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290r*: Harvard Studies in Syntax and Semantics Vol. II (edited by J. Aissen & J. Hankamer). Cambridge: Harvard University Department of Linguistics, 1976

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5. For some speakers, however, the judgments of the source sentence versions of (69-70) are nearly as bad as the judgments for the TI and PPEN versions. This means that, for these speakers, the hypothesis that Tl and PPEX produce results of equal grammaticality cannot be tested in these cases, since we don't know whether the ungrammaticality of (69-70)b,c results from the badness of their sources or from the application of TI and PPEX.

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RAISING IN MODERN GREEK: A COPYING PROCESSY Brian Joseph

1. Introduction

In Lodern Greek, there exist surface alternates of the following sort:

- (1) a. Gelo na figi o yanis want-leg ptl. leave-3sg-SUBJ John-NOK 'I want John to leave'
 - b. Gelo ton yani na figi John-ACC 'I want John to leave'
 - Georo por o yanic inc eksipnos consider-1eg COMP NOM be-3eg smart-NON 'I consider John to be smart'
 - b. Georo ton yani pos ine eksipnos 'I consider John to be smart'

where the (a) sentences have an embedded clause with a fullyspecified NP subject in the nominative case, and the (b) sentences have an NP, corresponding to the embedded subject of the (a) sentences, which is in the accusative case, and has moved to the left of the verbal particle $\underline{\mathbf{n}}\underline{\mathbf{n}}$ or the complementizer pos. Each sentence pair has the same basic meaning, perhaps differing only in some ill-defined way as to emphasis or focus. Moreover, with respect to similarities between the (a) and the (b) sentences, it is important to note that there is no difference, morphological or otherwise, in their respective embedded verbs -- in each case, the verb is fully finite, marked for both person and number. Thus,

the case-marking and the word-order are the only superficial differences between the (a) and the (b) sentences.

Nonetheless, it can be shown that these differences are not merely due to idiosyncrasies of Greek case-marking and/or word-order, but rather that they are indicative of the fact that a rule has applied in the derivation of the (b) sentences which has not applied, in the derivation of the (a) sentences. This rule is the rule of Subject-to-Object-Raising, by which a subject NP1 in a lower clause becomes the object in a higher clause. The concerns of this paper, then, will be two-fold. First, arguments supporting this proposed Raising analysis for the (b) sentences will be given. Once this analysis has been established, the nature of the Raising process will be investigated, with the purpose of determining whether the rule operates by removing the lower subject from its clause, leaving behind a "punctured" clause-remnant, or by copying that NP out of its clause, so that the embedded clause is still intact after Raising has taken place. This last question is not as trivial as it might seem, for Greek independently has a rule of Subject-Pronoun-Drop, so that under normal conditions, a copy left by the raised subject would not get a chance to surface as such. More will be said later about Subject-Pronoun-Drop.

2.0 Arguments for Raising

In order to prove that the rule of Raising is operative

in the derivation of the (b) sentences above, two types of evidence are necessary. First, it must be shown that in the structure represented by the (b) sentences, the accusative NF is not the underlying object of the matrix verb, as it would be if the verb were subcategorized for two EP's, analogous to the English verb persuade. This type of structure will be referred to throughout as an Object-EQUI subcategorization. Second, it must be shown that the accusative NP is in fact a member of the upper clause.

- 2.1: The Greek verb $\underline{p100}$ 'persuade' must have an object-EQUI subcategorization because of sentences such as the following:
 - (3) episa ton yani pos i maria agapai ton yorgo persuaded-isg ACC COMI Mary-LCC. love-3sg George-ACC 'I persuaded John that Lary loves George'

Thus, it is instructive to compare its properties with those of the putative Raising verbs <u>Qelo</u> 'want' and <u>Qeoro</u> 'consider'. In particular, there are several differences in behavior between <u>Qelo</u> and <u>Georo</u> on the one hand, and <u>piQo</u> on the other, differences which argue against an Object-EQUI subcategorization on <u>Gelo</u> and <u>Qeoro</u>.

- 2.1.1: For one thing, there is synonymy between a sentence whose clause embedded under <u>Gelo</u> is active and the corresponding one whose embedded clause is passive:
 - (4) a. Gelo ton yani na eksetasGi apo ton yatro
 John-ACC examine-PASS-3sg by the doctor
 'l want John to be examined by the doctor'
 - b. Gelo ton yatro na eksetasi ton yani the doctor-ACC examine-ACT-3sg John-ACC

'I want the doctor to examine coin'

The only difference between (4a) and (4b) is whatever difference of emphasis there is between active and passive sentences in general--both refer to the same event which is desired to take place. The same holds for <u>Georo</u>, for (5a) with an active complement is synonymous with (5b) with a passive complement (consisting here of the copula plus the past passive participle):

- (5) a. Georo ton petro pos eklepse afto ton skilo Feter-ACC CCMF stole-3sg this-the-dog-ACC 'I consider Peter to have stolen this dog'
- b. Georo afto ton skilo pos ine klemenos apo ton petro be-3sg stolen-NOM by
 'I consider this dog to have been stolen by Peter'

Crucially, this is not the case with the verb rife 'persuade':

- (6) a. episa ton yatro na eksetasi ton yani persuaded-isg doctor examine-3sg John-ACC 'I persuaded the doctor to examine John'
- ≠ b. episa ton yani na eksetas01 apo ton yatro examine-PASS-3sg
 - 'I persuaded John to be examined by the doctor'.

