THE CLITIC AS AGR-O:
A GB ANALYSIS OF MODERN GREEK[1]

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0. Introduction

The object clitic in Modern Greek might not occur at all as in (1a), or might occur with the lexical NP which is identical to the clitic as in (1b), or might occur alone, without identical lexical NP as in (1c):

(1)a. o janis i δ e tin γ opela (Warburton(1977:(4)-(6)))

John saw the girl

b. o janis tin i δ e tin γ opela

John her he-saw the girl

c. o janis tin i δ e

John her he-saw

The 1b construction is called clitic doubling.

The object clitic functions similar to an element of object agreement, as in 1b. However, its optionality and its independence complicate its character. In my view, the occurence of the object clitic can be analyzed as a sort of 'split' object-agreement phenomenon. This point of view is compatible with the AGRP (agreement phrase) hypothesis, especially the analysis proposed in Chomsky(1989). This analysis postulates AGR-O as a head of AGRP distinct from AGR-S, AGR-O as a head of AGRP distinct from AGR-S. The analysis seems to explain the asymmetry between the subject "clitic" and the object clitic well.

The purpose of this article is to show that the AGRP hypothesis is viable in dealing with so called clitics especially in object position in Modern Greek and to solve the problem of the asymmetry between subject "clitic" which occurs obligatorily and
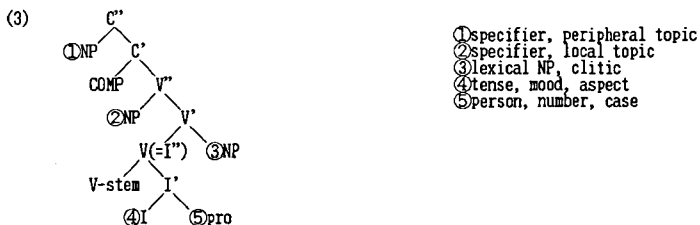
the object clitic which occurs optionally.

Firstly an analysis of the clitics in Philippaki-Warburton (1987) is presented. In section 2, Chomsky's argument for AGRP hypothesis and the object-agreement effect is discussed. I apply the AGRP hypothesis to my analysis of clitics using evidence from word order. The occurence of pro in object position is discussed with respect to the object-agreement phenomenon. In the section 4, the remaining problems would be pointed out.

1. Analysis of the clitic as argument

One of the main works on this subject is the analysis in Philippaki-Warburton(1987).First, she regards the clitic objects as a kind of pronominal which is base-generated at the object position as an alternative to a lexical NP. This is unlike other previous analyses of clitics, where they were treated as being in A'-position[2]. Her analysis does not seem to work in the case of so-called clitic doubling, since in such a construction there are two distinct object NP that share the same theta-role(clitic NP and full lexical NP) at the same time, and this would result in the theta-criterion violation. To avoid this, Philippaki-Warburton analyzes the lexical accusative NP as the peripheral constituent outside the government range of the verb, i.e., as topic or background information.In this analysis, the Resumptive Pronoun Solution(RPS) is utilized. Philippaki-Warburton summarizes the RPS in the following way:

    (2) i. Peripheral topic NPs are base-generated.
        ii. Missing subject and clitic object pronouns in the
            sentences accompanying the topic are base-generated
            pronominals functioning here as resumptive pronouns.
       iii. Case is assigned freely to topic NPs, and then matched
            with the pronominals at S-structure.
        iv. The predication rule at LF coindexes a base-generated
            pronominal with topic constituent.
        v. Topic NPs receive θ-role from their coindexed pronominals.
        (Philippaki-Warburton(1987:4))

The subject is analyzed in the same way as the object. Missing subjects have the status of pro, although they are dominated by I' which is the daughter of the V in her analysis[3]. The lexical nominative NP is regarded as a kind of topic. The pro which occurs to the right of the V(which in the standard analysis is the V's affix position) is related to the lexical nominative NP by virtue of the theory (RPS) which she postulates. The phrase structure which is assumed by Philippaki-Warburton is given below:

(3)
```
           C"
      ①NP     C'
         COMP    V"
            ②NP     V'
               V(=I")   ③NP
            V-stem   I'
                  ④I    ⑤pro
```

① specifier, peripheral topic
② specifier, local topic
③ lexical NP, clitic
④ tense, mood, aspect
⑤ person, number, case

The above analysis has some shortcomings.

