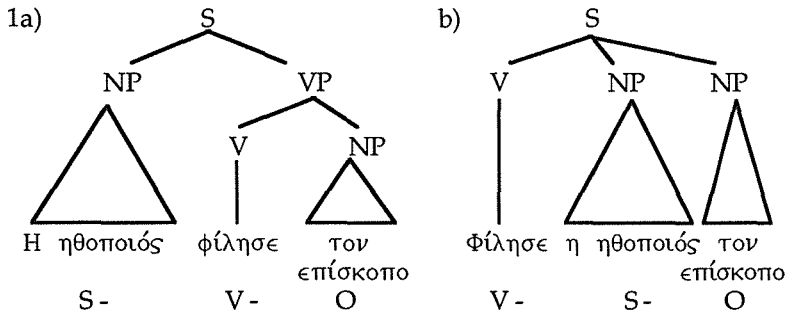


Clause structure in Greek: Evidence from subject-object asymmetries

Geoffrey Horrocks

I Introduction

In Horrocks (1983) it was argued that the basic word orders of Modern Greek were Subject-Verb-Object (SVO) and Verb-Subject-Object (VSO), as in 1a) and 1b).



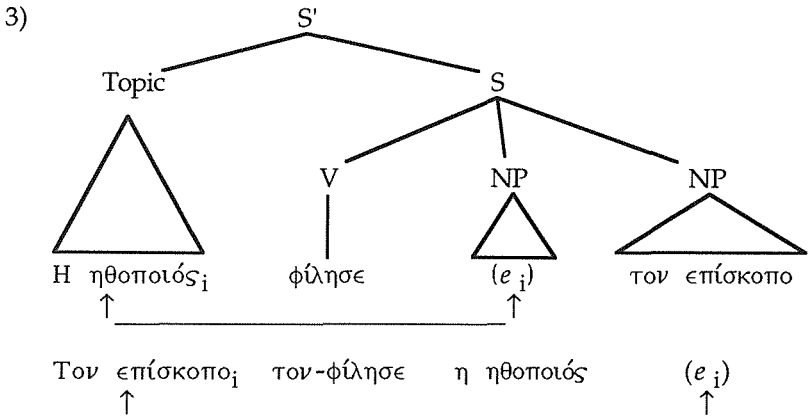
The first of these structures is assumed to be "configurational", i.e. the subject is structurally distinguished from the predicate (VP) and so appears in a position higher than that of the object, while the second is assumed to be "flat", i.e. with subject and object appearing side by side.

Since then both Philippaki-Warburton (1985) and Tsimpli (1990) have argued that the preverbal "subject" of 1a) is in fact a "topic", and that topics, regardless of grammatical function, typically appear in initial position in Greek. Thus in 2) it is the object rather than the subject which stands initially, and its topic status is marked by the "resumptive" clitic pronoun.

2) Τον επίσκοπο τον φίλησε η ηθοποιός

Philippaki-Warburton and Tsimpli therefore claim that Greek has only VSO as a basic word order, but allow for constituents whose functions are defined within this structure

(e.g. subjects and objects) to be topicalised by preposing. Accordingly they treat the sentence in 1a) as parallel to 2) in all relevant respects, united in the structure in 3).



The topicalised item, subject or object, appears initially in both cases, and the clause that follows is of the "basic" VSO type. S' is simply a label for the combination of a topic with an S. Where the subject is topic, as in the first example, the subject slot in the VSO structure is empty (e); where the object is topic, it is the object slot which is empty. In each case there is a relationship of coreference, marked by the use of the same subscript letter, between the topic and the empty position that determines the grammatical function, and hence the case, to be assigned to the topic. The "content" of the empty position in terms of person, number, case (and in part gender) is made explicit by a visible "agreement" element within the verbal complex; specifically, the verb ending in the case of topicalised subjects, a clitic pronoun in the case of topicalised objects.

The chief purpose of this article is to provide a better basis for determining the status of preverbal nominative Noun Phrases (NPs) in Greek; are they simply subjects in one of two basic subject positions, as in 1a) versus 1b), or are they preposed topics linked referentially to the subject position of a VSO structure, as in 3)? A variety of arguments are provided in support of one position or the other in the works cited above; here some evidence of a different kind is considered.