This is exactly the result that would be expected if <u>Oelo</u> and <u>Oeoro</u> did not govern underlying Object-EQUI subcategorization, but rather were subcategorized for only a sentential NP complement, and would constitute an explanatory problem if these verbs governed two NP's underlyingly, since (4a) and (4b), as well as (5a) and (5b), would have different deep structures, but would have the same basic meaning. The accusative NP in (1b) and (2b) therefore cannot be underlyingly an object of the matrix verb, and consequently must gain that status in the

course of the derivation.

idiomatic reading intact:

2.1.2: Furthermore, for at least some speakers of Greek, an idiom consisting of a verb plus an accusative object can be passivized and embeaded under <u>Geto</u> in the construction of (1b) and still preserve the idiomatic reading. This is impossible with <u>piGo</u>, where such a sentence is ungrammatical. Thus in the phrase <u>dino ksilo se kapyo</u>, literally "I give wood to some-; ore" but idiomatically 'i spank someone', <u>ksilo</u> 'wood' can be

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(7) Gelo ksilo na tu doGi him-GEN give-FASS-3sg 'I want him to be spanked' (Idiomatic)

The corresponding $\underline{pi \, \forall o}$ sentence is ungrammatical in the idiomatic reading: 4

passivized, and the whole phrase embedded under Gelo with the

(8) *episa ksilo na tu do@i
'I persuaded him to be spanked'.

It would be impossible for <u>Gelo</u> to have Object-EQUI subcate-gorization and still preserve the idiomatic reading of this phrase, under the reasonable assumption for semantic interpretation that only the parts of idioms that are together in deep structure will be interpreted idiomatically. Even more importantly, <u>keilo</u> here has no reference, and therefore could not trigger EQUI, whose primary condition for applicability is co-reference. The facts in (7) are exactly what would be expected if <u>Gelo</u> had only a sentence as complement in underlying structure.

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Essentially the same argument can be constructed on the basis of subject idioms such as ksilo pefti (se kapyo), literally "wood falls (on someone)" but idiomatically 'someone gets hurt/suffers (in a fight)'. As expected, the idiomatic reading is preserved when this expression is embedded under <u>Gelo</u> and <u>Georo</u>, but crucially, not when under <u>pigo</u>:

- (9) a. Gelo ksilo na pesi se afton
 fall-3sg on him-ACC
 'I want him to suffer (in the fight)' (Idiomatic)
 b. Georo ksilo na exi pesi se afton
 - Georo ksilo na exi pesi se afton
 have-AUX fallen
 I consider him to have suffered (in the fight)
- 'I persuaded him to get hurt (in the fight)'
 Again, these facts follow if <u>Gelo</u> and <u>Georo</u> do not have ObjectEQUI subcategorizations, but rather are subcategorized for a
 bare sentential complement in underlying structure.

2.1.3: Finally, given the evidence of the preceding sections, there is another argument against taking <u>Oelo</u> and <u>Georo</u> to be Cbject-EQUI verbs. If these verbs were subcategorized for the Object-EQUI construction, then heavy restrictions would have to be put on the appearance of this sub-categorization. In particular, sentences of the type <u>Oelo/Oeoro NP_i COMP NP_j VP</u>, would have to be prevented from surfacing; that is, when such a construction occurred underlyingly, the conditions for Object-EQUI would have to be met obligatorily to avoid such sentences as:

(11) *Qelo ton yani na figi i maria

(10) *episa ksilo na pesi se afton

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whereas there are verbs that do require such restrictions, for example, anaperzo 'force', it is important to note that these verbs do not behave like <u>Gelo</u> and <u>Georo'</u> with respect to the properties mentioned in the previous sections. Thus, while the need for a restriction on <u>anaperzo</u> is principled, the need for a similar restriction on <u>Gelo</u>, <u>Georo</u>, and any other verbs exhibiting similar properties is purely an artifact of the decision to regard these verbs as being able to govern <u>NF + S</u> complements underlying. Thus it may be concluded that <u>Gelo</u> and <u>Georo</u> do not have Object-EQUI subcategorization underlyingly, but rather have only a bare sentence as their object complement in deep structure.

- 2.2: The evidence that the accusative NP in (1b) and (2b) is in fact a member of the upper clause comes from two sources, Reflexivization facts, and the allowable readings for sentential adverbs.
- 2.2.1: Reflexivization in Greek involves the use of the nominal form ton eafton. Literally "the self", plus a possessive pronoun coreferent with the antecedent—although this type of reflexivization is somewhat elevated stylistically, and is representative of more educated speakers, nonetheless it is a part of current colloquial Greek. The process which introduces this reflexive must be clause-bounded, as indicated by the following sentences:

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- (12) a. *ego nomizo pos den agapai ton eafton mu I think-1sg COKF not love-3sg the-self-of me "I think that she doesn't love myself'
 - b, ego nomizo pos den me agapai me-ACC-CLIP

'I think that she doesn't love me'.

In (12), we see that the presence of a clause-boundary between two coreferent MP's requires that the second NF be a non-reflexive form, under normal discourse conditions. 7 We shall refer to this Reflexivization process as Ordinary Reflexivization, a process which is restricted to operating within the limits of the simple clause.

The evidence for Raising comes from the fact that the accusative NP in (1b) and (2b) may be the reflexive form, ton eafton, when coreferent with the matrix subject:

- (13) a. Oelo ton eafton mu na petixi want-1eg the-self-of me succeed-3eg 'I want myself to succeed'
 - b. Georo ton eafton mu pos ine eksipnos consider-1sg be-3sg smart-NCL 'I consider myself to be smart'.

If the accusative NP in the putative Raising sentences were not a member of the upper clause, then Ordinary Reflexivization would have to be needlessly complicated to account for these cases. Raising therefore has indeed made the downstairs NP a member of the upper clause.