First, there is an asymmetry between subject and object in this analysis. The object clitic occurs optionally, whereas the subject clitic is always present. Philippaki-Warburton seems to regard the optionality of the object clitic as a sort of discourse device: that is, since the clitic is base-generated at the object position, the lexical accusative NP in the clitic doubling construction can be topic or background information.

An analysis based on the discourse does not answer the following question: why an alternation between clitic and lexical NP is not found in what we call the subject position, similar to the object position? Furthermore, she argues that S is equivalent to V"(verb phrase) in Modern Greek, while in English it is equivalent to I", as assumed by Chomsky(1986).

In addition, her analysis does not seem to work well in selection of the type of S by the element which takes S as its complement(typically COMP). According to T. Tachibana(personal communication), the complementizer, _oti_(that), takes only

indicative in Modern Greek. Thus complementizers are subcategorized for the type of S. In this case, the features relevant to subcategorization belong to the category mood. Therefore the head

of S must have the feature of the mood. In order that the
information for mood may be put under the category Infl, the S must
be the maximal projection of the Infl. Thus the relation [S=I"]
must hold in Modern Greek as well. In the structure assumed by
Philippaki-Warburton, (3), mood falls under the Infl which is
under the V° level and COMP cannot select the proper maximal
projection which contains the modal information of indicative.

2. AGRP hypothesis
    Pollock(1989) proposed a phrase structure where the AGR
projects its own maximal projection. This analysis was extended by
Chomsky(1989). Chomsky postulates the structure below:

(4)　　IP
　　　／＼
　　NP　　I'
　　　　／＼
　　AGR-S　　FP
　　　　　／＼
　　　　F'　(negP)
　　　／＼
　　neg　　AGRP
　　　　／＼
　　AGR-O　　VP
　　　　　／＼
　　　　(ADV)　VP
　　　　　　　／＼
　　　　　　V　　...
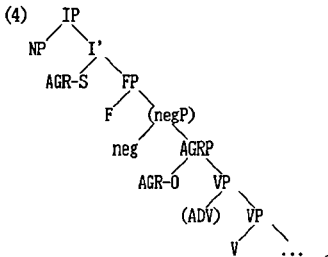
According to Chomsky, this assumption is compatible with Kayne's
observation in French. See the following example:
    (5) i. Paul a repeint (* repeintes) les chaises
        ii. Paul les a repeinates
As in this example, only when the clitic object is moved to the
pre-verbal position, the agreement holds between the object NP and
the participle. According to this analysis, in (i) the object IN
SITU is not properly governed by the AGR-O, while in (ii) the
clitic is raised to the SPEC of the AGRP and the SPEC-head
agreement arises. The motivation of the movement of the object NP
to the SPEC of AGRP is explained case-theoretically. Chomsky
suggests the breakdown of the case-assignment into the case-marking
and the case-checking: i.e., if a verb only case-marks and AGR-O
case-checks the object, then it must be moved to the SPEC of AGR-O
to be properly governed by it and to be case-checked. This
suggestion is extended in Chikamatsu(1991).

3. The analysis of the clitic object as an AGR-O
3.1. Application of Chomsky's analysis to the clitic doubling in
    Modern Greek
    The AGRP hypothesis can be used to explain the clitic doubling
effect in modern Greek.
  (6) to   katsikaki, to   jorγaki   δen   ton   aγapuse
      the   kid   the   Yorgakis   not   him   loved
      "The kid didn't love Yorgakis"
      (Sekimoto(1987:(6)))
The verbal morphology shows no agreement with the object NP, unlike
the French example cited above. In my analysis, the clitic(ton) is
not at the A-position but at the position of the AGR-O in the
Modern Greek, whereas the clitic(les) is base-generated at the
object position(A-position) and moved to the SPEC of AGRP in
French. In Greek, the full lexical NP(jorγaki) is base-generated
at the complement position of the VP and raised to the SPEC of the
AGRP, just as the clitic in French. Probably, the lexical object
NP(jorγakis) is case-marked by the V, but it is not case-checked
in (6). And so it is raised to the SPEC of AGRP in order to be case-
checked by the AGR-O. The raised lexical object (jorγaki) is
properly governed by the AGR-O and the SPEC-head agreement holds
between them. It follows that the clitic, ton, occurs as an
agreement element. In my analysis, the clitic (ton) cannot have
case, since it is not the NP, but an agreement element.