II Theoretical Preliminaries

Before presenting the relevant data, however, it is necessary to provide some theoretical background. First, a distinction must be drawn between Argument positions (A-positions) and non-Argument (A'-positions) positions, as in 4).

- 4) **A-positions:** S-internal positions associating constituents with a major grammatical function: subject, direct object, indirect object.

A'-positions: peripheral (S-external) positions associating constituents with a "scope bearing" role – as interrogatives, topics, etc.

Thus in terms of the diagrams in 1) and 3), the A-positions are the positions occupied by NPs under S. By contrast, the Topic position in 3) is an A'-position, a position outside S not associated with any specific grammatical function; subjects, objects and elements bearing other functions can all appear there. Instead, an item in this position is identified as the theme of the S that follows; this has "scope" over that S and is linked to an empty position that associates it with a grammatical function. To give a concrete example, in 5) below the NP *Bill* functions both as topic, by virtue of its initial position, and as object, by virtue of the fact that it is understood as if it occupied the empty position after *stand*. This is made explicit in the "translation" into a pseudo-logical formula, where *Bill* is treated as an external "operator" that "binds" the "variable" *x* in the object position of the S which defines the operator's scope.

- 5) Bill, I really can't stand
 As for *x*, *x* = Bill [_SI really can't stand *x*]

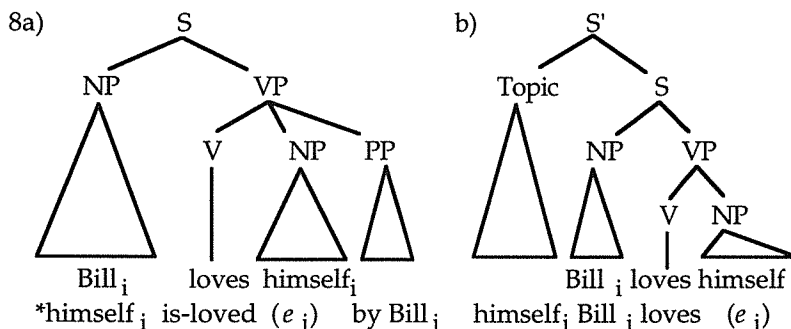
We are now in a position to ask the key question: do preverbal "subjects" in Greek behave as if they occupy an A-position (i.e. as simple subjects) or an A'-position (i.e. as topics)? The criterion to be applied in answering this question is given in 6).

- 6) Subject-object asymmetries are unaffected by movement to A'-positions.

To illustrate the force of this principle we may take the simple examples in 7).

- 7a) Bill loves himself/*Himself is loved by Bill
 b) Bill loves himself/ Himself, Bill loves

Clearly reflexive pronouns cannot appear in subject position in English. In 7a) the "passivisation" interchange between the postverbal object position and the preverbal subject position, both A-positions, produces an ungrammatical sentence. By contrast, the "topicalisation" interchange between the postverbal object A-position and the preverbal topic A'-position in 7b) presents no problems. This follows if we assume principle 6), together with the proposition that English SVO clause structure is configurational (i.e. as in 1a). A simple sentence would then have the structure of 8a), a sentence with a topicalised constituent that of 8b).

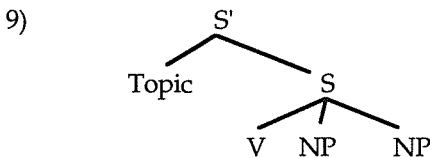


In 8a) subjects are structurally differentiated from objects, so that differential behaviour (asymmetries) might be expected on the basis of the greater prominence of the former. In particular, if we assume that reflexive pronouns cannot have structurally inferior antecedents, it follows that an object reflexive may have a subject as its antecedent, but that subject reflexives are impossible, because all their potential antecedents are necessarily structurally inferior. So when a reflexive as "logical" object with patient status is proposed to subject position as part of the process of forming a passive sentence (the empty position (*e*_i) marks the "original" position of the reflexive), the result is ungrammatical. Apparently, then, when we are dealing with an inter-

change between A-positions, as in passivisation, it is the final, and not the original, positions of the relevant NPs that enter into the calculation of structural prominence.

