone thelume ‘we want him’). Thus, it would seem that clitics are treated as words by this phonological rule. c) Clitics are optional and they are not sensitive to properties such as animacy, gender etc. d) Clitics are not proper affixes since they do not have a fixed stable position; they precede finite forms of the verb, while they follow gerunds and imperatives. We would like to point out here that Condoravdi & Kiparsky’s (2001) alleged explanation of this phenomenon as stemming from the inability of non-finite categories to pick up inflectional elements relies crucially on the assumption that imperatives are not finite forms of the verb. However, there are arguments supporting the finite nature of the imperative (see Philippaki-Warburton 1993, 1998).

Another problem for Sportiche’s analysis is the following: The double is generated in the argument position. Presumably, it receives the Accusative Case from the *v*/Agr<sub>O</sub> head. But then the question is how does the clitic, when present, get its accusative Case. That the clitic has clear markings of Case is evident from its morphology, as shown in (25).

|      |            |        |        |
|------|------------|--------|--------|
| (25) |            | Strong | Clitic |
|      | Nominative | aftos  | tos    |
|      | Genitive   | aftu   | tu     |
|      | Accusative | afton  | ton    |

An analysis that treats the clitic as an affix and the double as the object-argument will need two separate mechanisms for accusative.

As for Condoravdi & Kiparsky’s second argument, we would like to point out that it is generally accepted that in Greek *V* moves to *I* in overt syntax. Therefore, the superficial form ‘*V* and *V*’ does not correspond to *V*<sup>0</sup>-conjunction, but must essentially be a CP-conjunction. This means that the argument presented in (23) cannot hold.

#### 4.2 Problems with the complex-DP analysis

Let us now turn to some objections related to the analyses that follow (a version of) Uriagereka (1995) in assuming that the clitic and its double are contained in a DP, which is a complement of the verb.<sup>13</sup>

First, one of Papangeli's (2000) arguments for the claim that the clitic and the double form a constituent is the fact that they can be substituted by the pronominal 'o idhjos' (the same) in constructions where clitic doubling, according to her judgement, is obligatory.

- (26a) tu aresi tu jani i musiki  
 him-Gen pleases the John-Gen the music-Nom  
 'John likes music'
- (26b) \*aresi tu jani i musiki  
 pleases the John-Gen the music-Nom
- (27) tu aresi tu kaliteru mathiti ... ala dhen aresi tu idhju i apotichia  
 him-Gen pleases the best student... but not pleases the same  
 the failure

Notice that if (26b) was grammatical, Papangeli's argument about the clitic and the double being a single constituent would collapse. However, a number of Greek speakers find (26b) perfectly acceptable. What is more, empirical research done by Georgiafentis (1999) shows that structures parallel to (26b) are widely accepted.

Papangeli's claim that the clitic (head) and its complement (the doubled DP) form a constituent and are therefore adjacent (though they become discontinuous via the clitic moving to V) is based on data involving only a verb and its direct object. When we consider double object constructions, especially with imperatives and gerunds, the picture becomes more complex. Consider the imperative in (28).

- (28) dhose tu to to ghrama tu Jani  
 give him-Gen it-Acc the letter-Acc the John-Gen  
 'Give the letter to John'

Here, if we follow Papangeli's analysis we will have [tu ... to to ghrama ... tu jani], where the constituent that has the genitive clitic in its head and

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<sup>13</sup> We will not discuss here Terzi's (1999) analysis because it deals with the order of direct and indirect clitics and not with clitic placement itself. Since she adopts (some version of) Uriagereka's analysis we assume that our objections extend to her analysis, too.

the genitive DP as its complement are separated by the constituent with the accusative clitic and its object. In the imperative the situation is free so that either the genitive or the accusative may immediately follow the gerund in constructions such as (29).

- (29a) dhose tu to tu jani to ghrama  
give him-Gen it-Acc the John-Gen the letter-Acc
- (29b) dhose tu to to ghrama tu jani  
give him-Gen it-Acc the letter-Acc the John-Gen
- (29c) dhose to tu to ghrama tu jani  
give it-Acc him-Gen the letter-Acc the John-Gen
- (29d) dhose to tu tu jani to ghrama  
give it-Acc him-Gen the John-Gen the letter-Acc  
'Give the letter to John'