- 2.2,2: The argument from the reading of adverbs is based on the following sentences:
 - (14) a. iQela o yanis fonakta na diavasi to vivlio wanted-1sg NOW loudly read-3sg the book

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- "I wanted dohn to read the book loadly"
- b. iGela ton yani fonakta na diavasi to vivlio John-ACC read-3sg (I made it known) loudly (that) I wanted John to read the book'
- (15) a. Georg o yanis distince inc kakurgos consider-lag Nos unfortunately be-3s, criminal ti consider John to be, anfortunately, a criming 1
 - b. Georo ton yani distixos pos ine kakurgos John ACC CGAP 'Unfortunately, I consider John to be a criminal'
- Die (a) and (b) sentences in (14) and (15) differ as to what the adverb modifies. In (14a) and (15a), the adverb modifies the embedded verb9, while in (14b) and (15b), it describes the manner in which the action of the main verb is carried out.
- Siven these contrasts, there is an argument for the accusative NP ton yani in (14b) and (15b) being in the upper clause based on the following principle, formulated in Fostal (1974)10:
 - (16) A "sentential" adverb cannot be inserted in a complement clause.

This principle allows "insertion of main clause 'sentential' adverbs between the immediate constituents of the main clause, but not in a position inside complement sentences" (Postal (1974), p. 147). Assuming this principle to be applicable to languages other than English, 11 the facts of (14) and (15) can be accounted for straight-forwardly if the accusative NF's in the putative Raising sentences are members of the upper clause. That is, the contrasts of (14) and (15) are explicable if the

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the adverbes position between the accusative RF and the complementizer pass or the particle na is to the left of the embedded clause-boundary. This presupposes that in sentences such as (14a), where the nominative RF is to the left of the particle na, it is still under the domination of a sentence-node. These contrasts in adverbial reading would be difficult to account for if Raising did not change the clause boundaries. In that case, one might try to base these contrasts on the case-marking of the adjacent RF (that being the only superficial difference between (14a) and (14b), for instance), but that is the sort of analysis that cries for explanation, for there is no reason to presume that case-marking on an adjacent noun should have any effect at all on adverb interpretation.

However, if we take the change in case-marking to be a reflection of a structural change in the position of the embedded clause-boundary, then we can easily account for the difference in adverbial reading, because in the (a) sentences, the adverb will be in the lower clause, while in the (b) sentences, it will be in the upper clause. In this regard, it should be noted that the case-marking of accusative on the putative raised NP is exactly what would be expected for a direct object of a verb, whereas if that NP were not the object of the matrix verb, the case-marking assigned to it would be anomalous. Thus, we may conclude that sentences of

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type of (1b) and (2b) are in fact derived by a rule of maining which makes a subject of a subordinate clause into an object of a supercodinate clause.

3.0 The Kature of the Laising Liocens

Given, then, that made a rule of kaising does exist in wreek, there are some properties of the kaising sentences in particular and breek syntax in general which make it possible to consider the following question concerning the nature of this process--in the Raining accomplished by the actual removal of the subject Ni of the lower clause or by the copying of that NF out of its clause? That is to say, is the process one in which the lower clause becomes deprived of a subject, or one in which the lower clause remains intact after the application of Raising? 12 The surface structure under a copying analysis would be derived by pronominalization of the lower NP, if it is not already a pronoun, and then deletion by the independently-needed rule of Unstressed Subject Pronoun Drop. An analysis similar to this has been proposed for Raising in English 13 but was ultimately rejected by Postal (1974, p. 266-267) because it would require an otherwise unmotivated rule for English to delete the lower occurrence of the NF.

It is important to note that the independent rule of EQUI-NP-Deletion, which in earlier accounts (e.g. Postal (1971) and Grinder (1972)) was taken to be the rule performing the necessary deletion of the lower NI in fact cannot operate here, for as Fostal (1974) points out, it would then have to delete such EF's as there, tabs (in tabs be kept on), and others, which can be Raised, but which must be considered to be non-referential, and thus unable to trigger the rule of EQUI, which depends on conditions of co-reference. Loreover, even if it were possible to redefine the conditions on EQUI so that NF's such as there could be subsumed under it, there would still be a problem with having EQUI apply to the cutrut of a Raising-by-Copying process in English. This is so because EQUI would have to be obligatory whenever Raising occurred, since no overt NF can surface in the lower clause of a Raising sentence, even though it is generally a lexically-governed rule which is optional with many verbs (e.g. I expect that I'll go, I persuaded John, that he, should go). That is to say, for the Raising cases, EQUI would be governed not by the matrix verb involved, but rather would depend on the application of another rule. Thus, by any account, a Copying analysis for English Raising would involve an unmotivated complication of the grammar, either by extra statements about the application of EQUI, or by the addition of an otherwise unnecessary deletion rule.

For Greek, though, Raising by Copying would not entail any such complication of the grammar. As has been mentioned earlier, Greek independently has a rule deleting unstressed subject pronouns. A normal Raising sentence would not be a situation in which the subject pronoun would receive stress,

cally be accounted for by the grammar. Thus the theoretical problems for English inherent in an analysis of Raising or a copying process do not appear to hold for Greek.

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kereover, there is one superficial preparty of Raining sentences in Greek which might lead one to suspect that Greek Raising is something other than a rule by which the lower verb is simply deprived of its subject. As roted above in section one, the verb in the embedded clause after maising is fully finite, showing marking for both person and number. Thus, there is no de-finitization accompanying the Raising process.14 Fostal (1974, p. 269, 366) has conjectured that Raising is always accompanied by the de-finitization of the clause that loses its subject. Though lostal does not make explicit what he actually means by "finite verb", his remarks make sense if we take it to mean a verb inflected for person and number. Although this hypothesis cannot be maintained in its strongest form, because in Japanese, Raising leaves behind a fully finite clause, it may be tenable, as Fostal himself suggests, but does not make explicit (1974, p. 386), in a weaker form, ad hot though it may seem, that excludes verb-final languages. Greek, however, would be a counter-example to even the weakened form of this universal, for it is not a verb-final language, yet the verb in the lower clause continues to keep the person and number marking appropriate before Raising.