In 8b), by contrast, where the landing site is an A'-position, the preposing of the reflexive is unproblematical. Here the assignment of an antecedent is apparently based on the positioning of *Bill* and *himself* prior to the topicalisation of the latter; i.e. despite the preposing of the reflexive, it is the structural relation of its "original" object A-position with respect to that of the subject which determines the grammatical status of the example. In other words, for the purposes of the operation of the reflexive rule, the subject antecedent remains structurally superior to the reflexive object. Thus while displacement of a constituent to an A-position may change the relations of structural superiority that hold prior to movement, displacement to an A'-position does not.

Recall now that, according to the analyses of Philippaki-Warbuton and Tsimpli, all Greek sentences have a basic VSO structure. A sentence with a topicalised constituent therefore has the structure in 3), repeated here as 9).



Since subjects and objects are not structurally differentiated, differential behaviour is not predicted. This framework therefore implies, among other things, the existence of subject reflexives, apparently correctly.

10) Ο εαυτός μου φταίει

It also follows from what was said above that the absence of subject-object asymmetry in basic clause structure should also carry over when a subject or an object is topicalised to the preverbal A'-position. We therefore obtain the following predictions:

- 11a) If the *topic* theory of preverbal subjects is correct, Greek should behave uniformly as a VSO language with "flat" sentence structure, irrespective of whether the subject is preverbal or postverbal.
- b) If the *simple subject* theory of pre-verbal subjects is correct, Greek should behave as an SVO language with configuration sentence structure when the subject is preverbal, but as a VSO language with flat sentence structure when the subject is postverbal.

In the light of these predictions the relevant data can now be examined.

III The Data

We may begin with the examples in 12), where in each case the grammaticality judgement is based on the reading where Γιάννη is taken to be coreferential with either the subject or the object of αγαπάει, as indicated.

- 12a) * $[S \text{ Αγαπάει } (e_i) [NP_{\tau\eta} \text{ μητέρα του Γιάννη}_i]]$
 b) * $[S \text{ Του}_i \text{ αγαπάει } [NP_{\eta} \text{ μητέρα του Γιάννη}_i]]$
 c) % $[S [NP_H \text{ μητέρα του Γιάννη}_i] \text{ του}_i \text{ αγαπάει}]$

To understand the status of these examples, we must first consider the rules in 13).

- 13a) An antecedent cannot appear in the same NP or S as the pronoun it binds.
 b) A pronoun cannot command its antecedent (i.e. the constituent immediately containing the pronoun must not also contain the would-be antecedent).

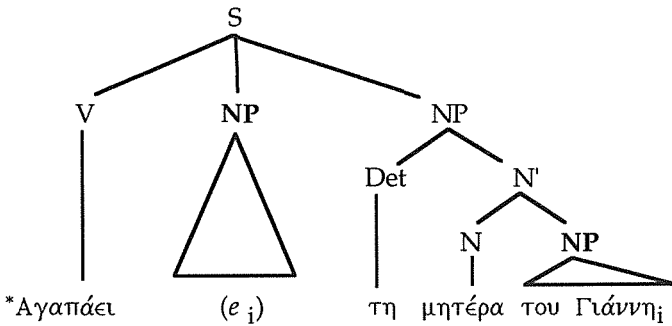
To see the force of these, consider the English examples in 14).

- 14a) * $[S \text{ John}_i \text{ loves him}_i S]$
 b) * $[S \text{ He}_i \text{ loves John}_i S]$
 c) $[S \text{ John}_i \text{ says } [S \text{ Mary } [VP \text{ loves him}_i VP] S] S]$
 d) * $[S \text{ He}_i \text{ says } [S \text{ Mary } [VP \text{ loves John}_i VP] S] S]$

The first violates 13a), the second both 13a) and 13b), since the constituent immediately containing *he* is S, and this obviously also contains *John*. 14c) is well-formed, however, because the NP and the pronoun are in different clauses, and the constituent immediately containing *him* is the VP of the subordinate clause, which clearly does not also contain *John*. 14d) by contrast is ungrammatical, because, although the NP and the pronoun are in different clauses, the pronoun clearly commands its potential antecedent; i.e. the S immediately containing *he* also ultimately contains *John*.

The structure of 12a) can now be represented as in 15).