3.2. Evidence from word order
3.2.1. Opational occurence of the clitic object
    The above analysis is supported by evidence from word order.
    The argument in Philippaki-Warburton(1987) presupposes the VSO
([Vs 0])
order as the basic word order of Modern Greek, while Ukida(1983) sta
tes that
the unmarked order of Modern Greek is SVO.
    In Modern Greek the complementizer(the head of CP) occurs to

the left of the clause(CP), which means the language is head-
initial[4]. P precedes its complement, from which it follows that the
case is assigned to the right. Thus it is plausible that Modern
Greek is a VO language, though its word order seems to be fairly
free.

    In Ukida(1983) the following data are presented:

(7)a.   o   pavlos aγorase to   spiti (S-V-O)

           the   P.   bought   the house

           "The Pavlos bought the house"

   b. ??? o pavlos to spiti aγorase   (S-O-V)

   c. ?? aγorase o pavlos to spiti   (V-S-O)

   d.   aγorase to spiti o pavlos   (V-O-S)

   e. ?? to spiti aγorase o pavlos   (O-V-S)

   f.???? to spiti o pavlos aγorase   (O-S-V)

Of these examples ones of OV order are unacceptable(especially b.
and f.), which suggests the VO character of Modern Greek. However,
according to Ukida (1983), the clitic doubling counterparts of OV
sentences are acceptable, as shown below:

(7')b.   o pavlos to spiti <u>t</u>'aγorase   (S-O-(o)V)

   f.   to spiti o pavlos <u>t</u>'aγorase   (O-S-(o)V)

If the direction of the case-assignment and that of the theta-
assignment are rightward, the object NP is base generated at the
post-verbal position(see(7a)). As a result, VO order arises. But
AGR-O, instead of V, sometimes case-checks the object NP, in which
case the object NP must be raised to the SPEC of AGRP in order to
be case-checked by AGR-O[5]. As a result, it causes the object-
agreement effect. Thus AGRP hypothesis can predict the
unacceptability of the VO examples and the acceptability of the
clitic doubling counterparts of the VO examples(O-(o)V) correctly.

    Sekimoto(1987) looked at corpus and found the following:

(8)

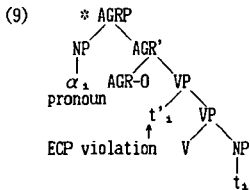| category of main object\order		O-V	V-O
not clitic doubling	noun	53	863
	pronoun	57	34
clitic doubling	noun	27	14
	pronoun	16	17

The cases where the main object is a noun gives support. If the
clitic doubling effect is not found, VO order is prominent, which

shows that the VO order is basic(53 cases versus 863). Conversely, if the clitic doubling effect arises, OV order is prominent. The raising of the object NP(which brings OV order) causes the object-agreement phenomenon.

Sekimoto(1987) comments that the word order is pretty free and that it is determined stylistically in the case that the main object is pronoun, judging from the fact that there is not a very sharp contrast between the frequency of OV order and that of VO order.
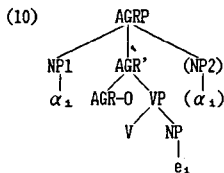
Here note that when the main object is pronoun, there are more OV examples than VO ones in cases without clitic doubling. VO is the underlying basic order. The object must be able to be moved to the preverbal position in these cases. Then, why doesn't the object-agreement effect hold in these cases? Perhaps it is because the movement in these cases is not the raising to the SPEC of AGRP but an adjunction to VP. If so, the adjoined NP is not governed by AGR-O. This assumption is plausible, because the pronoun is ready to be the word with old information which often precedes the phrase with the old information. Probably the movement is scrambling which adjoins the phrase with old information from the grammatical function position inside the VP. With this operation OV construction without clitic doubling is derived.