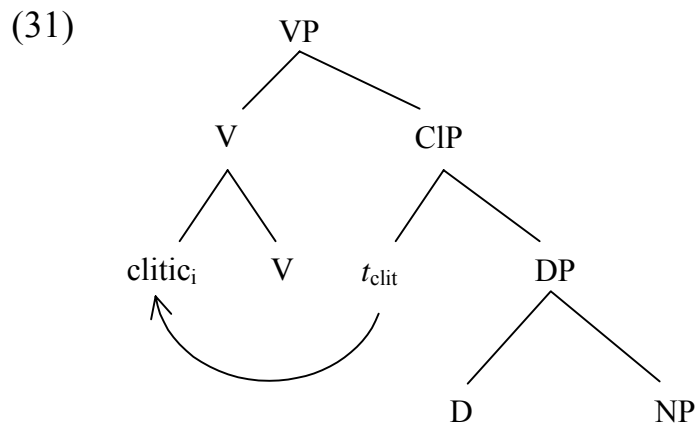
In these constructions we see that the clitic and its double may be interrupted by another clitic or another double or both. These constructions raise questions about the single constituency of the clitic and its double, since a strictly local head-movement analysis of cliticization cannot account for these sequences. Although Papangeli (2000) discusses briefly the indirect objects and the genitive clitic, she does not try to apply her analysis to data such as those above.

Moreover, if we consider structures with a strong pronoun, which according to Papangeli are head-complement structures, too, like clitic ones, we must conclude that the ungrammaticality of (30) indicates that the strong pronominal and clitic constructions are not identical.

- (30a) \*dhose [aftunu [afto to ghrama] tu mathiti]  
give-2<sup>nd</sup>-imp him(strong)-Gen this(strong)-Acc the letter-Acc  
the pupil-Gen  
'Give this letter to this pupil'
- (30b) dhose [tu [to to ghrama] tu jani]  
give-2<sup>nd</sup>-imp him-Gen this-Acc the letter-Acc the pupil-Gen  
'Give the letter to the pupil'

Furthermore, according to Papangeli's (2000) proposal, the discontinuity of the clitic and the doubled DP is derived by the head movement of the clitic to the head of V, as shown in (14, repeated here as 31).



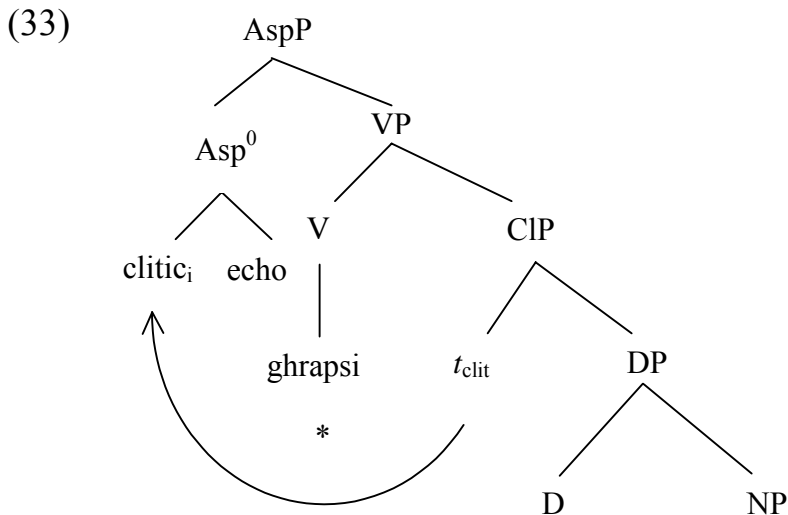


The problems with this hypothesis are as follows. If the clitic moves by head movement to V, the result will be clitic-V. The undesirable consequence of this will be that the constructions of the perfect tenses, perfect and pluperfect, which are formed with the auxiliary ‘echo’+the non-finite form of the verb cannot be generated with the clitic attached to the auxiliary, as is the case:

- (32a) to echo ghrapsi to ghrama  
 it-Acc have-1sg written the letter-Acc  
 ‘I have written the letter’  
 (32b) \*echo to ghrapsi to ghrama  
 have-1sg written the letter-Acc

Furthermore, we cannot formulate the clitic head movement in a way that will bring the clitic to the left of the Aux because to skip the intervening head of the V will violate minimality.<sup>14</sup>

<sup>14</sup> Uriagereka (1995:103-104) recognizes the existence of e problem and proposes a weakening of the Head Movement Constraint for such cases.



Additional problems arise in view of the fact that the clitic is not really attached to the V as such but to a fully inflected V. What makes this significant is the fact that part of the inflection of past tense in disyllabic verb forms is the presence of an augment *e-*. The clitic attaches to the left of this augment.