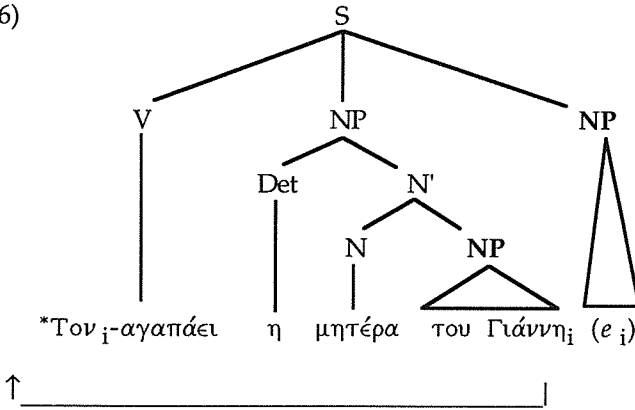
15)



If we take the subject here to be an invisible/empty pronominal (which nonetheless agrees with the verb in the usual way), it is clear that it commands its would-be antecedent, even though the latter appears inside an NP that does not also contain the former. The sentence is therefore ungrammatical.

The structure of the equally ungrammatical 12b) is provided in 16).

16)

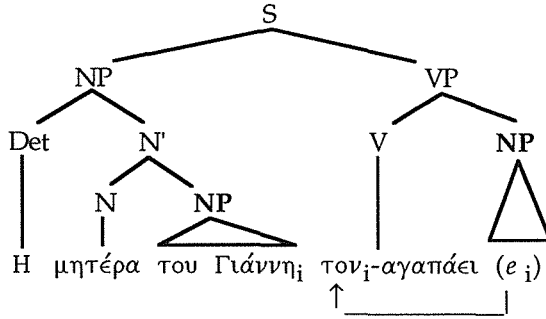


It is assumed that the pronoun here originates as a "regular" direct object in the usual A-position, but is then displaced because of its clitic status. But in either its original or its final position (adjoined to V) it is clear that the pronoun illegitimately commands its potential antecedent.

So far the rules in 13) have correctly predicted the grammaticality facts, provided we assume, as seems entirely reasonable, a flat VSO structure for the sentences concerned. The really interesting example, however, is 12c), where the subject is preverbal. Native speakers seem to fall into three distinct groups when presented with data of this type; some find the sentence grammatical with a coreferential reading, others find the sentence ungrammatical unless they take Γιάννη and τον to be two different people, while others still find it very difficult to make a judgement. The % sign at the beginning of 12c) therefore indicates that at least a "percentage" of speakers accept the sentence as grammatical.

A very natural solution to this state of affairs would follow directly if we assumed that both the "simple subject" and the "topic" theories of preverbal nominative NPs were in essence correct. Those who find 12c) grammatical would then assign it the structure in 17).

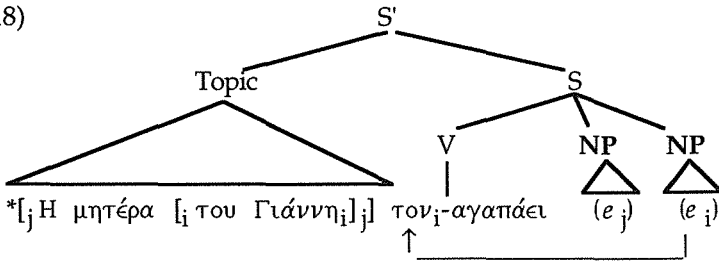
17)



The antecedent is inside an NP that does not also contain the pronoun, and, since the preverbal NP is simply a subject in its original A-position, the pronoun (whether in its initial or final position) does not command the antecedent. The sentence is therefore grammatical, given the assumption of a configurational SVO structure.

Those who find 12c) ungrammatical presumably assign it the alternative structure in 18).

18)



Since, as we have seen, topicalisation to an A'-position does not affect the superiority relations holding prior to the displacement, the antecedent (του Γιάννη) is effectively still contained within a subject NP (η μητέρα του Γιάννη) that is commanded by the object clitic. In other words, from the point of view of the rules determining possible antecedent-pronoun relations, this sentence is structurally identical to 12b)/16), and so has exactly the same ungrammatical status.

Finally, those who cannot come to a clear decision about the status of 12c) presumably waver between the two available analyses.

To confirm the plausibility of this approach we must now look for further evidence that preverbal nominative NPs may appear in both A- and A'-positions, as both simple subjects and topics respectively.

