Nominalized Clauses in the Syntax of Modern Greek

ANNA ROUSSOU

1 Introduction

The aim of this paper is to provide an account of a special case of nominalization in Modern Greek (MG), within the recent framework of GB theory (Chomsky 1981, 1986a&b, 1988). In particular it is argued that nominalized clauses in MG have a DP structure. This proposal is based on the analysis of noun phrases put forward by Abney (1986,1987), Szabolcsi (1987), Horrocks & Stavrou (1985, 1986) and others. On this basis I will try to argue that nominalization in MG takes place for purposes of Case assignment. According to this, nominalized clauses occur in those positions where Case is assigned and therefore the presence of the Determiner is obligatory to receive it; otherwise, whenever Case is not required, Det-insertion does not take place. Finally, in the so called impersonal constructions, the presence vs absence of D seems to characterize different structures.

2 The data and their properties

In MG there is a special case of nominalization which involves prefixing the neuter singular definite article *to* to the clause, which has a clause initial complementizer *oti/pos*, or the particle *na*, or a wh-phrase.

(1) a. *To oti prospathises poli* tha metrisi ...
the-nom that tried-2sg a lot fut count-3sg
"That you tried hard will count..."

b. *To na ise politikos* apeti ...
the-nom prt be-2sg politician-nom requires-3sg...
"For you to be a politician requires..."

*I would like to thank Misi Brody, Rita Manzini, Neil Smith, and Ianthi Tsimpli for their help. Special thanks to Rita Manzini for her insightful comments.

c. *To an tha fighi* dhen to gnorizo.
the-nom whether leave-3sg not it-acc know-1sg
"Whether he will leave, I don't know".

Only the singular definite article *to* can be prefixed to these clauses. Henceforth, I will refer to them as nominalized or *to*-clauses.

(2) *ena / *i oti efighe
a / the-fem that left-3sg

Furthermore, nothing can intervene between the Determiner and the CP, as opposed to the case where we have a D+NP structure.

(3) a. * to *oreo* oti efighe
the-nom-nice that left-3sg

b. to *idhio* to gheghonos oti efighe
the-nom-same the-nom-fact that left-3sg
"The very fact that he left..."

Finally, *to*-clauses have the distribution of NPs. In other words they can occur in the subject or object (of a V or P) position.

SUBJECT:
(4) *to oti ehis filus* simeni pola.
the-nom that have-2sg friends-acc mean-3sg much
"That you have friends means a lot".

OBJECT:
(5) a. *to oti perase* to ksero.
the-acc that passed-3sg it-acc know-1sg
"That he passed I know".

b. apo *to oti etreme.*
from the-acc that was shaking-3sg
"From the fact that he was shaking"

3 The structure of to-clauses

3.1 The NP analysis

One of the main claims of X-bar theory is that all phrase-structure rules should conform to the following schema:

(6) X^n --> ...X^{n-1}... (Jackendoff 1977:30)

According to (6) every phrasal category (XP or X") directly dominates another category with the same feature specification but with one bar less. X^0 is the head of the phrase; this projects to the phrasal category XP, known as its maximal projection. Other intermediate levels may intervene between XP and X^0. Chomsky (1986b:3) proposes the two following schemata:

(7) a. X' = X X"*
b. X" = X"* X'

(where * stands for zero or more occurrences of the same maximal projections). In (7a) X" is the complement of the head X, while in (7b) it is the specifier. The implication is that both complements and specifiers need to be maximal projections themselves.

As was mentioned in section 2 nominalized clauses function as NPs. As a first attempt, the following rule could be formulated to account for their structure:

(8) NP --> CP

However, this would lead to a violation of condition (6) since the NP node would directly dominate a category which is not specified for the same features, i.e in (8) the head of NP is not N but the CP. Hence, we have to look for another analysis.

Warburton & Papafili (1988) mention that *oti* nominalized clauses have the structure of an NP and are dominated by an NP node but in this case the head noun *gheghonos* (=fact) has been omitted:

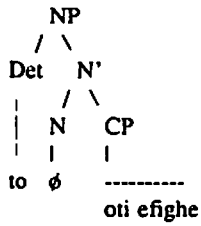
(9) a. *to* oti efighe...
the-nom that left-3sg

from

b. to *gheghonos* oti efighe...
the-nom-fact that left-3sg
"The fact that he left..."

In other words (9a) has the following structure:

(10)

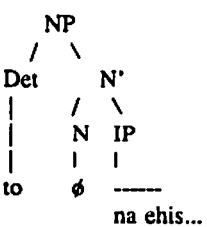


This kind of approach however, has some defects. First of all it is limited to nominalized clauses introduced by the complementizer *oti*, since it is only these clauses that occur as complements of the noun *geghonos* (=fact). Their analysis leaves out those *to*-clauses (e.g non-factive) that have the particle *na*[1] or a wh-phrase introducing the CP. Let us consider the following example which involves a nominalized clause with *na* instead of *oti*.

(11) a. *to na ehis ipomoni* ine proson
the-nom prt have-2sg patience-nom be-3sg advantage-nom
"That you have patience is an advantage".

If we assume the analysis of Warburton & Papafili (1988) to be correct, then we would probably derive (11a) from the following structure:

(11) b.