(34a) *to ghrafo to ghrama*  
it-Acc write-1sg the letter-Acc  
'I write the letter'

(34b) *to eghrapsa to ghrama.*  
it-Acc wrote-1sg the letter-Acc  
'I wrote the letter'

This shows that the clitic attaches not to V as a head but rather to a fully inflected verb, i.e. to the left of IP by adjunction to it. XP-adjunction to a maximal category is not subject to the Head Movement Constraint so that when the clitic adjoins to IP, this IP may contain an auxiliary or not and will contain all inflectional elements including a possible augment.

Finally, as far as the extraction facts are concerned, we consider the data in (19b, repeated here as 35), ungrammatical.<sup>15</sup>

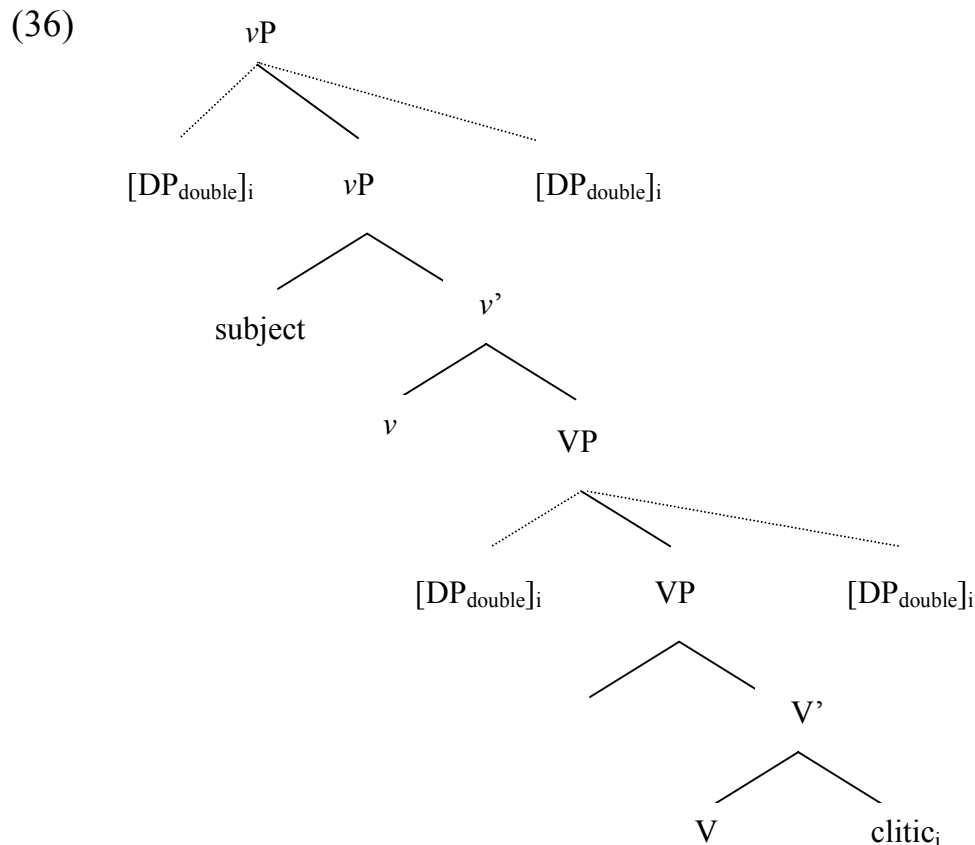
(35) *\*tu felini tin idha tin tenia*  
the Felini-Gen her-Acc saw the movie-Acc  
'I saw Felini's movie'

<sup>15</sup> Note that if the clitic is absent, the sentence becomes grammatical.

This is in line with the proposal we put forward in section 5 according to which the DP-double occupies an adjunct position.<sup>16</sup> If this is true, then extraction out of an adjunct would give rise to ungrammaticality.

### 5. *The proposal*

In what follows we present arguments for the analysis that treats the clitic as the internal argument of the verb and the double DP as an adjunct in clitic doubling constructions. In order to provide an explanation for the differences between clitic doubling and right and left dislocation structures, we propose that in clitic doubling constructions the DP is adjoined lower (adjunction to  $vP/VP$ ) than in dislocation constructions. Our analysis is illustrated in (36).<sup>17</sup>



<sup>16</sup> We note that the Greek case as far as extraction is concerned is similar to the Spanish one (example (20)), which –according to Papangeli– is a result of the adjoined position of the double.