IV *Preverbal subjects in A-position*

Clear evidence that a preverbal nominative may indeed be simply a subject in an A-position is provided by the fact that there is a marked difference in status between the examples in 19).

- 19a) Το κορίτσι που ο Γιάννης συνάντησε...
 b) *Το κορίτσι που το Γιάννη τον συνάντησε...

All speakers are agreed that the appearance of an object NP between the relative marker *που* and the verb is ungrammatical (even if its topic status is explicitly marked by a resumptive clitic pronoun); the appearance of a subject NP in this slot is less problematical, however, and for some speakers at least, is perfectly acceptable. This difference could not be explained if preverbal subjects and preverbal objects were both simply topics in the same A'-position.

Similar remarks apply to the asymmetry between preverbal subjects and objects in adverbial interrogatives.

- 20a) Γιατί/πότε ο Γιάννης συνάντησε τη Μαρία;
 b) *Γιατί/πότε το Γιάννη τον συνάντησε η Μαρία;

If the topicalisation of the object NP to preverbal position is ungrammatical in 20b), the alleged topicalisation of the subject in 20a) should also be bad. The fact that it is not again strongly suggests that in this position the subject is simply a subject, and that the relevant preverbal position is therefore an A- and not an A'-position.

The evidence, however, is not all one-way, and in the next section some data are examined which suggest that preverbal nominatives may indeed be topics.

V Preverbal subjects in A'-position

We may begin with the observation that 21), with an interrogative object pronoun and a preverbal subject, is ungrammatical.

21) *Ποιόν ο Γιάννης συνάντησε;

It is important to note that there is no subject-object asymmetry in such cases, since 22), with a topicalised object in the same position, is also ungrammatical.

22) *Ποιός τη Μαρία την συνάντησε;

Nonetheless, there is no absolute restriction on the combination of a topic with an interrogative pronoun, since the examples in 23), where the topic precedes the interrogative, are both well-formed.

23a) Ο Γιάννης ποιόν συνάντησε;

b) Τη Μαρία ποιός την συνάντησε;

It seems, then, that the topic A'-position must precede the position occupied by interrogative pronouns, and, on the basis of 23a), that preverbal subjects may therefore be topics.

Since interrogative pronouns are also clearly operators,

24) **For which x, x a person** [did John meet x]

the position they occupy must also be an S-external A'-position, so that the examples in 23) can be translated into pseudo-logical formulae as in 25),

25a) **As for y, y = John: for which x, x a person** [did y meet x]

b) **As for y, y = Mary: for which x, x a person** [did x meet y]

and the ungrammaticality of 21) and 22) can then readily be explained as the result of putting topic and interrogative operators in the wrong order; apparently topics have to have "wider" scope than interrogatives.

This analysis accounts for 22) well enough, but the generalisation of the solution to 21), though clearly correct when the subject is topicalised, does not account for the full array of facts. We have already seen that there is also a preverbal subject A-position which is not available to topicalised objects, so the question to be asked now is why this A-position cannot be filled when there is an interrogative pronoun in the same sentence. The only possible answer is that preverbal subjects occupy the same structural position as pronominal interrogatives (cf. Horrocks (1983 and 1992), Drachman (1989 and 1992), and Drachman and Klidi (1992)). In this way the fact that the two items cannot co-occur preverbally in the same sentence is neatly explained; there is only one immediately preverbal position available for subjects and pronominal interrogatives, and this cannot be "filled" twice over. It should be noted, however, that interrogatives always take precedence over subjects when both are present; i.e. the inherently scope-bearing item must take priority, so that its syntactic position may overtly reflect its semantic function as an operator. There is, furthermore, an important corollary to the conclusion that preverbal subjects and pronominal interrogatives are in complementary distribution. If subjects must occupy A-positions and interrogatives must occupy A'-positions, we are obliged to draw the further conclusion that the position in question is inherently neutral between A- and A'-status, and that it takes its character from its contents; i.e. it is an A-position when filled by a subject and an A'-position when filled by an interrogative (cf. Fukui and Speas (1986), Drachman (1989 and 1992), Drachman and Klidi (1992) and Horrocks (1992)).