The problem with this structure, should we attempt to give a unified account of *to*-clauses with *oti* and *na*, is that *na*-clauses do not occur as complements of the particular noun *gheghonos*, i.e:

---

[1] I will take a neutral position as to whether *na* is a complementizer, or a subjunctive marker, or both. For the present purposes I will assume that *na*-clauses here have a CP-projection.

(12) * *to gheghonos na* ehis ipomoni...
the-nom-fact prt have-2sg patience-nom
"* The fact to have patience..."

Similarly, if we assume the analysis of a head-noun missing we encounter problems with nominalized wh-clauses, since these clauses do not occur as complements of nouns, hence we cannot assume the omission of a head noun.

(13) a. * *to gheghonos poso* kostise...
the-nom-fact how much cost-3sg

but: b. *to poso kostise...*
the-nom how much cost-3sg
"How much it cost..."

Moreover, there is a vast number of nouns in MG that take a CP as their complement and they are not neuter; instead they can be feminine (mainly) or masculine:

(14) a. *i epithimia* na petihi
the-nom-desire prt succeed-3sg
"The desire to succeed".

b. *i fimi* oti eghine ipurghos
the-nom-rumour that became-3sg minister-nom
"The rumour that he became a minister".

If we were to follow the line of argumentation proposed by Warburton & Papafili (1988) we could assume that the CPs in (13a&b) above could also be nominalized, if their head nouns (i.e "epithimia" and "fimi" respectively) were omitted.

(15) a. * i ∅ na petihi
the-fem prt succeed-3sg

b. * i ∅ oti eghine ipurghos
the-fem that became-3sg minister-nom

However, this kind of analysis would yield the wrong results, since in this case the nominalized clauses preceded by the feminine instead of the neuter definite article are ungrammatical.

Finally, if we assume that there is a head noun missing, then we cannot explain the parallelism between those structures where a CP appears as the

complement of a verb, but it can also appear as *to*-clause in a preverbal derived position:

(16) a. ksero *oti efighe*.
know-1sg that left-3sg
"I know that he left".

b. *to oti efighe* to ksero.
the-nom that left-3sg it-acc know-1sg
"That he left I know".

In this case we cannot account for the presence of the article *to* in (16b), as shown in (16a), since there was no NP having the CP as its complement in the first place.

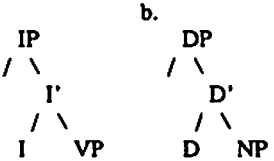
Given the above problems, it seems wise to change our approach and look for another analysis of the nominalized clauses. In the following section I will propose an analysis that explores the implications of the DP-analysis of noun phrases for the structure of *to*-clauses in MG.

3.2 A proposed analysis: to-clauses as DPs

3.2.1 The DP-structure of noun phrases

Abney (1986, 1987) argues that the Determiner (D), along with Complementizer and Inflection, is a functional, i.e non-lexical head. On the basis that lexical heads select their complements, he also assumes that there is some kind of selection, called functional selection, between functional elements and their complements. According to this D selects an NP as its complement in the same way that I selects VP. Under this proposal D has its own maximal projection and becomes the head of the NP:

(17) a. b.



Szabolcsi (1987) reached a similar conclusion as far as the noun phrase in Hungarian is concerned. According to her analysis the noun phrase structure in Hungarian resembles the clause structure proposed by Chomsky (1986b). She

notes that in the following example the Determiner *a(z)* is analogous to C in sentences:

(18) en-ek-em *a* kalap-om.
I-DAT-1sg the Hat-POSS.1sg
"my hat" (Szabolcsi 1987:172)

The dative marked subject of the noun phrase in (18) precedes the Determiner as opposed to (18') where the nominative subject follows D:

(18') *az* en kalapom
the I hat-POSS.1sg
"my hat" (Szabolcsi 1987:171)

Szabolcsi argues that the subject in (18) occupies a position similar to that of the spec of CP. She calls this position spec of CN". According to this the Determiner *a(z)* occupies the CN position which is similar to that of C in sentences.Notice that Szabolsci assimilates D to C[2].

Horrocks & Stavrou (1985) also argue for a DP analysis of the noun phrases taking their evidence from MG. They assume that NPs in MG have a position similar to that of C in sentences which functions as an "escape hatch" in case of extraction out of a noun phrase in MG:

(19) $[_S$pyon$_i$ $[_S$ akuses $[_{NP}$ ti fimi $[_S$ oti$[_S$ apelisan $t_i]]]]]]$
whom heard-2sg the-acc-story that dismissed-3pl
"Whom did you hear the story that they they dismissed?"[3]

---

[2]According to Ouhalla (1988) noun phrases in Hungarian have a DP-projection (what Szabolcsi calls CN"). He argues that the IN" projection could be assigned a more articulated structure as is the case with IP in sentences. The proposed structure is:

a. $[_{DP}$ D $[_{AGRP}$ AGR $[_{NOM}$ NOM $[_{XP}$ X...]]]]

in parallel with the sentential structure:

b. $[_{CP}$ C $[_{AGRP}$ AGR $[_{TNSP}$ TNS $[_{XP}$ X...]]]]

(Ouhalla 1988:160)

[3]It has to be mentioned that (19) is not fully acceptable among native speakers; see also Warburton & Papafili (1988).

Horrocks & Stavrou claim that NPs have a further projection, like the CP projection of sentences. This projection is the Determiner phrase and consequently D is the head of the NP.

On the basis of the data in section 2 I will try to show the consequences of the DP analysis for "*to*-clauses".