<sup>17</sup> For us clitic doubling and CLLD are two sides of the same phenomenon involving a clitic-argument and a coindexed DP adjunct, which can attach to different domains in the clause. If it attaches to the thematic domain ( $vP/VP$ -domain), we derive clitic doubling. If it attaches to the clausal domain (discourse domain), it is left-dislocation.

The clitic is analysed as both an XP and an  $X^0$ , as in Chomsky (1995). This allows the clitic to move as an XP without violating Head Movement, and then adjoin as an  $X^0$  to  $I^0$ , be it the main verb or the auxiliary ‘echo’. (The exact realisation of this movement will be discussed later). Movement of the clitic leaves a trace in the thematic position, which makes unnecessary the postulation of *pro* in the internal argument position.

A problem with the suggestion made above derives from the question of Case assignment. If the clitic is the object argument proper, as we suggest, then the Accusative Case will be given to the clitic (or will be absorbed by the clitic) and this raises the question how is Accusative assigned to the double? Notice in Greek both the clitic and the double are clearly marked with the Accusative marking. Greek appears to violate Kayne’s generalisation (Kayne 1975), confirmed by French, where if there is a clitic, there is no clitic doubling and by some Spanish dialects where the double needs to be introduced with a preposition whose function is to assign case to the double since the structural case is already absorbed by the clitic. In Greek, the fact that the clitic has an Accusative and the double has an Accusative, too, has led to the conclusion that the double is in the object argument position. Thus, the accusative Case on the double would seem to undermine an adjunct interpretation.

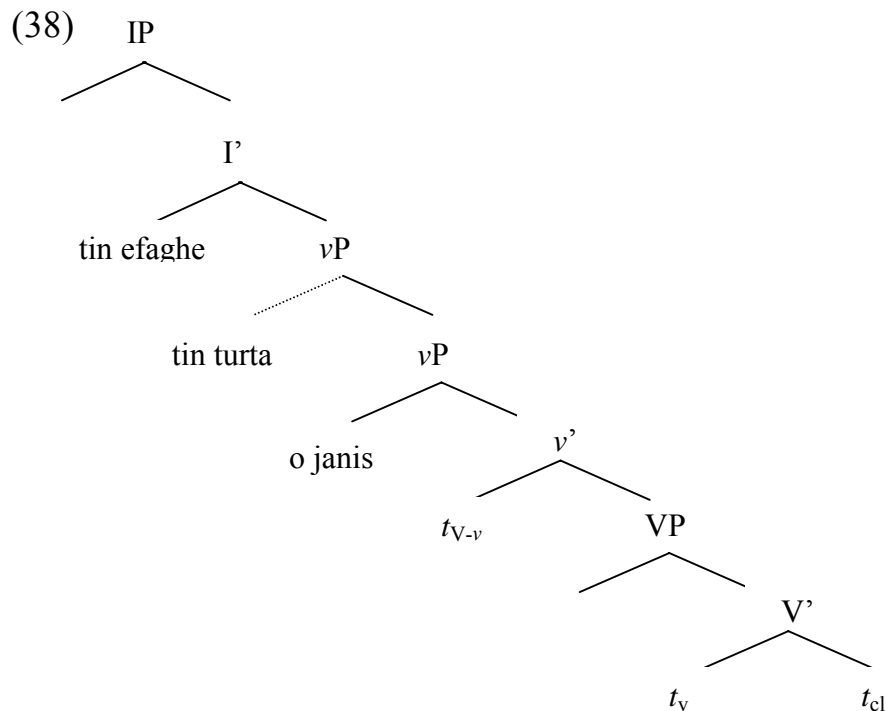
However, again this is not the only possible interpretation of the data. An alternative explanation may be the following. In Greek there is a great deal of evidence which shows that the subject DP never occurs in the EPP position (Philippaki-Warburton 1987, Tsimpli 1990, Alexiadou & Anagnostopoulou 1998). It is either generated in  $vP$  or it is base generated in a number of A-bar positions (adjunction positions). The lexical subject in adjunct positions cannot receive its Nominative Case either through government or through Spec-head agreement. We must, therefore, conclude that it receives case freely. This case, if nominative, is then sanctioned by coindexation between the lexical subject DP and the morphological element which constitutes the structural subject (*pro*,  $AGR_S$  or subject clitic Philippaki-Warburton 1987, Tsimpli 1990, Philippaki-Warburton & Spyropoulos 1996, Alexiadou & Anagnostopoulou 1998, Spyropoulos 1999, Spyropoulos & Philippaki-Warburton 2001) with which the lexical DP agrees in person, number and gender and Case. If this is the correct mechanism to explain the Nominative Case in lexical subjects born in adjunct positions, as has been argued and defended by a number of researchers, it would seem just as legitimate to propose that the double DP in clitic doubling constructions may be interpreted as an adjunct which receives a case freely. If the case is the accusative and there is agreement between the double and the clitic in terms of all other relevant

features then coindexation is successful and the Accusative on the double is licensed. This interpretation solves the problem of the coexistence of two Accusative marked DPs. The clitic receives its Accusative through the Case assigning property of the verb while the double DP receives its own freely and licences it via coindexation with the clitic. The mechanism is the same for lexical subjects and for doubled objects.