In this regard, it should be mentioned that in general, reek does not have non-finite verb-forms -- there is no infinitive proper in the language, only inflected subjunctive verb forms marked with the verbal particle na, which appear where other languages have infinitives. 15 however, under at least one interpretation of Fostal's claim, that only languages with appropriate non-finite verb forms could have a rule of Raising. we might expect to find that Greek did not have a Raising rule. 16 Inus the Greek facts can be taken to bear on the validity of Fostal's claim, and conversely, whatever validity his claim may have can be grounds for suspecting that there may be more to Raising in Greek than just the simple removal of a subject from its clause, for if the subject of the lower clause is copied out of its clause, the lower clause would still have a subject after Raising and there would be no reason to expect the verb to become de-finitized.

3.1: The syntactic evidence for Raising-by-Copying in Greek is of two types. The first concerns both the fact that a province form corresponding to the Raised NF can appear overtly on the surface, and also the conditions under which it can occur. The second is based on the nature of the apparent clause-remnant after Raising. If Raising is accomplished by Copying, then the prediction is that the embedded clause will behave with respect to certain processes as if it were a full clause that had a subject, and not a "punctured" clause that had lost

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thus the nature of the operation of the process in question. Thus the nature of the complement after kaising can specifically be compared with the one in Object-EQUI structures, as with the verb piec 'persuade', under the crucial assumption that there does exist a rule of Object-EquI in the language. This is not a trivial assumption, since Greek has a rule of Subject Ironoun Drop. Thus, it is conceivable that instead of EQUI applying, what is operative in the derivation of (18) from (17):

- (17) episa ton yani [pos o yanis fevgi]
- (18) episa ton yanl na figl persunded-lag John-ACC leave-Jug-SUBJ 'I persunded John to leave'

and then Subject Ironoun Grop, which is presumably a late rule, since, among other things, it is discourse-conditioned. Evidence that bears on this assumption comes mainly form the contrasts in the behavior of the respective sentential complements to pigo and to Raising verbs such as gelo, for they seem to be hard to account for if pigo sentences have a subject in their lower clause throughout the course of their derivation, up to the point at which Subject Pronoun Drop applies. Although the question of Raising-byCopying and the existence of Equi are independent problems, they intersect in the second set of data to be treated here. Thus, these data will in essence be testing the following bi-partite hypothesis:

(19) Modern Greek has Raising-to-Object-Position by

Corying and not by Kemoval of the subject of the lower clause, and an actual rule of EdUl-NF-Deletion from Object-Fosition (Object-EdUl)

while the first set of data will be of relevance only to the first part of (19), namely, that creek Raising is by Copying. Finally, it should be said here that in testing to see whether Greek Raising is by a Copying process, it is being tacitly assumed that a language would not have both Raising-by-Copying and Raising-by-Removal of the lower subject. If this assumption is wrong, then the task becomes one of determining what the conditions for Copying as opposed to Removal actually are. Nothing more will be said about this assumption here.

3.21 As mentioned above, a pronoun coreferent to the Raised NP can appear in the downstairs clause, under appropriate con-

- ditions, so that (20) is a possible variant of the Raising construction in (21):

 (20) (?)@eoro ti maria pos afti ine eksipni
 - consider-lag mary-ACC she-NCN be-3sg smart-NON.-FEG.
 'I consider Mary to be smart'
 - (21) Georo ti maria pos ine eksipni 'I consider Mary to be smart'

This is a situation which directly points to Raising as a Copying process, for the occurrence of the pronoun would be difficult to account for if Raising removed the lower subject entirely from its clause. Such sentences would either have to be due to an underlying Object-EQUI subcategorization on these verbs, a possibility which was rejected earlier (see pp. 3-7), or else to an ad hoc rule which, after kaising had operated,

copied the appropriate prenoun downstairs.

Sentence (20) is marked (?) to indicate that it is well-formed only if the pronoun receives emphasis. Otherwise, the presence of the coreferent preson downstairs is superfluous and makes the sentence unwieldy—while it is perhaps not ungrammatical, neither is it really dreck. The reason for this is that subject pronouns in Greek generally must be stressed on the surface; compare (22), with no surface subject pronoun, with (23), where the pronoun appears:

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- (22) ida ton yani xbes ke mu ipe kati saw-1sg John-ACC yesterday and me told something 'I saw John yesterday and he told me something'
- (23) (?)ida ton yani x@es ke aftos mu ipe kati he-Ett told-Bsg 'I saw Jeln yesterday and he told me comething'

Sentence (23) without emphasis on after, has the same unwieldy feel to it as the Raising sentence (20). Thus it appears that the conditions governing Subject Fronoun Drop are the same as those which control the appearence of the pronominal form in the Raising cases. This is an important point, because one of the theoretical considerations which made it conceivable that Greek Raising was by Copying was the fact that an extra rule to delete the lower occurrence of the NP would not be needed, for a rule already existing in the language would be able in principle to perform the necessary deletion. This would only hold, though, if that rule did not have to be complicated in any way in order to account for the Raising sentences.

The parallelism of the conditions on Subject Fronoun Drop and the occurrence of the pronoun downstairs in Raising sentences is confirmed by the following data. Certain conditions vert mono 'only', for instance, requires that the pronoun be retained in order to have the reading in which it modifies the subject of a sentence; compare (24) with (25) as responses to the question "What do you think of Peter?" a

- (24) nono aftos ine eksipnos only he-NON be-3sg smart-NON 'Only he is smart'
- (25) mono ine eksipnos 'He is only smart (and nothing else)' ≠ ..Only he is smart'

We find the exact same situation in the Raising cases:

- (26) Georo ti maria pos mono afti ine eksipni she-NOW smart-NOW-FEM 'I consider only Mary to be smart'
- (27) Georo ti maria pos mono ine eksipni 'I consider Mary to be only smart (and nothing else). # .*I consider only Mary to be smart'

To treat this as an idiosyncrasy of pronominalization in Greek, saying perhaps that the adverb mono requires a pronoun along with it which is copied onto it from its antecedent, so that if Raising deprived mono of its head NP, some later rule would copy the appropriate pronoun back onto it, would completely miss the clear connection between the occurrence of the pronoun in (26) and its appearence under emphasis in (20), not to mention the totally ad hoc nature of the copying rule required. Thus, the conclusion seems to be warranted that Raising in

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Greek is by copying, and that the lower occurrence of the NF that is copied out of its clause is later deleted by the rule of Unstressed Subject Ironoun Orop.