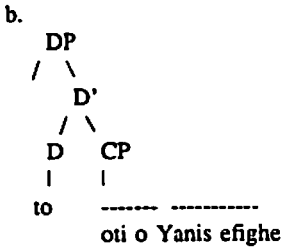
3.2.2 To-clauses as DPs

As was mentioned in the previous section NPs are assumed to have a DP projection. On the assumption that nominalized clauses in MG function as NPs we would expect them to have a similar structure, i.e to have a DP representation. Let us consider the following sentence:

(20) a. to oti o Yanis efighe...
the-nom that the-nom-John left-3sg
"That John left..."

The proposed structure is the following:

b.



As the above schema indicates in nominalized clauses the Determiner selects a CP instead of an NP (this possibility can be explained in terms of categorial features; this will be explained in a later section). Therefore, under this analysis there is no need to assume that there is a head noun missing. The immediate implication of this proposal is that we can adopt a unified account of nominalized clauses, no matter whether the CP has an *oti* complementizer, the particle *na* or a wh-phrase. Having proposed a possible structure of *to*-clauses we can examine why nominalization takes place. In order to do so we need to know the properties of C and D as well, so that we will be able to shed some light on the function of the Determiner in nominalized clauses.

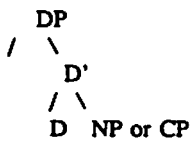
4 The reasons for nominalization

4.1 The properties and the function of C

Kayne (1982, adopted by Holmberg 1988) has argued that the complementizer in sentences functions as a nominalizer. Its role is to give the clause a nominal categorial status so that it can function as an argument. Szabolcsi (1987) also argues that the role of C is to "turn the proposition into something that can act as an argument" (1987:180). Ouhalla (1988) pursues this topic further by offering some syntactic arguments for the function of C "in terms of a binary system which recognizes only two major categories, nominal and verbal (formally specified in terms of either of the two matrices [+,-N] or [+,-V])" (1988:143). On the assumption that C is nominal we can predict that its syntactic function is to nominalize a sentence, which is in fact verbal because of the presence of T(ense) and AGR(eement). According to this the CP acquires a nominal status and this conforms to the general assumption that only nominal categories (hence NPs and CPs) can function as arguments.

Let us now turn to *to*-clauses in MG. As was mentioned in section 3.2.2 they have the same structure as NPs:

(21)



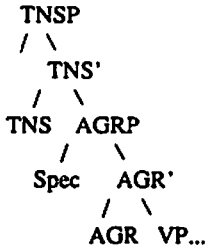
The fact that D may select an NP or a CP can be well accomodated under the preceding analysis. Given that C is nominal the CP has a nominal status. Therefore, NPs and CPs are similar in terms of categorial features, i.e they are both nominal. What this implies is that in MG the Determiner selects a nominal category as its complement. However, there is a problem that arises at this point. If CPs are nominal why is the Determiner required in *to*-clauses? In the following section I will try to offer an answer to this question.

4.2 The role of D in to-clauses

In this section the discussion will focus on the fact that D in *to*-clauses has a special role to play. We will argue that nominalization in this case is not due to D, since sentences already have a CP projection that makes them nominal, but that it takes place for purposes of Case assignment. If this is correct, then we would expect that in those positions of syntactic representation where Case is not required the Determiner will be absent (i.e nominalization will not take place).

Before we examine this proposal we need to consider certain word order facts in MG. It has been argued quite extensively (cf. Warburton 1982, 1987, Tsimpli 1990) that MG is a VSO language with an SVO alternative. Tsimpli (1990) in particular argues that in MG TNS selects AGR, hence the VSO order.

(22)



Movement of V to AGR and then to TNS leaves the subject behind at the spec of AGRP where it is assigned nominative Case via coindexation with AGR[4]. When we have an SVO order both Warburton (1987) and Tsimpli (1990) assume that the subject is base generated in topic position. What occurs in the spec of AGRP (the canonical subject position) is a resumptive pronoun, i.e pro, which is allowed on the basis that MG is a pro-drop language, so that rich AGR licenses pro. Under the representation in (22) we assume that topics are adjoined to the left of TNSP.

Given our previous discussion, i.e that D is the head of the noun phrase, we would expect case to be realized on D and N as seems to be the case in MG:

(23) *i* Maria *tis* Maria*s tin* Maria
the-nom-Mary the-gen-Mary the-acc-Mary

As far as nominalized clauses are concerned we notice that case is morphologically apparent only on D:

(24) a. *to oti ehi filus*
the-nom that have-3sg friends-acc
"That he has friends..."

[4]Following standard assumptions in the literature, Tsimpli (1990) assumes that the subject is base-generated in the spec of VP where it receives the external theta-role; from this position it moves to the spec of AGRP where it receives nominative Case via coindexation with AGR.

b. to zitima *tu na ine enohos*
the-nom-case the-gen be-3sg guilty-nom
"The case of his being guilty"

c. apo *to oti efighe*
from the-acc that left-3sg[5]
"From the fact that he left"

On the basis of the above observations we can attempt to give a more detailed explanation of the role of the Determiner in MG nominalized clauses, starting from *to*-clauses as subjects.