However, there is an additional problem which Anagnostopoulou (1999) uses against a 'right dislocation' analysis, which may also challenge an adjunct analysis for the double in general. The problem has to do with the surface position of adjuncts in relation to arguments. Anagnostopoulou (1999) states that Vallduví (1990) and Zubizarreta (1994) 'predict that it is impossible for a right dislocated object to occur between the verb and a post-verbal focused subject, the reason being that focused subjects occur in a VP-internal position. In other words, (37) cannot be a right dislocation structure, it can only be a clitic doubling structure (Anagnostopoulou 1999:765).

- (37) tin efaghe tin turta o janis  
 her ate-3sg the cake-Acc the John-Nom  
 'John ate the cake'

Before we consider this, let us clarify one point. Anagnostopoulou (1999) uses the term clitic doubling here to mean a structure with a double DP analysed as an argument. However, we have already pointed out that an adjunct interpretation of the double DP does not commit us to a 'right dislocation' analysis, since the double can be interpreted as an adjunct in a lower VP adjunction position. We, therefore have no problem in agreeing with Anagnostopoulou that sentence (37) is not a 'right dislocation' structure. This, however, does not necessarily mean that we will also agree that the double is the object argument. In fact we suggest that the double in (37) is a  $\nu$ P-adjunct, as shown in (38).



Does the order of the postverbal constituents in examples like (37) pose problems for our adjunct analysis, too? To answer this, we note that the problem would be serious if it were the case that adjuncts can only occur as right adjunctions and thus to the right and higher than the arguments of the VP. This, however, cannot be so given constructions like those in (39), where we have an adjunct locative, comitative, and temporal, respectively preceding the focused and thus probably VP internal subject.

- (39a) *ti maria tha ti feri sto parti o janis*  
 the Mary-Acc will her bring to-the party the John-Nom  
 ‘John will bring Mary to the party’
- (39b) *mas enochli me tis anoisies tu o janis*  
 us-Acc bothers with the nonsense his the John-Nom  
 ‘John bothers us with his nonsense’
- (39c) *na mas traghudhisi apopse o janis*  
 prt us sing-3sg tonight the John-Nom  
 ‘Let John sing for us tonight’

Whatever analysis can be given to the above constructions must also be available for an adjunct double DP which may intervene between the verb and a focused subject, as in (40) below.

- (40a) *tha ti feri ti maria o janis*  
 will her-Acc bring the Mary-Acc the John-Nom  
 ‘John will bring Mary’
- (40b) *tus enochli tus ghitones mas o janis*  
 them-Acc disturbs the neighbours-Acc our the John-Nom  
 ‘John disturbs our neighbours’

Having justified the presence of a DP-double as a left-adjunction to  $\nu$ P, what remains now to be discussed is the postulation of the other three possible adjunction sites in (36). First, the position which is left adjoined to VP is supported by constructions like (41), where the in-situ subject marks the edge of the  $\nu$ P, not allowing the adjunction to  $\nu$ P, while the CP complement marks the right edge of VP, excluding the possibility of adjunction of the DP-double on a higher position.

- (41) *tin epise o spyros ti marina na maghirepsi makaronia*  
 her-Acc persuaded the Spyros-Nom the Marina-Acc prt  
 cook-3sg spaghetti-Acc  
 ‘Spyros persuaded Marina to cook spaghetti’

Second, the existence of right-adjoined positions of the DP-double is supported by data like (42), where the DP-double appears on the right of the CP-complement.

- (42) *tin epise o spyros na maghirepsi makaronia ti marina*  
 her-Acc persuaded the Spyros-Nom prt cook-3sg  
 spaghetti-Acc the Marina-Acc  
 ‘Spyros persuaded Marina to cook spaghetti’

Since there exist no tests that would distinguish the right-adjunction to  $\nu$ P from the right-adjunction to VP, we can assume by analogy to the left-adjunction cases that both positions are available. Let us now return to the problems that our analysis allegedly has.