Next, let us return to the issue of "low frequency of the OV construction with clitic doubling". I would like to claim that the pronoun which is adjoined to the VP cannot be raised to the SPEC of AGRP. Let us assume that any phrase α cannot be properly governed by a given lexical head β, where α is adjoined to βP, the maximal projection of β, since the lower node of βP in the adjoined structure blocks the government[2]. If a pronoun is adjoined to VP by some scrambling type of operation and if it is further raised to the SPEC of AGRP further, then the intermediate trace is left ungoverned and ECP violation would arise. The ill-formed s-structire is something like this:

(9)
```
        * AGRP
      NP      AGR'
      |      /    \
     α₁   AGR-O   VP
   pronoun       /  \
             t'₁    VP
              ↑    /  \
       ECP violation  V   NP
                          |
                          t₁
```

As we observed above, in the case where the main object is a
pronoun, OV order does not reveal the object-agreement effect
(clitic doubling) exceptionally. I would ascribe this observation
to the incompatibility between the scrambling (or pronoun fronting)
and the raising to the SPEC of AGRP. Namely a sentence with the
scrambled pronoun cannot be clitic doubling construction.

   Yet we are still left with the question as to: why is the
clitic doubling possible even in the VO constructions? One possible
analysis would be to assume the undecided linear ordering of the
SPEC of X" and the X'. Namely object NP α can be raised to either
NP1 or NP2 in the tree below:

(10)
```
            AGRP
           /  \
      NP1    AGR'    (NP2)
      |     /   \      |
     α₁  AGR-0  VP   (α₁)
               /  \
              V    NP
                   |
                   e₁
```

NP2 is also governed by AGR-O. As (8) shows, NP2 is more marked
than NP1. Probably, the raising to the NP2 is utilized as a kind of
discourse device, just as the extraposition or something like that[7].

   Thus clitic doubling as an object-agreement phenomenon is
typically found basically in OV order construction, unlike its
unmarked VO order. This effect is caused by the movement of the
object NP from its post-verbal grammatical function position to the
preverbal position, probably SPEC of AGRP. Thus our analysis can
properly answer the question which is a serious problem in
Philippaki-Warburton(1987): why the occurence of the object clitic
is optional, whereas the subject clitic always occurs? Our answer
is that the subject NP is base-generated at the position which is
properly governed by the AGR-S, while the object NP is properly
governed by the AGR-O, only when it is raised to the SPEC of AGRP

from its grammatical function position ungoverned by AGR-O.

3.2.2. The evidence of the post-negative position
     Our analysis is also supported by the position of the negative
in linear ordering. Ukida(1983) describes the following
distribution of the negative element:
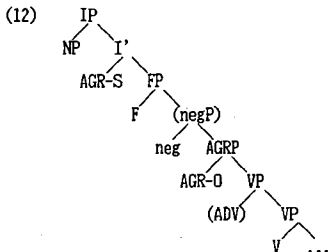 (11)a. Indicative
        NEG--<u>tha</u>--genitive clitic--accusative clitic--V
     b. Subjunctive
        <u>na</u>--NEG--genitive clitic--accusative clitic--V
Thus, clitics occur just between the negative element and V.
     Here let us recall the structure which is proposed by
Chomsky(1989). See below:

```
(12)      IP
       /      \
     NP       I'
           /      \
       AGR-S      FP
              /      \
            F       (negP)
                  /      \
                neg     AGRP
                      /
                 AGR-O    VP
                      /      \
                   (ADV)     VP
                           /    \
                          V     ...
```

The AGRP is located between negP and VP. The linear ordering would
be something like "...neg--AGR-O--V..." . The position of clitics
in Ukida's description corresponds to AGR-O in the structure
assumed by AGRP hypothesis.

3.3. Clitic and pro
     So far we have mainly looked at the cases of clitic doubling.
However, the object-clitic can occur without any lexical NP, as
below:
  (13) ton ksero (Philippaki-Warburton(1987:(42)))
       him know-I
       "I know him"
I postulate a pro which is generated at the object position in d-
structure and is raised to the SPEC of AGRP just as the overt NP.
     Philippaki-Warburton(1987) hypothesizes that clitics are

pronominal just as pro. On the other hand, in our hypothesis,
clitics themselves are not NP and so not pronominal. There is a pro
at an NP position in the case when a clitic occurs alone at a
"visible" level. See the next example:
  (14)tha   fiji   (Philippaki-Warburton(1987:(42)))
      will leave-he
      "He will leave"
This sentence has no overt subject NP and the personal ending of
the verb shows the subject agreement with the missing subject.
Modern Greek seems to be pro-drop language. If the missing subject
of the previous example is pro, then it would be plausible that the
missing object is also pro, since the clitic seems to be a kind of
agreement element, as we have assumed so far.
     Rizzi(1986:(49)) postulates the following to license pro:
  (15) pro is Case-marked by X^o_y.[8]
The content of X^o_y is parameterized. By virtue of this condition,
a case-theoretic explanation of the movement of the object to the
SPEC of AGRP is still viable, even though the object is pro.