4.2.2 Case and to-clauses

4.2.2.1 To-clauses as subjects

Let us consider the following sentences:

(25) a. *to oti lei psemata* apodhiknii tin enohi tis.
the-nom that tell-3sg lies-acc prove-3sg the-acc-guilt her-gen
"That she tells lies proves her guilt"

b. *to na ise politikos* apeti poli dhulia.
the-nom prt politician-nom require-3sg lot-work-acc
"For you to be a politician requires a lot of work"

In (25a&b) the nominalized clauses seem to be in the subject position of the matrix clause. This is not in conflict with our analysis of them given that *to*-clauses have a DP structure and DPs can function as subjects. Consider now the following sentences where the Determiner is absent:

(26) a. * *oti lei psemata* apodhiknii...
"That she tells lies proves..."

b. * *na ise politikos* apeti...
"For you to be a politician requires..."

In the above examples the absence of D has led to ungrammaticality. A logical explanation for this would be to connect in some way the presence of D with

[5]Notice that in MG nominative and accusative are not morphologically distinct as far as *neuter* nouns and articles are concerned.

the subject position where the clauses (nominalized or not) occur. One property of the canonical subject position, i.e the spec of AGRP, is that it receives nominative Case via coindexation with AGR. Leaving aside for the moment the fact that in MG in SVO word order the subject is in topic position the solution to the problem could be derived from an account on why the clauses in (26a&b) cannot serve as subjects. One possible explanation could be the following: subjects have to receive Case because of the presence of the AGR element; therefore the clauses in (26a&b) have to receive Case somehow. The next question to consider is whether clauses can in general be assigned Case. Stowell (1981) has proposed the following principle:

(27) *The Case Resistance Principle (CRP)*
"Case may not be assigned to a category bearing a Case assigning feature" (1981:146)

According to this, sentences cannot be assigned Case, since they contain the AGR alement which is itself responsible for Case assignment (via coindexation) to the subject of the sentence[6]. On this basis Stowell (1981) argues, following an analysis similar to the one proposed by Koster (1978)[7], that subject-clauses in English (cf.(28) below) are not real subjects, since they are excluded from this position by virtue of the CRP, but topics.

(28) [That John came early] surprised me.

According to his analysis the subject clause in (28) occurs in the subject position at D-structure. However, at S-structure it has to move so that the CRP is not violated. For this reason it moves to a non-A-position leaving behind a trace, i.e a variable, bound by the clause in the topic position. The variable in the subject position is assigned nominative Case[8]. As Stowell notes this would

---

[6]In Stowell's analysis the element [± TNS] is assumed to be responsible for Case assignment and not AGR.

[7]Koster (1978) argues that what are assumed to be subject-sentences are not real subjects but topics (he calls them "satellites"). These topics bind a phonologically empty NP in the subject position of the main clause. The problem with this analysis is that it cannot fit in the present GB framework, since there are problems with the nature of the empty NP. It cannot be pro because English does not have rich AGR to license it; it cannot be PRO because the position is governed and finally, it cannot be a variable because there is no movement.

[8]The standard assumption is that A'-movement involves an operator. The problem that we face with Stowell's analysis is that there is no operator involved. This implies that the problem of subject-sentences in English remains open.

imply that the trace of the moved CP is "immune to the effects of the CRP" (1981:153). This can be explained if traces do not inherit the categorial features of the moved phrases. Alternatively, he argues, we can assume that the CRP does not apply to the trace since it does not have lexical content, given that the CRP applies only to the lexically headed phrases.

Bearing these points in mind, let us return to the analysis of nominalized clauses in MG and see how the CRP could be exploited. Notice that in (26a&b) the *oti* and *na*-clauses occupy the subject position. Assuming the validity of the CRP we could claim that clauses are excluded from those positions where Case is assigned. Hence, the ungrammaticality of the above sentences. However, things become more complicated if we take into account the fact that the above sentences, i.e (26a&b), exhibit the SVO word order[9]. As was mentioned in section 4.2.1 the SVO order in MG is not assumed to be the canonical word order: the subject is in topic position coindexed with pro in the spec of AGRP. The implication of this is quite clear: the above mentioned sentences should be grammatical under Stowell's analysis, since the subject-clauses in question are in a topic and not in the canonical subject position. However, this is not the case as the ungrammaticality of (26a&b) indicates. In order to explain this ungrammaticality and also account for the differences between the Greek and English data we need to examine how the CRP functions in the MG case.

One of the properties of the clause sturcture in MG is that the subject-topic phrases are assigned Case, under coindexation with pro in the spec of AGRP.

(29) a. [i Maria]$_i$[$_{TP}$epline[$_{AGRP}$[pro$_i$][$_{VP}$ta ruha]]] (SVO)
the-nom-Mary washed-3sg the-acc-clothes
"Mary washed the clothes".

b. epline i Maria ta ruha. (VSO)
washed-3sg the-nom-Mary the-acc-clothes
"Mary washed the clothes".

If therefore, a clause appears on this position it has to be Case-marked. The problem is that, according to the CRP, clauses cannot receive Case, since they contain AGR that is itself a Case-assigner; the ungrammaticality of (26a&b) is explained. In a nutshell we could say that subject-topic clauses in MG differ from their English counterparts in that they are assigned Case.