- 3.3: The second argument for Raising-by-Copying centers on the hypothesic given in (19), and is based on the behavior of the intensive reflexive o idios 'the same, very, oneself, etc.', a form which is inflected for gender, number, and case. It generally occurs next to its antecedent, as in (26):
 - (2f) o jetroną c iwioną iwe ton yanią feter-1.ty the-same-16tM saw-3sg John-ACC 'Teter himself saw John'

but can float to the right in a simple sentence: 17

- (29) o petros; ide ton yani; o idios;/*; 'leter himself naw John'.
- And, it need not float to sentence-final positions
 - (30) o petros; ide ton yani; o idios;/*; sto dromo 'Peter himself saw John on the street'.

One restriction on this floating is that in complex sentences, it seems that o idios cannot float over a full embedded sentence¹⁸

- . (31) "o petros, ipe pos i maria efige, o idios, Peter-NOM snid-Jug Mary-NOM left-Jag NOM' 'Peter himself said that bary had left'
 - (32) *o petros, pistevi pos i gi ine tetragoni o idios, believes-Jng the-earth-NOM square 'Feter himself believes that the earth is square'
 - (33) *o petros; nomizi pos i maria agapai ton yorgo loves-3sg George-ACC o idios: 'Peter himself thinks that Mary loves George'

with the Raising verb @elo 'want' and the verb pico 'per-

outse', we find the following ribbesions—a idios cannot float off of the subject of <u>Gelo</u> over the clause left after Reiging, but it can float off of the subject of <u>piGo</u> to the end of the sentence, over the complement clause; these facts are shown in (34) through (37):

- (34) *o petros; Geli emena na ton agapiso o idios; want-1sg me him love-1sg 'Feter himself wants me to love him'
- (35) *i maria; Gell tor yani na er@i edo i idia. iary-NON donn-ACC come-3sg here NGK-For 'hary herself warts John to come here'
- (36) i maria, epise ton yani na ine kalos i idia; persuaded-3sg be-3sg good-NCM-MASC 'Mary herself persuaded John to be good'
- (37) i maria; epise ton petro na ine kalo agori i idia;
 Feter-ACC good-boy-NTR-NCM
 'Mary herself persuaded Peter to be a good boy'

If the hypothesis of (19) were not accepted, then separate restrictions would be needed to account for the impossibility of floating o idios across a full clause and across the apparent clause-remnant left by Raising. Furthermore, some ad hoc statement would be needed to distinguish the pioo remnant from the Gelo remnant, because of the contrast in their behavior. On the other hand, hypothesis (19) would account for the observed facts straight-forwardedly, for at the time the Float rule applies 19, the Raising remnant would be a full clause and the EQUI remnant would not be. Therefore, the one restriction on the Float rule, independently needed because of (31) through (33), plus hypothesis (19), would explain (34) through (37).

In the face of this evidence, it is quite hard to main-

tain the converse claim that there is no Object-EQUI and that Raising is by complete removal of the subject of the lower sentence, for if the 11to centences arose by Pronominalization and then subject fromoun orop, we would expect o idion not to be able to float off of the subject of piec, if the rick trale applied before Subject Fronoun Drop, or if the ordering were the opposite, then both belo and [160 should behave alike in this regard. It is crucial to this argument that Raising and EQUI occupy similar positions in derivations, in particular, that Raising not be post-cyclic if EQUI is cyclic. The evidence for the cyclicity of EQUI has to do with the removal of the EQUI trigger from the position from which it would ordinarily trigger the rule, by other rules such as Passive or Question Formation. The evidence for the cyclicity of Raising is of the same type as is found in English, e.g. interaction with Reflexivization and with Passive. Thus, these facts of o idios-Float provide rather strong evidence in favor of the hypothesis advanced in (19).

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And, the argument can be taken even one step further, for having Raising be by Copying eliminates the need for an extrinsic ordering of cyclical rules. 20 If kaising is by Copying, then free ordering of the rules of Raising and o ldios-Float is possible, because o idios will not be able to float over the complement clause either before or after Raising under this hypothesis, for the complement clause is a full clause both be-

4. Conclusion

In conclusion, it can be stated that the evidence of section three makes it very likely not only that Greek does have a true rule of Object-EQUI-NP-Deletion, but furthermore, that Raising-to-Object-Fosition in Greek is a Copying rule, and not a rule which deprives the lower clause of a subject altogether. In that case, the putative universal discussed in section 3.0, Postal's de-finitization universal, is not violated by the facts of Greek, for the lower verb will continue to have a subject after the operation of Raising, and so would not be ex-

. 2 5-

jected to become non-finite.

Finally, we can consider the more interesting question of whether languages that have no infinitival verb forms can have rules such as Faining operate so as to deprive embedded verbs of their cobjects, we can entertain the possible hypothesis that only languages without infinitives will have Raising-by-Copying and furthermore, that in such largement, baising accessarily will be a complete process. Fairle, is thellar to each in its typology, in that they are both rules watch operate between two and only two clauses. Foreover, EaUI strips an embedded sentence of its subject, just as Raising does in those languages where it does not operate by Copying. Thus, the fact that EQUI has been shown to exist in Greek would seem to indicate that a non-copying Kaising rule should be possible in a language with no infinitives. These, however, are all questions that can be determined empirically, and so it is better that they be left to further investigation.

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Afferdiz.