Another possible problem of the adjunct analysis of the doubled DP proposed here, which was discussed first by Schneider-Zioga (1994) and quoted in both Sportiche (1992/1996) and Anagnostopoulou (1999) concerns the treatment of ECM and small clause constructions like (43) to (45).

- (43) o janis tin perimeni [[tin maria] na paraponethi]  
the John-Nom her-Acc expects the Mary-Acc prt complain-3sg  
'John expects Mary to complain'
- (44) o janis tin ekane [ti maria] na klapsi  
the John-Nom her-Acc made the Mary-Acc prt-cry-3sg  
'John made Mary cry'
- (45) o janis dhen ti theori ti maria eksipni  
the John-Nom not her-Acc considers the Mary-Acc  
intelligent-Acc  
'John does not consider Mary intelligent'

The problem considered to be presented by these constructions, according to Schneider-Zioga (1994) as well as Sportiche (1992/1996) and Anagnostopoulou (1999), is that they contain a doubled DP in a position where right dislocated elements do not seem to be tolerated.

Notice that for this argument to be acceptable we need an independently supported analysis for these constructions. However, as far as we know, no satisfactory analysis is available. Nor is it obvious what analysis is possible within these authors' view that the double is the argument. In these examples, as bracketed by Sportiche (1992/1996) and Anagnostopoulou (1999), the double is not an argument of the main clause but the subject of the complement clause receiving its theta role there. This means that the clitic on the main verb connects with a *pro* object argument in the main clause, according to their analysis. This *pro* being the main object argument must be receiving the Accusative Case from the main verb. But then how does the DP [ti Maria] in the complement clause receive its Accusative and how does it raise to the Spec of the CP of the clitic in order to license its specificity feature? We see that these constructions pose a serious problem with the clitic as functional category. In these constructions the double is the subject of the complement clause and yet, according to the analysis of clitic doubling, it should be the object argument of the main verb, which would raise to the Spec of the clitic to license its specificity feature.

Within our analysis we can proceed as follows. Firstly, sentence (44) above must be analysed as an object control construction, where the DP [ti Maria] is the double to the clitic 'ti' and an adjunct in VP followed by the complement clause in subjunctive. Sentences (43) and (45) cannot be interpreted as ECM constructions but are most naturally interpreted as either the result of reanalysis where the DP [ti Maria] from being the subject of the complement clause is reanalysed as the object of the main clause (Hadjivassiliou et al. 2000), or as object control structures from the



very beginning (see Kotzoglou 2001 for arguments against the raising and reanalysis approaches to Greek ECM). In any case, all three structures can be analysed as instances of control, where the clitic occupies the internal argument position of the matrix verb and thus Anagnostopoulou's argument does not hold.

Before we conclude this section, let us discuss the realization of the clitic movement. There are two alternative possibilities, both consistent with our proposal:

a) Clitics move as both  $X^0$  and XP elements (Chomsky 1995). This enables them to leave the  $vP$  and adjoin directly to the I head. This movement does not violate the Head Movement Constraint, nor does it violate the Structure Preservation Principle, despite appearances. Although the head of the formed chain is an  $X^0$  and its foot an  $X^{\max}$ , this is not problematic, given that clitics are simultaneously  $X^0$  and  $X^{\max}$ , so the resulting chain is interpreted at LF as such.

b) The second possibility involves XP movement of the clitic to the left periphery of IP (adjunction). Cliticization could then proceed under linear adjacency and, thus, be a PF phenomenon (recall that [Spec, IP] does not contain overt material in Greek<sup>18</sup>). This account explains the postverbal position of clitics in the imperative form, assuming that verb movement from  $I^0$  to Mood<sup>0</sup> (which is located to the left of  $I^0$ , left of Neg<sup>0</sup>) in overt syntax (instantiated only in the imperative, see Philippaki-Warburton 1998) leaves material adjoined to IP behind. In this way, the need of the postulation of excorporation for structures like (22a) is avoided.

Concluding this section, we note that all the arguments given against the adjunct analysis of the doubled DP undermine a right dislocation analysis but they do not reject a solution treating the DP-double as a lower adjunct. Our analysis succeeds in establishing a node which is low enough in the tree to justify the lack of intonational effects and near enough to the verb to allow for other complements to follow it.