Let us now return to the nominalized clauses in (25a&b) and examine what the consequences of the CRP are, given their status as DPs instead of CPs. Assume that these clauses are base-generated as CPs (i.e without the DP projection) in the subject- topic position. When Case-marking takes place at S-

[9]We have to note that nominalized clauses tend to occur in an SVO order and not in VSO. This could probably be attributed to processing difficulties.

stucture the CRP appears. There are two options available: either the CRP rules them out, OR some language particular mechanism, which could be referred to as the rule of *Det-insertion*, intervenes and turns these CPs into DPs. We could assume that Det-insertion resembles in this case *of-insertion* in English in examples like:

* proud Mary --> proud *of* Mary (cf. Chomsky 1986a)

The difference is that in the former case Det is inserted to bear Case, while in the latter the preposition is inserted to assign Case. Det-insertion provides a DP projection for the CPs under discussion; therefore, it is the Determiner that is Case-marked so that the CP is not ruled out as ungrammatical. It seems that in MG the second option is avalaible, leading therefore to the appearance of *to*-clauses.

At this point we have to refer briefly to the possible range of phrases used to introduce the nominalized clauses. As was mentioned in section 2 nominalized clauses may have the complementizer *oti*, the particle *na* or a wh-phrase. As the examples (1a-c) show, any CP in general can be nominalized and appear in the subject position after Det-insertion has taken place. However, the CPs introduced by the complementizer *pu* (=that) seem to disobey the above pattern. *Pu* has a multiple function in MG. It is used in complement clauses after certain verbs (e.g psych-verbs) (31a&b) and in relative clauses along with the relative pronouns (31c).

(31) a. harika *pu* efighe.
was glad-1sg that left-3sg
"I was glad that he left".

b. thimame *pu* se sinantisa stin aghora.
remember-1sg that you-acc met-1sg at-the-acc-market
"I remember that I met you at the market".

c. o anthropos *pu* idhes ine filos mu.
the-nom-man who saw-2sg be-3sg friend-nom my-gen
"The man that you saw is a friend of mine".

As (31a&b) indicate *pu* seems to behave like the *oti* complementizer in MG. However, if we attempt to nominalize a *pu*-clause the result is ungrammatical e.g:

(32) * *to pu* efighe
the-nom that left-3sg

The question that concerns us here is why *pu* resists nominalization[10]. Before we proceed to this question, let us first examine some of the properties of *pu*. As (31c) shows *pu* is used in restrictive (and appositive) relative clauses. However, it cannot occur in free relatives:

(33) a. *opios* ithele na erthi, irthe.
whoever-nom wanted-3sg prt come-3sg came-3sg
"Whoever wanted to come, came".

b. * *pu* ithele na erthi, irthe.
that wanted-3sg prt come-3sg came-3sg

Although the problem of the free relative clauses is more complicated than that, let us restrict ourselves to (33b). There are two assumptions that we can make to account for the ungrammaticality of (33b). First of all in free relatives we have indefinite pronouns, hence there is no specific reference to individuals. Secondly, *pu* needs a fixed reference from the context (cf.31c). In other words we could say that *pu* is specified as [+ definite] and for this reason it cannot occur in an environment specified as [- definite] (cf.33a&b), since this would lead to a clash of features[11].

Bearing the above properties in mind let us return to our initial question, i.e why *pu*-clauses resist nominalization. The argumentation could run as follows: assume that phrases in topic position must have the feature [+def]. According to this subject- clauses need to be [+def] as well. Nominalized clauses acquire this feature by virtue of their DP-projection (recall that in nominalized clauses it is only the definite article *to* that is used). If *pu* is specified as [+def] this implies that *pu*-clauses do not need the Determiner. According to this we would expect *pu*-clauses to occur in subject position without the DP-projection. However, as (34) below indicates this is not the case.

---

[10]There is only one case where *pu*-clauses are preceded by the definite article *to*:

me to pu efighe
with the-acc that left-3sg
"The moment he left"

The construction with *me+to pu* has however, an abverbial meaning and therefore, it requires a different treament. Notice that *pu* is also used as an adverb in MG.

[11]Christidis (1986) argues on semantic grounds that *pu* has a [+definite] feature. On this basis he proposes that *pu* could be assumed to function in sentences in a way similar to that of the definite article in noun phrases.

(34) * *pu efighe* apodhiknii tin enohi tu.
that left-3sg prove-3sg the-acc-guilt his-gen
"That he left proves his guilt"

As was already mentioned earlier in this section Det is inserted in the case of nominalized clauses, under the operation of the CRP, for Case purposes. If *pu*-clauses do not allow for a DP-projection, then they cannot occur in a subject position, since Case assignment would fail, given the CRP. Although we have not succeeded so far in explaining why *pu*-sentences do not allow for a DP-projection, we must be satisfied perhaps for the time being with stipulating in some way this result. The whole issue of *pu*-complements is much more complicated and an adequate explanation is beyond the scope of the present paper.

Having examined the properties of nominalized clauses on subject (topic) position and the reasons for which nominalization takes place, we can now consider the properties of *to*-clauses in object position.

4.2.2.2 To-clauses as objects

In MG objects usually follow the verb, as in (35a). If they appear preverbally and are associated with a clitic, as in (35b) they are assumed to be base-generated in topic position (cf.Tsimpli 1990 for a detailed discussion).

(35) a. i maria katharizi *to spiti*.
the-nom-Mary clean-3sg the-acc-house
"Mary cleans the house".

b. *to spiti to* katharizi i maria.
the-acc-house it-acc clean-3sg the-nom-Mary

Let us now examine the following sentences that contain nominalized clauses in object position. We will deal with those *to*-clauses that are in a preverbal position (i.e topics) and thus, associated with a clitic. As the examples below indicate, the absence of the Determiner in this case does not lead to ungrammaticality.