Tossible Counter-Evidence

The evidence of section three does in fact appear to support the claim that Raising in creek is a Copying process, and that furthermore, creek has a rule of Object-EQUI. However, there are a few sets of data which at first glance appear to be troublescme to these results, in that under certain assumptions about the process involved, hypothesis (19) makes the wrong predictions. However, such counter-evidence will turn out to be just apparent and not real counter-evidence, since there are reasonably well-motivated analyses of the phenomena involved under which the data become irrelevant to the issues which hypothesis (19) deals with. The first such set of data is concerned with the reference of the present active participle, and the second with the conditions under which the complementizer <u>pos</u> may be deleted.

A.1: The present active participle is indeclinable in form, and occurs with no overt subject, so that there can be ambiguity as to which NP in a given sentence the participle refers to. In general, it seems that the participle is interpreted as going with a nominative NF, that is, the subject of some verb. Thus in a simple sentence, the participle is read as going with the subject:

(38) ida; ton yani perpatondas i/*; sto dromo saw-1sg John-ACC walking-FICFL on-the street

⇒ 'll caw John as I was walking on the street'

≠ 'll caw John as he was walking on the street'.

In a complex sentence, where there is more that one nominative id subject, the position of the participle generally affects the possible reading--when it is sentence-initial, it goes with the matrix subject only, but when it is sentence-final, it can be read with the matrix or embedded subject:

- (39) kapraizondas j/s j sto paro tu, o petros i nomise smoking, iTCLL on-the digar his letter-Now thought pos o yanis; xamogelase COMF John-Rob smiled-Jag 'while he j/s was smoking his digar, Feter thought that John j smiled'.
- (40) o petres; nomine pos o yanis; xamogelase kapnizondas;/j sto puro tu
 'while he;/j was smoking his cigar, Feter; thought that John; smiled'.

Whether this process is one of finding a referent by an interpretive rule for a participle generated with no subject underlyingly, or one of deleting, by some form of an EQUI rule, the subject of the participle under coreference with another Ni in the sentence, probably cannot be decided on the basis of the Greek facts, regardless of the theoretical status each approach may have. It will be assumed here that the two are equivalent with respect to these facts, and the neutral terminology of the "reading" the participle has will be used, with no theoretical bias to be understood.

Concerning the Raising and Object-Equi sentences, there are the following facts which would seem to run counter to the

claims of hypotheris (19):

- (41) Celo, ton petro, na skotoGi apo ton yanik

 fevgondasi/*i/*k apo to spiti
 from the house
 'I want Feter to be killed by John, as I/*he
 am/*is leaving (from) the house'
- (42) episai ton yanij na mei ksanadi, fevgondasi/j isg cohn-ACC me see-again-3sg apo to spiti 'I persuaded John to see me again, as I/he was leaving (from) the house'.

In (41), where Raising has occurred, the present active participle is not read with the former lower subject, but instead goes with the matrix subject, whereas in (42), an Object-EQUI sentence, the participle is read with either the matrix subject or the matrix object. Sentence (41) contrasts with (43), where Raising has not taken place, and both referents are possible with the participle:

(43) Gelo, na skotogi o petros apo ton yani k, fevlsg 3sg Feter-NOR by

gondas i/j/*k apo to spiti
'I want Peter; to be killed by Johnk, as I/he j/*k
am/is leaving (from) the house'.

These facts run counter to what hypothesis (19) would predict, under the necessary assumptions that the process by which the referent of the participle is fixed takes place after Raising, possibly post-cyclically, and, before Subject Fronoun Drop. In that case, (19) would predict that the participle will be read with the former lower subject in Raising cases, because there would be a nominative NP present in the lower clause, in the

in the form of the intert downstairs subject, which the participle could be associated with. And, for the Object-EQUI cases, since (19) provides for there being no subject in the lower sentence after EqUI, the participle should be read only with the matrix subject, insumuch as it otherwise deet not appear to be able to go with accusative NF objects.

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however, (41) is not representative of the whole rituation with Raisine and the reading of the participle--it seems to be more complicated than (41) would indicate, for in fact, there do exist some sentences in which the participle is read with the Raised NP:

- (44) o retros; isele ton yanij na tragusai, perpaton-NCE. wanted-Jog ACC sing-Jog walkingdasi/i sto txolio PTCPL to the school 'Peter; wunted John; to sing, while hei/j was walking to school'.
- (45) Georg ton yani; pos ine fliaros, milondas; i/j consider-leg ACC be-Jeg talkative talking sti taksi in-the class 'I consider John to be garrulous, when talking in class'.

These sentences, especially (45) suggest that semantic factors may well be at work in allowing the various possible readings; talking is more likely to be an action connected with someone who is identified as garrulous, rather than with one who is doing the mental activity implicit in <u>Quoro</u>. Furthermore, even though sentence-initial participles are generally read with the matrix subject, the preposed version of (45) still

has the reading of the participle going with the Raised IF:

(46) milondas; i/i sti taksi, Georo ton yani pos ine when the is talking in class, I consider John to be 21 am garrulous'.

If semantic factors control the participial readings, then the apparent generalization that the participle is read with nominative NP's only cannot be maintained, and the counter-evidence to hypothesis (19) disappears. A particular set of semantic factors, possibly, though not necessarily, coupled with any considerations of particular structural configurations, would be the crucial determinant for the participial reading.

Moreover, there are other grounds also why the counterevidence to hypothesis (19) may not be real counter-evidence, for the two assumptions that the participial-referent reading process takes place after Raising and before Subject Fronoun Drop, have no independent motivation. Clearly, the deep structure configuration is not curcial to this process, because a subject derived by Fassive, and not the demoted subject, is linked to the participle:

(47) o petros; skotose ton yanik fevgondas;/*; nom killed-3sg ACC leaving-PTCPL

'Peter, killed John, as he /*; was leaving (from) the house'

(48) o yanis, skoto**eike** apo ton petro, fevgondas, 1/1 NOW kill-PASS-3sg by

'John; was killed by Peters, as hearify was leaving (from) the house'.