## 6. Conclusion

In this paper we examined pronominal clitic doubling in Greek. Initially, we presented a number of recent accounts of clitic doubling in Greek and we focused on a number of problems that these analyses raise. In particular, we provided evidence showing that Greek clitics are not affixes,

<sup>18</sup> Alexiadou & Anagnostopoulou (1998), Spyropoulos & Philippaki-Warburton (2001).

but independent words. In addition, we showed that clitics do not form a complex DP together with their doubles, but they are merged in the internal argument position of the verb. We proposed that the relation between clitics and their doubles is that of coindexation, with the doubles occupying different adjunct positions. Accordingly, we attempted a unification of clitic dependencies, claiming that adjunction of the DP-double on a higher functional projection results in Clitic (Left/Right) Dislocation, whereas adjunction of the DP-double on the vP or VP gives us clitic doubling. Finally, two alternative solutions of how clitic movement takes place were proposed, although the exact motivation for this movement was not addressed in this paper.

### *References*

- Agouraki, Y. (1992). Clitic left dislocation and clitic doubling: a unification. *UCL Working Papers in Linguistics* 4. 45-70.
- Alexiadou, A. & Anagnostopoulou, E. (1998). Parametrizing AGR: word order, V-movement and EPP-checking. *Natural Language and Linguistic Theory* 16. 491-539.
- Anagnostopoulou, E. (1994). *Clitic dependencies in Modern Greek*. PhD dissertation, University of Salzburg.
- Anagnostopoulou, E. (1999). Conditions on clitic doubling in Greek. In van Riemsdijk, H. (ed.) *Clitics in the languages of Europe*. Berlin: Mouton de Gruyter. 761-798.
- Androulakis, A. (1998). *Wh-* and direct object clitic revisited. In Joseph, B. D., Horrocks, G. C. & Philippaki-Warbuton, I. (eds.) *Themes in Greek linguistics II*. Amsterdam: John Benjamins. 131-167.
- Androulakis, A. (2001). Clitics and doubling in Greek. *Reading Working Papers in Linguistics* 5. 85-111.
- Aoun, J. (1981). *The formal nature of anaphoric relations*. PhD dissertation, Massachusetts Institute of Technology.
- Aoun, J. (1985). *A grammar of anaphora*. Cambridge, Mass.: MIT Press.
- Borer, H. (1984). *Parametric syntax*. Dordrecht: Foris Publications.
- Chomsky, N. (1995). *The minimalist program*. Cambridge, Mass.: MIT Press.
- Chomsky, N. (2001). Derivation by phase. In Kenstowicz, M. (ed.) *Ken Hale: a life in language*. Cambridge, Mass.: MIT Press. 1-52.
- Condoravdi, C. & Kiparsky, P. (2001). Clitics and clause structure. *Journal of Greek Linguistics* 2. 1-39.
- Dobrovie-Sorin, C. (1990). Clitic doubling, *wh*-movement, and quantification in Romanian. *Linguistic Inquiry* 21. 351-397.
- Drachman, G. (1997). Some properties of clitics (with special reference to Modern Greek). In Alexiadou, A. & Hall, A. (eds.) *Studies on universal grammar and typological variation*. Amsterdam: John Benjamins. 219-248.
- Georgiafentis, M. (1999). *Double object constructions in Greek*. MA dissertation, University of Reading.