(36) a. *(to) oti perase* to ksero.
the-acc that passed-3sg it-acc know-1sg
"I know that he passed the exams".

b. *(to) na ksipnao noris* to protimo.
the-acc prt wake-up-1sg early it-acc prefer-1sg
"I prefer to wake-up early".

What we must crucially take into account is the fact that verbs like the ones in the matrix clauses in (36a&b) subcategorize for a CP (and a DP as well).

(37) a. ksero [oti perase].
know-1sg that passed-3sg

b. protimo [na ksipnao noris].
prefer-1sg prt wake-up-1sg early

On the basis that a CP may appear as a complement of those verbs we could assume that whenever there is a clitic the preposed CP can be interpreted as a base-generated topic (cf.(35b) where we have a DP instead). The association of the clitic with the CP in topic position seems to be well-formed: the clitic is assigned accusative Case, while the CP does not require Case. If on the other hand, the CP acquires a DP-projection by virtue of Det-insertion, then Case is realized on the Determiner. In this case we get a DP associated with a clitic in the main clause, where their association involves Case sharing[12].

Before we turn to another type of construction there is something more to be mentioned about nominalized clauses as objects. Consider the following examples:

(38) a. * ksero *to oti efighe*.
know-1sg the-acc that left-3sg
"I know that he left".

b. * protimo *to na fevgho*.
prefer-1sg the-acc prt leave-1sg
"I prefer to leave".

If *to*-clauses are assumed to be DPs and verbs like *ksero* (=know) and *protimo* (=prefer) also subcategorize for a DP, what is wrong with (38a&b)? Recall that the above verbs subcategorize for a CP as well; recall also that we assumed that *to*-clauses are not base-generated as such (cf. section 4.2.2.1). The Determiner occurs for purposes of Case-marking and therefore the clause becomes a DP. However, in (38a&b) Case is not required, since CP selection

[12]According to Tsimpli (p.c) Det-dropping, as far as object-clauses are concerned, may take place at PF. From this we derive (36a&b) without *to*.

is specified within the subcategorization frames of the verbs under discussion. Thus, if the Determiner appears, although it is not required, the whole structure is excluded[13].

A final point that we need to make with respect to *to*-clauses as object-topics is the following: the nominalized clause in topic position has to obey the subcategorization restrictions of the main verb, i.e the verb on which it depends. According to this, if a verb like *protimo* (=prefer) for example subcategorizes for a CP introduced by *na*, then the topic clause in this case must be introduced by *na* otherwise the result is ungrammatical.

(40) a. * (to) *oti* fevgho to protimo.
the-acc that leave-1sg it-acc prefer-1sg

b. (to) *na* fevgho to protimo.
the-acc prt leave-1sg it-acc prefer-1sg

Before we leave this section let us examine briefly the case where the *to*-clause is the object of a preposition. Assuming that nominalized clauses are not base generated as such we would expect the following construction, i.e P+CP:

(41) * apo *oti etreme*.
from that was shaking-3sg
"From the fact that he was shaking"

The reason for the ungrammaticality of (41) is evident if we take into account the fact that Prepositions are Case-assigners (cf. Chomsky 1986a). However, in the structure P+CP the CP, by virtue of the CRP cannot be assigned Case. In order to get a grammatical result Det-insertion must take place, yielding a DP-projection for the CP so that Case is assigned to D[14].

---

[13]If we have a Verb that subcategorizes only for a DP, then we would expect D to be present obligatorily

dhen amfisvito *to oti efighe*.
not dispute-1sg th-acc that left-3sg
"I do not dispute the fact that he left".

In this case we probably have to assume that the nominalized clause is base-generated as such.

[14]Some prepositions e.g *prin* (=before), *andi* (=instead), *horis* (=without) do not require a *to*-clauses to follow them. All of them subcategorize for a *na*-clause (and a DP as well). The difference is that prepositions like *apo* (=from) subcategorize only for a DP, hence nominalization is obligatory.

(42) apo *to oti etreme.*
from the-acc that was shaking-3sg
"From the fact that he was shaking".

To summarize, in the last two sections I have argued that nominalization takes place for purposes of Case assignment. Under the operation of the CRP clauses are assigned a DP-projection wherever Case is required. In subject-clauses the presence of D is obligatory as well as in the case of prepositional objects. In the case of preposed CP objects nominalization is optional. In the following section we will deal with some impersonal constructions which in the first place seem to be problematic for our analysis.

5 "To-clauses" and impersonal constructions

The impersonal constructions we are going to look at involve (i) impersonal verbs that exemplify a passive morphology and (ii) the copula *ine*+adjective constructions.

5.1 Impersonal verbs

Let us first examine the following sentences:

(43) a. anakinothike (apo tin kivernisi)
was announced-3sg (by the-acc-government)
"It was announced (by the government)

oti tha ghinun ekloghes.
that fut hold-3pl elections-nom
that elections will be held".

b. *to oti tha ghinun ekloghes*
the-nom that fut hold-3pl elections-nom
"That elections will be held

anakinothike apo tin kivernisi.
was announced-3sg by the-acc-government
was announced by the government".