Clearly such an "ambivalent" position cannot easily be taken to be the "basic" subject position, and the view that VSO is the fundamental order of constituents in Modern Greek (i.e. the one in terms of which the core grammatical functions of subject, object etc. are defined) would therefore appear to be justified. Nonetheless, the usual corollary of this view, that the immediately preverbal "subject" position is in reality in the position reserved for topicalised constituents, is manifestly false; subjects *qua* subjects may appear there to the exclusion of topics, and are in complementary distribution with interrogative pronominals. The topic position proper, where subjects may also appear, is located to the left of this A/A'-position.

The answer to the question posed earlier is now clear therefore; a preverbal nominative NP may be simply a subject, in which case it appears in the A/A'-position just identified, or it may be a topic, in which case it appears in the topic A'-position at the leftmost extremity of the clause. It remains now to formalise the analysis, and to place the facts of Greek in a broader theoretical context.

VI Conclusions

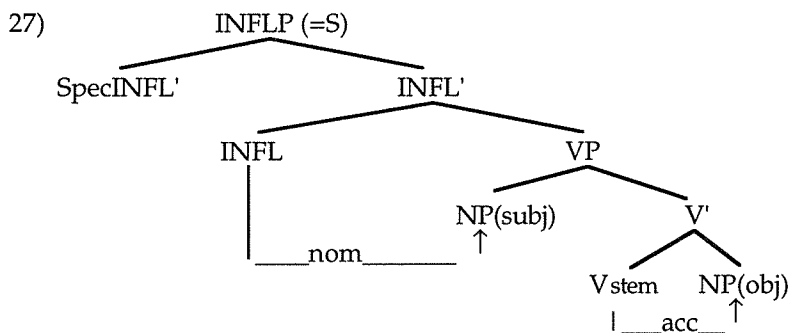
To summarise, the results of the discussion so far are:

- 26a) The basic clause structure of Greek is non-configurational VSO.
- b) The immediately pre-verbal position in a Greek sentence is a neutral A/A'-position that takes its character from its contents; these may be a subject NP (leading to A-position status) or an interrogative pronoun (leading to A'-position status), with the latter having priority when both are present.
- c) The topic position, where subjects, objects and other items may appear, is the leftmost position of the clause.

We must now tackle the question of why there are two subject positions in Greek, and how nominative case may be assigned to them. The two questions are in fact intimately related, and the answer to the second leads on naturally to consideration of the first.

One obvious principle of case assignment is that NPs are case marked by the heads that govern them; e.g. verbs and prepositions typically assign specified cases to their objects within VP and PP, etc. It should be noted, however, that while particular verbs assign designated cases to their object(s) regardless of whether they are in finite or non-finite form, only finite verb forms assign nominative case to subjects. We might say, therefore, that nominative case is a corollary of finiteness rather than something assigned by particular verbs. Following the logic of this argument, we could extend the principle of case assignment under government by supposing that finiteness is

carried by a verb's inflectional ending and that finite inflections may in principle assign nominative case to a governed subject, just as particular verb stems assign, say, accusative or genitive case to a governed object. Such an extension would require us to regard S as an Inflection Phrase whose head assigns nominative case, just as the head of VP assigns accusative case. Thus in (27), the verb stem case marks its object, and finite INFL case marks the subject.



Once accusative case assignment has been carried out, V must, of course, be "raised" to combine with its inflection, giving a VSO order. It is assumed here that all the "arguments" of a verb (i.e. subject, object, indirect object) originate within VP and are case marked there. A "flat" VSO sentence is therefore reinterpreted as one in which subject and object both appear in VP, and the structural superiority of a subject in an "configurational" SVO sentence is reinterpreted to refer to a situation in which the subject is in a position external to VP (in fact in the specifier position of INFL', i.e. SpecINFL', see below).

Clearly this option of nominative case assignment under government is not universally available, otherwise all languages would have basic VSO order like Modern Greek. Since case assignment under government normally requires a lexical head (e.g. a verb or a preposition), we might argue that nominative assignment under government is only possible when a verb stem has been raised to combine with a (finite) inflection to create a "derived" lexical head incorporating a real lexical item. Nominative assignment under government would then follow from the possibility of verb raising.

In this connection, note the contrast between Greek and English in 28), where in each case the verb in bold face has been raised from the VP-internal position marked (*v*).