- Grimshaw, J. (1991). Extended projection. Ms., Brandeis University.
- Hadjivassiliou, A., Philippaki-Warburton, I. & Spyropoulos, V. (2000). Greek ECM constructions revisited. In Nicolaidis, K. & Mattheoudakis, M. (eds.) *Proceedings of the 13th international symposium on theoretical and applied linguistics*. 70-80.
- Heim, I. (1982). *The semantics of definite and indefinite noun phrases*. PhD dissertation, University of Massachusetts at Amherst.
- Hurtado, A. (1985). On the properties of LF. *Cornell Working Papers in Linguistics* 5. 121-149.
- Jaeggli, O. (1982). *Topics in Romance syntax*. Dordrecht: Foris Publications.
- Jaeggli, O. (1986). Three issues in the theory of clitics: Case, doubled NPs, and extraction. In Borer, H. (ed.) *Syntax and semantics 19: the syntax of pronominal clitics*. Orlando, Florida: Academic Press. 15-42.
- Joseph, B. (1988). Pronominal affixes in Modern Greek: The case against clisis. *CLS* 24. 203-215.
- Joseph, B. (2001). Dialect evidence bearing on the definition of 'word' in Greek. In Ralli, A., Joseph, B. D. & Janse, M. (eds.) *Proceedings of the first international conference of Modern Greek dialects and linguistic theory*. Patras: University of Patras. 89-104.
- Joseph, B. (2002). Defining "word" in Modern Greek: A response to Philippaki-Warburton & Spyropoulos 1999. To appear in *Yearbook of Morphology*.
- Kayne, R. (1975). *French syntax: the transformational cycle*. Cambridge, Mass.: MIT Press.
- Kayne, R. (1991). Romance clitics, verb movement, and PRO. *Linguistic Inquiry* 22. 647-686. [Reprinted in Kayne, R. (2000). *Parameters and universals*. Oxford: Oxford University Press. 60-97].
- Kayne, R. (1994). *The antisymmetry of syntax*. Cambridge, Mass.: MIT Press.
- Kotzoglou, G. (2001). *Controlling Greek ECM*. MA dissertation, University of Reading.
- Panagiotidis, P. (to appear). Explaining and motivating a two-step movement for pronominal clitics. In Henry, A. (ed.) *Motivating movement: explaining the displacement property of natural language*. Dordrecht: Kluwer Academic Publishers.
- Papangeli, D. (2000). Clitic doubling in Modern Greek: a head-complement relation. *UCL Working Papers in Linguistics* 12. 473-498.
- (Philippaki-)Warburton, I. (1975). The passive in English and Greek. *Foundations of Language* 13. 563-578.
- (Philippaki-)Warburton, I. (1977). Modern Greek clitic pronouns and the 'surface structure constraints' hypothesis. *Journal of Linguistics* 13. 259-281.
- Philippaki-Warburton, I. (1987). The theory of empty categories and the *pro*-drop parameter in Modern Greek. *Journal of Linguistics* 23. 289-318.
- Philippaki-Warburton, I. (1993). Verb movement and clitics in Modern Greek. In Philippaki-Warburton, I., Nicolaidis, K. & Sifianou, M. (eds.) *Themes in Greek linguistics. Proceedings of the 1<sup>st</sup> international conference on Greek linguistics*. Amsterdam: John Benjamins. 53-60.
- Philippaki-Warburton, I. (1998). Functional categories and Modern Greek syntax. *The Linguistic Review* 15. 159-186.

- Philippaki-Warburton, I. & Spyropoulos, V. (1996). Provlimata ptoseos sto plesio tis theories tu elachistu [Case problems in minimalism]. *Studies in Greek Linguistics* **17**. 289-318.
- Philippaki-Warburton, I. & Spyropoulos, V. (1998). On the boundaries of inflection and syntax. In Booij, G. & van Marle, J. (eds.) *The yearbook of morphology 1998*. Dordrecht: Kluwer Academic Publishers. 45-72.
- Schneider-Zioga, P. (1994). *The syntax of clitic doubling in Modern Greek*. PhD dissertation, University of Southern California.
- Sportiche, D. (1992/1996). Clitic constructions. Ms. UCLA / In Rooryck, J. & Zaring, L. (eds.) *Phrase structure and the lexicon*. Dordrecht: Kluwer Academic Publishers. 213-276.
- Sportiche, D. (1999). Pronominal clitic dependencies. In van Riemsdijk, H. (ed.) *Clitics in the languages of Europe*. Berlin: Mouton de Gruyter. 679-708.
- Spyropoulos, V. (1999). *Agreement relations in Greek*. PhD dissertation, University of Reading.
- Spyropoulos, V. & Philippaki-Warburton, I. (2001). 'Subject' and EPP in Greek : the discontinuous subject hypothesis. *Journal of Greek Linguistics* **2**. 149-186.
- Suñer, M. (1988). Agreement in clitic-doubled constructions. *Natural Language and Linguistic Theory* **6**. 391-434.
- Terzi, A. (1999). Clitic combinations, their hosts and their ordering. *Natural Language and Linguistic Theory* **17**. 85-121.
- Tsimpli, I.-M. (1990). The clause structure and word order in Modern Greek. *UCL Working Papers in Linguistics* **2**. 226-255.
- Tsimpli, I.-M. (1999). Null operators, clitics and identification: a comparison between Greek and English. In Alexiadou, A., Horrocks, G. & Stavrou, M. (eds.) *Studies in Greek syntax*. Dordrecht: Kluwer Academic Publishers. 241-262.
- Uriagereka, J. (1995). Aspects of the syntax of clitic placement in Western Romance. *Linguistic Inquiry* **26**. 79-123.
- Vallduví, E. (1990). *The information component*. PhD dissertation, University of Pennsylvania.
- Zubizarreta, M.-L. (1994). The grammatical representation of topic and focus: implications for the structure of the clause. *Cuadernos de lingüística* **2**. 181-208. Madrid: Universitario Ortega y Gasset.