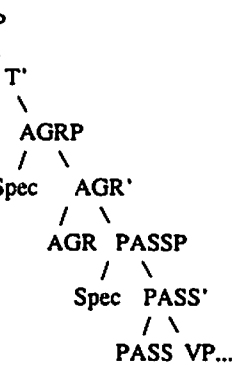
In (43a) there is a CP following the verb, while in (43b) there is a DP (i.e a nominalized clause) preceding it. If the Determiner is omitted the latter sentence becomes ungrammatical[15]:

(43) b'. * *oti tha ghinun ekloghes* anakinothike...
that fut hold-3pl elections-nom was announced-3sg

According to the explanation given so far for the subject-clauses we could assume that the CP in (43a) is in a complement position (notice that the verb *anakinono* (=announce) subcategorizes for an *oti*-clause), while the *to*-clause in (43b) is in a subject position hence the obligatoriness of D. However, in order to deal with the above constructions we have to take into account the fact that the main verb, i.e *anakinothike* (was announced) exemplifies the passive-affix *-thi-* (cf.Tsimpli 1989).

Ouhalla (forthcoming) proposes that the passive morpheme is a head that projects its own maximal category. According to this the structure we get for MG passives is the following:

(44)



The general assumption in the literature is that the presence of PASS blocks assignment of the external theta-role to the structural subject position (cf. Jaeggli (1986) and others, and also Ouhalla (forthcoming) who offers an argumentation on different grounds). The object on the other hand has to move in order to get Case and the only available position for Case-assignment is the structural subject position. Let us now return to the examples in (43a&b). The VP-complement, as (43a) indicates, is a CP. Since clauses do not require Case, there are two options: either the CP remains in situ, yielding (43a), or the CP

[15]Warburton & Papafili (1988) take sentences like (43b') to be grammatical, however I will not agree with them.

moves to the spec of AGRP where it receives Case via coindexation with AGR. However, if it is to be assigned Case it has to be nominalized, hence the presence of D.

At this point we have to notice that these options yield in fact two different constructions: an impersonal (43a) and a personal one (43b). If the CP fails to move, the spec of AGRP is filled by a pronominal element (pro), which is allowed on the basis that MG is a pro-drop language. We will assume following standard assumptions in the literature (cf. Chomsky 1982, Burzio 1986, Borer 1989) that this is an expletive pro (notice that in MG there are no overt expletives like the English *it* and *there*). If, on the other hand, the CP moves to the subject position where it acquires a DP-projection, the derived construction is not impersonal. This seems to be evident given that in this case the structural subject is specific, or referential. The latter properties are of course due to the presence of D which contains features like [± definite], gender, number etc.

In a nutshell we could say that the failure of the CP-complement in passive structures to move to the subject position yields an impersonal construction where an expletive pro occupies the spec of AGRP. If the CP moves and therefore becomes the structural subject then we get a personal construction with a specific/referential subject[16].

5.2 Copula+adjective constructions

The next impersonal structures we are going to deal with are the copular *ine*+adjective ones. We will attempt to give only a partial explanation for these constructions here, since a full explanation would require more work on copular structures in general. Let us consider the following examples:

(45) a. ine fanero *oti lei psemata.*
be-3sg obvious-nom that tell-3sg lies-acc
"It is obvious that she tells lies".

[16]We could account for the differences between (43a&b) in terms of Chain formation. In other words, if in (43a) there is an expletive pro in the subject position and a CP in the VP-complement position, then we have an expletive-argument chain, i.e [pro, CP] (cf.Chomsky 1986a). According to this the expletive pro is assigned Case but is not theta-marked by the verb, since it is the CP that appears in an argument position. In (43b) on the other hand there is a movement chain formed, i.e [CP_i, t_i]. The CP in this case moves from an A- to an A-position where it is Case marked, and for this reason it acquires a DP-projection.

b. *(to) oti lei psemata* ine fanero.
the-nom that tell-3sg lies-acc be-3sg obvious-nom
"That she tells lies is obvious".

(46) a. ine kalo *na ehis filus.*
be-3sg good-nom prt have-2sg friends-acc
"It is good to have friends".

b. *(to) na ehis filus* ine kalo.
the-nom prt have-2sg friends-acc be-3sg good-nom
"For you to have friends is good"[17].

One possible explanation for the above sentences would be to assume that in (45a) and (46a) we have a complex adjectival construction (cf.Chomsky (1981)) where the CP is assumed to be the complement of the adjective, hence not in a Case-marked position. On this basis we still need an explanation for (45b) and (46b). Things appear to be more complicated in this case, since the presence of D seems to be optional. Let us first consider the case where there is a nominalized clause. Given our previous discussion (cf.section 4.2.2.1) we would expect that in this case the nominalized clause occurs in a Case-marked position and for this reason Det-insertion has taken place; this position could probably be identified as the subject (topic) position. If this turns out to be the case, then we would expect, according to our discussion about passive constructions, that there is a difference between (45a, 46a) and (45b, 46b) respectively. How could this difference be spelled out? Assume that in (45a) and (46a) we have a construction where the spec of AGRP, i.e the structural subject position, is occupied by an expletive pro. However, in (45b) and (46b) we have a nominalized clause which is assumed to be the subject (in topic position presumably) of the clause. The subject-topic in these examples is associated with a pro in the canonical subject position. This pro however, is assumed to be referential, therefore the presence of D is obligatory; Case is realized on the *to*-clause via coindexation with pro.