Since the process must therefore wait until after lassive has applied, we can hypothesize that it is the cycle-final state of affairs which is crucial to the operation of this process. If this hypothesis is valid, and clearly, it is a question that must be determined empirically, then the participial-referent process becomes irrelevant to the hypothesis of (19). Phis would be so because if the the process is dependent on the cycle-final subject, then it would either be a cyclic process itself or else be global but able to determine the cyclic subject of any earlier stage in a derivation. The process would then operate only with the pre-Raising and pre-EQUI situation, when the complement clauses of these two are identical in terms

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And, as to the second assumption, we need only look at the contrast between (41) and (49), where Ruising has taken place, but Subject Ironoun Drop has not deleted the lower occurrence of the NP because it is stressed, occurring with the adverb mono. Accordingly, the participle can only be read as going with the lower subject:

of having a subject, and thus be irrelevant to hypothesis (19).

(49) 100la; ton yani, na skoto0i mono aftos; apo ton wanted-isg ACC only he-NOM by petrok, fevgordas 1/1/1/ apo to spiti 'I wanted only John, to be killed by Feterk, as the j/wk was leaving (from) the house. Sentences such as (41), then, may indicate that where various

derivations are possible, and there is no semantic factor that

influences the appropriateness of a particular reading, then the rarticiple is interpreted as going with the nearest nominative NP on the surface. The participial-referent reading process would then be dependent on the surface structure configurations, and so would be affected by the application of Subject Pronoun Drop.

It is unclear which of these various proposals is in fact correct, and obviously, more work will have to be done concerning these problems with the reading of the participle. But, it seems likely that at least some of the suggestions given here will prove to have relevance to the final solution. Thus, the apparent counter-evidence to (19) can be considered to be no more that just apparent.

A,2: The second set of apparently troublesome data centers on the deletion of the complementizer pos 'that'. We find the following pattern for Raising verbs such as Quoro 'consider' which occur with pos. 21

(50) o petros Geori spos o yanis ina eksipnos Peter considers John to be smart-M (51) o petros Geori ton yani pos ine eksipnos

Peter considers John to be smart

That is, pos, apparently optional with full clauses, is obligatory with the clause left over after Raising. 22 This is potential counter-evidence to the analysis of Raising as a Copying process because it appears to be a way in which the embedded clause after haising does not behave like a full clause, The non-optionality of position in (51) would then indicate that there is in fact no subject to the lower verb ine. This counter-evidence, Lowever, does not hold up, for the ungrarmaticality of (51) may be attributed to factors which make it irrelevant to the question of Raising by Copying. In particular, it is the case that pos-actetion, although not completely imrossible, does not produce perfectly acceptable sentences when a complement clause has lost its subject by subject Ironoun urop:

(52) nomizo (pos) aftos efige ya tin agina he-NCF left-3ng for the Athens (53) nomize (70) effige ya tin asina

'I think that/B he left for Athens'.

The disappearence of the subject pronoun contributes to the unacceptability of (51). This suggests that pos-beletion applies late in a derivation, after Subject Ironoun brop has deleted the lower pronoun in (53), and thus in (51). In that case, pos-Deletion would have no bearing on the question of how Raising is carried out,

Still, though, pos-Deletion in (53) is not as bad as in (51), so other factors may be at work as well. It is possible, although perhaps not provable, that the juxtaposition of an accusative KP with a finite verb is what causes the further unacceptability of (51). The impossibility of pos-Deletion in

the Raising cases could then perhaps be connected with the need to be able to identify clause-initial boundaries; the presence of the complementizer would facilitate this process, whereas its absence would hinder it. 23 The pos-Deletion data therefore would not constitute counter-evidence to the claim that Greek Raising is by Copying.

.. 13...

Footnotes

- *I would like to thank Judith Aissen and Jorge hankemer for their help and suggestions on earlier versions of this paper, and blias Dinopoulos for his native judgements.
- 1. This making process is restricted to subjects of lower clauses. Despite the existence of sentences such as:
 - (i) Oelo ton yani na (ton) agapisi i maria John-ACC him love-Bag Mary-NGG "I want John that Mary love him"

which superficially appear to involve the raising of a nonsubject (since ton yani is the object of agapisi), it is clear that ton yani has not become part of the upper clause. For one thing, such an NP cannot become the reflexive form ton eafton, but can only be a non-reflexive pronoun, and this Reflexivization process is clause-bounded (see pp. 7-8):

(ii) iOela emenu/"ton cafton mu na agapisi i maria me the-self of me 'I wanted Mary to love me'

nor can it cliticize onto gelo:

(iii) "me iDela na agapisi i maria me-CLIT 'I wanted Mary to love me'.

Therefore, (i) must be the result of a Scrambling rule which moves constituents around within a clause. The presence of the clitic ton, then, would be due to a dislocation process occurring within the lower clause. Furthermore, the verbal particle ma must be regarded as not signaling a clause-boundary, and so is not a complementizer proper.

- 2. I assume here that a Thrase-Structure rule generation of the putative Ruising sentences is not at all motivated -- the standard sorts of arguments ugainst such a generation, e.g. those based on lexical facts, the possibility of passive morphology in the embedded clause, etc., all hold for Greek.
- This class of verbs is rather small, and throughout, <u>Qelo</u> and <u>Qeoro</u> will be taken us paradigmatic for this class.
- 4. The literal rending is also ungrammatical with $\underline{pi00}$, presumably because $\underline{pi00}$ requires an animate NP object, and $\underline{ksi10}$ is non-animate.

5. This presumer that Greek has a rule of E401--for evidence supporting this assumption, see below pp. 19-22, section 2.3.