- 28a) *John kissed [often (*v*) Mary]
 b) John has [often (*v*) kissed Mary]
 c) Ο Γιάννης φιλούσε [συχνά (*v*) τη Μαρία]

Assuming that *often/συχνά* are VP-internal adverbs, it would seem that verb raising is impossible in English unless we are dealing with an auxiliary (contrast 28b) with the ungrammatical 28a)), while in Greek it can apply freely (cf. Pollock (1989) for the original comparison between English and French on this basis). This distinction between Greek and English might be explained in terms of the relative "strength" of Greek inflectional morphology, where verb endings still play an independent syntactic role not only in assigning case but also in determining the person and number of an "empty" subject. This is in sharp contrast with the "weakness" of the English system, where only the third person singular of the present tense has a distinct termination and even this is no more than a conditioned marker of agreement with an obligatory overt subject NP.

How, then, is nominative case assigned in an SVO language like English which does not permit verb raising? We should note first of all that items which specify a phrase agree as far as possible with the head of the phrase. In 29), for example, the head of the NP, *γυναίκες*, forces the specifier of the NP to agree in number, gender and case.

- 29) [[μερικές] γυναίκες]
 ↑_{-nom/3/pl/fem-|}

In English the agreement requirements are fewer, but we must still say *those women, this man*, etc. Now, since INFL in 27) is *inter alia* an element with which the subject must agree, either overtly as in Greek or largely covertly as in English, we may see it as essentially pronominal in character, bearing not only features of person and number but also nominative case. Thus if a subject NP cannot be assigned nominative case under government within VP because V does not raise to INFL, there is now another possibility. Since a specifier must agree with its head, a subject

NP can be raised out of VP to the specifier position within the Inflection Phrase (SpecINFL'), where it will agree with INFL in person, number and nominative case. Nominative case can therefore be assigned to a subject NP by virtue of the agreement requirement imposed under the Specifier-Head relationship. Languages which follow this course, like English, are obviously SVO languages with subjects external to VP in a "configurational" clause structure.

The discussion in the preceding section, however, showed that SpecINFL', the only subject position in English, is in Greek only optionally available as a subject A-position. Since subjects in Greek may remain within VP and receive nominative case there under government, there is naturally no need for compulsory raising to the higher position, which is therefore primarily an A'-position (for pronominal interrogatives), serving only secondarily as a subject position if/when optional NP-raising forces Spec-Head agreement.

At this point we should recall Greenberg's famous universal concerning VSO languages (Greenberg (1963)):

- 30) Universal 6: all languages with dominant VSO order have SVO as an alternative or as the only alternative basic order.

This describes Greek perfectly, and we now have the necessary mechanisms for assigning nominative case to the two subject positions concerned. To explain the availability of both, let us assume that Spec-Head agreement is a universal requirement in all phrases, so that the agreement of a subject in SpecINFL' with the head INFL, including the assignment of nominative case, is universally required when/if a subject is raised there. By contrast, nominative assignment to a subject within VP is clearly not universally available, and depends on the existence of verb raising (and "strong" verbal morphology) in the language in question. It follows from these assumptions that languages with the latter (VSO) option, like Greek, will also have the former (SVO) option, but that some languages, like English, will have only the former (cf. Koopman and Sportiche (1991) and Cardinaletti and Roberts (1991) for a wider discussion of these options and their implications). If we now assume that nominative assignment takes place once all NP-movements have been

completed, as seems necessary if we are to explain the assignment of nominative e.g. to a "derived" subject in a passive sentence, we can say that subjects originate in Greek within VP, thus giving the language a basic VSO order, but that, grammatical constraints permitting, they may freely raise to the more prominent SpecINFL'. Then whether raising takes place or not, there is a mechanism for assigning nominative case to the subject NP.

The circumstances that favour subject raising, given that this is grammatically permissible, cannot be gone into in detail here, but we may briefly mention the property of specific reference as a key factor. This extends beyond definiteness, as the two sets of data in 31) show.

- 31a) *Σεισμός έγινε στη Θεσσαλονίκη
Έγινε σεισμός στη Θεσσαλονίκη
- b) Μια παλιά γνωστή μου με πλεύρισε
Με πλεύρισε μια παλιά γνωστή μου

In other words, sentences with referential subject NPs show a clear tendency to mark the subject-predicate split syntactically by extracting the subject from VP.

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