The problem is why in (45b) and (46b) the Determiner is not in fact obligatory, and can be omitted. First of all, let us assume that the presence vs absence of D in the examples under discussion implies two different constructions. When D is present we have a personal construction, while the absence of D yields an impersonal construction. As was already mentioned, in the case of nominalized clauses the pro in spec of AGRP is referential. If, however, we do not have a nominalized clause but a CP in this position (topic) the pro in the canonical subject position cannot be referential but is an expletive, hence our construction is impersonal.

[17]Notice that (45b) and (46b) are slightly dubious without the article *to*.

To summarize, we have argued in this section that copular impersonal constructions resemble their passive counterparts. If there is a nominalized clause the structure is assumed to be personal; if, on the other hand, nominalization does not take place, there is an expletive pro in the canonical subject position and the result is an impersonal construction. What remains unclear is why (43b) contrasts with the possibility of omitting *to* as in (45b) and (46b). This problem, however, will just have to be left open here.

6 Conclusion

In this paper I have attempted to give an account of the so called nominalized clauses in MG. In order to deal with these we have made the assumption that nominalized clauses are analysed as DPs; thus, the functional head D in MG may select an NP or a CP. The main claim has been that in the case of *to*-clauses the Determiner is inserted for purposes of Case assignment According to the CRP clauses do not require Case; however, when a clause appears in a Case-marked position it has to be assigned Case. Therefore, D is inserted to bear Case so that the sentences under discussion are not ruled out as ungrammatical. As far as passive impersonal constructions are concerned we have assumed that the CP can remain in complement position. If, however, it moves to the subject position it requires Case and therefore, Det-insertion takes place. The result then is a personal construction. This seems to be the case for the copular impersonal constructions as well.

References

Abney, S. (1986) Functional Elements and licensing. Paper presented to GLOW 1986, Girona.

Abney, S. (1987) *The English Noun Phrase in its Sentential Aspect*. PhD Dissertation, MIT.

Borer, H. (1989) Anaphoric AGR. In O.Jaeggli & K.Safir (eds.) *The Null Subject Parameter*. Dordrecht: Kluwer Academic Publishers.

Burzio, L. (1986) *Italian Syntax: A Government-Binding Approach*. Dordrecht: Reidel.

Chomsky, N. (1981) *Lectures on Government and Binding*. Cambridge, Mass.: MIT Press.

Chomsky, N. (1982) *Some Concepts and Consequences of the Theory of Government and Binding*. Cambridge, Mass.: MIT Press.

Chomsky, N. (1986a) *Knowledge of Language: Its Nature, Origin and Use.* New York: Praeger.

Chomsky, N. (1986b) *Barriers.* Cambridge, Mass.: MIT Press.

Chomsky, N. (1988) Some Notes on the Economy of Derivation and Representation. ms, MIT.

Christidis, A.-Ph. (1986) The Morpheme pu as a Definite Clause Nominalizer. *Studies in Greek Linguistics*: 7, 135-148.

Holmberg, A. (1988) *Word Order and Syntactic Features in the Scandinavian Languages and English.* PhD Dissertation, University of Stockholm.

Horrocks, G. & M.Stavrou (1985) Binding Theory and Greek Syntax: Evidence for Wh-movement in NP. *Studies in Greek Linguistics*: 6, 199-220.

Horrocks, G. & M.Stavrou (1986) A First Attempt to explain the Distribution of Adjectival Modifiers in Modern Greek Noun Phrases. *Studies in Greek Linguistics*: 7, 107-116.

Jackendoff, R. (1977) *X-bar Syntax: A Study of Phrase Structure.* Cambridge, Mass.: MIT Press.

Jaeggli, O. (1986) Passive. *Linguistic Inquiry*: 17, 587-622.

Koster, J. (1978) Why Subject Sentences don't exist. In S.J.Keyser (ed) *Recent Transformational Studies in European Languages.* Cambridge, Mass.: MIT Press.

Ouhalla, J. (1988) *The Syntax of Head Movement: A Study of Berber.* PhD Dissertation, University of London.

Ouhalla, J. (forthcoming) *Functional Categories and Parametric Variation.* To be published by Routledge, London.

Roussou, A. (1990) *Nominalization in the Syntax of Modern Greek.* MA Dissertation, University College London.

Stowell, T. (1981) *Origins of Phrase Structure.* PhD Dissertation, MIT.

Szabolcsi, A. (1987) Functional Categories in the Noun Phrase. In Kenesei (ed) *Approaches to Hungarian*: Vol.2, 167-189.

Tsimpli, I.-M. (1989) On the Properties of the Passive Affix in Modern Greek. In R.Carston (ed.) *UCL Working Papers in Linguistics: Vol.1*, 235-260.

Tsimpli, I.-M. (1990) The Clause Structure and Word Order in Modern Greek. In J.Harris (ed.) *UCL Working Papers in Linguistics: Vol.2*, 226-255.

Warburton-Philippaki, I. (1982) Provlimata Sxetika me ti Sira ton Oron stis Elinikes Protasis [Problems related to the Word Order in M.Greek]. In *Glossologia*: 1, 99-107.

Warburton-Philippaki, I. (1987) The Theory of Empty Categories and the pro-drop Parameter in Modern Greek. In *Journal of Linguistics*: 23, 289-318.

Warburton-Philippaki, I. & A.Papafili (1988) Categorization of Modern Greek Complement Clauses and Binding Theory. In *Studies in Greek Linguistics*: 9, 293-313.