- 6. The middle voice of the verb is by far the most common way of expressing reflexive actions.
- This last stipulation is necessary because of sentences such as:
 - (iv) ego nomizo pos o eaftos mu @a figi se ligo I think the-self-NOW of me FUT leave soon 'I think that as for myself, <u>I</u> will leave shortly'

Here the reflexive appears across a clause-boundary from its antecedent, and is nominative; this however, seems to be a different case from the reflexivization in (12). The nominative reflexive can be used only in contexts which imply a marked dichotomy between opposing desires or effects within the same person (a distinction that is hard to capture in an English translation). Furthermore, it can appear several clauses away from its antecedent, and in fact, need not have any overt antecedent—the non-nominative reflexive requires an antecedent, though:

- (v) a. nomizo pos i maria epise con yani na pi think-lsg Mary-NOM persuaded-Jsg-John-ACC say pos prepi na figi amesos o eaftos mu is necessary leave immediately the-self-NCM my 'I think that Mary persuaded John to say that it
 - 'I think that Mary persuaded John to say that it was necessary for myself to leave (even though I really wanted to stay)

 - c. *o yanis xtipise ton eafton mu John-NOM hit-3sg the-self-ACC of-me '*John hit myself'.

Since (iv) cannot have the unmarked reading of "I think that I'll go soon", with no emphasis or contrast involved, and (12) does not have the contrastive reading, we can conclude that the phenomenon in (iv) and (v) is truly distinct from that in (12).

8. Note that the Reflexive form ton eafton requires that the downstairs werb have third person agreement on it. For a dis-

where it will be the ten canonical of the first tenths we say that the coin \mathcal{T}_{α}

i. In both (19.) and (19a), the reading where the caverb modifier the ratrix with it possible, but this reading in each concreption, there is to preserve and the twent, he set it is evidental, then the first. Then, ander normal interaction, (19a) he (10a) have only the reading with the powerb modifying the cals nied werb.

10, ic.tal (10%) developes a shallow argument for keining the length be smooth on the conclusion of Administration χ , the argument here in three on that.

it. Evidence from tune (1972) indicates that it helds in wapiness is well.

12. This formulation is not intermed to have any theoretical bias--talling in terms of the "nemeval" of the subject of sentences is menable to either a transformational framework in which there is actual movement of an El out of one clause and into enther, or a rule tional framework in which at El ceases to bear the grammatical relation "subject-of" to the lower verb.

13. Cf. Testal (1971), p. 162-163; some (1966), p. 275, 273-4; and Griguer (1972), p. 97-98.

14. as Fostal Limself (1974, p. 386n) notes, this therefore also entails a violation of Chomsky's Tensed-S Constraint (cf. Chomsky (1973), p. 237-238), to whotever extent it was intended to be or may be taken to be universal. Chomsky's system deries the existence of rules such as Raising, but the fact that the Raised NI passivizes (e.g. with the verb georg) upstairs is a violation of the constraint.

15. The one form which is non-finite, the present active participle, is impossible as the verb in the embedded clause after kaising:

- (vi) a. "Gelo ton yani trexondas sto dromo want-isg John-ACC running-PTCPL on-the street '1 want John (to be) running on the street'
 - b. Gelo ton yani na trexi sto dromo run-3eg
 11 want John to be running on the street

However, the inappropriateness of a present active participle as the embedded verb could perhaps be motivated on semantic grounds; therefore, Greek would be irrelevant to lostal's uni-

versal because it lacked the appropriate non-finite verb forms, but see $\mathfrak{p}.$ 15.

16. This in itself is an interesting point, for Raising in Rodern Greek appears to be rather limited in its scope-there do not seem to be many predicates that allow it, and those that do have the non-Raised forms the more common variant. In earlier stages, Greek had Raising as a much more productive and wide-spread rule, and furthermore, had infinitival verb forms. Thus, we may have here an instance of a language in the process of losing a syntactic rule.

17. This float process is not restricted to occurring only off of subjects, but such cases are the only ones of interest to us here. Ether quantifier-like elements can float but do not show the relevant properties for this argument.

18. The proper generalization, it seems, must involve the notion of "full" clause, as opposed to one that has been "punctured" by the loss of its subject due to a rule such as EQUI. This must be so because o idios cannot float over embedded sentences containing Weather-Verbs, which presumably have no subject underlyingly (although possibly this could be taken to support a view that such verbs have dummy subjects in deepest structure):

(vii) *o yanis pistevi pos vrexi/xionizi tora o idios John-NOM believe-3sg rain / snow now NOM-MASC 'John himself believes that it is raining/snowing now'

Furthermore, the level at which this constraint applies must be before Subject Pronoun Drop, or else the removal of a subject by this rule must be considered different from the removal by a rule such as EQUI (a proposal which may be independently justifiable in languages where EQUI triggers de-finitization of a verb but Subject Pronoun Drop, naturally, does not), because of sentences such as (viii), in response to the question "What does Mary want concerning Peter?":

(viii) *i maria Geli na ine kalo agori i idia Wary-NOM 3sg be-3sg good-boy NOM-FEM 'Mary herself wants him to be a good boy'

This fact ties in with the observations regarding <u>6 idios</u>-Float in Raising sentences.

19. This assumes that the Float rule applies before Subject Fronoun Drop and after Raising and EQUI. Subject Fronoun Drop

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has been argued to be post-cyclic at least for other big lages, and a late ordering for the rule in week needs to be warranted on the basis of there from (and, c), footnote H). At to the Float rule and ball, if it applied before ball, special statements would be reeded to allow quities to float across the complement clause.

- 20. Evidence for Relating being cyclical is of the wase type as in Emplish, ef. p. 21. If a idios-Float had to apply before Raising, then it too would have to be cyclic.
- 21. The verbal particle ma that occurs with <u>Gelo</u> can never be deleted; thus only <u>weoro</u> is of interest here.
- 22. These facts can also be used as an argument that the KI has in fact been Raised into the apper clause, under the assumption that pos is required to maintain the delineation of the clause boundary; cf. below and footnete 2).
- 23. This functional constraint on complementizer deletion was inspired by a similar observation for English made in Euro (1974), p. 134, n.16.

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TURKISH COMPARATIVES

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