4. Conclusion
     In this article, it was shown that the AGRP hypothesis was
feasible in dealing with clitics in Modern Greek. In addition, the
asymmetry between subject clitic which occurs obligatorily and the
object clitic which occurs optionally was explained by virtue of
the raising of the object to the SPEC of AGRP which is assumed by
Chomsky(1989)'s AGRP hypothesis.
     However there are some further problems.
     In 3.2.2. we looked at the linear ordering of negative,
clitics and the verb. There are counter examples regarding the
ordering of these elements. When the verb is put into imperative,
we would have the following ordering(Ukida(1983)):
  (16) V--genitive clitic--accusative clitic

Imperative is incompatible with negative. So the negative position
is to be ignored. Next, see the ordering with the participle
(Ukida(1983)):

(17) NEG--V(participle)--genitive clitic--accusative clitic

In both of these orderings V occurs to the left of the clitics.
Both imperative and participle are, in a way, non-finite forms,
although there are no infinitive in its strict sense. One
possibility might be the movement of the V to some position higher
than the AGR-O, which is motivated by the finiteness. But the
detailed mechanism of such a movement is unclear at present.

Another problem is how to handle what I may call IO-agreement
phenomenon. See the sentence below:

   (18)   tu   to   eδose   (to vivlio)   (tu jani)

        to-him   it   he-gave   (the book)   (to-John)

        "He gave the book to John"

        (Warburton(1977:(59)))

In this sentence indirect object is also doubled. Ukida(1983) says
that such a sentence is a little archaic and that in a
colloquialism the indirect object is changed into PP and it agrees
with the "genitive" clitic, as follows:

   (19) To   peponi   ston   petro   tu   arese

        the   melon(NOM)   to-the   P.   to-him   like

        "Peter liked the melon(The melon was desirable for Peter)"

        (Ukida(1983:(32')))

If agreement holds for PP, it would undermine the case-theoretic
explanation of the raising of the complement of the VP, since PP
need not be case-assigned.

NOTES

1. This paper is based on the one which was read at the third
general meeting of the Society of Greek Linguistics and Literature
(in Hiroshima) on July 7th.1991. I thank those who gave me good
comments and advice.

2. A means argument. The position to which a theta role(e.g.,agent,
theme, experiencer, etc.) is assigned is the A-position.

A'-position is the position to which a theta role is not assigned.
For instance, the subject, the object, etc. are the A-positions.
The COMP, IP-adjoined position, etc. are the A'-positions.

3. I' means the single bar level of projection of the category
Infl(ection). Rough representation of the phrase structure based on
the X-bar-theory is something as below:

X"(=XP, maximal projection)

... X'

X⁰ ...
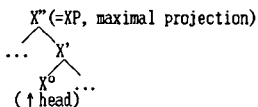
(↑ head)

4. The headedness parameter determines the linear orderning between
a head and its complement. VO order is an instance of head-initial
order, since the V is the head of the VP and the O is its complement.
5. What case-checks an NP is either V or AGR-O.
6. This analysis is to be depicted as follows:

β"

α β"<----a barrier for the government by β^0

β'   .....

β^0
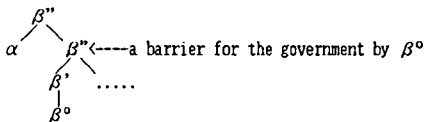
Chomsky(1986) analyzes α as governed by β^0 in the case like this
(cf. VP adjunction case). However, I assume here that some sort of
'more restricted version of the government' which does not hold in
the case like (9).
7. Usually, it is supposed that the specifier occurs to the left of
the head. In this respect, my analysis is weak, though I regard
that NP2 in (10) is marked position. One possible alternative is
the rightward adjunction to the AGRP. AGRP-adjoined NP is regarded
as governed by the head of AGRP, in terms of agreement, although
the adjoined element is not properly governed for ECP, as I assumed
for (9).
8. An overt NP must be case-assigned by virtue of the case filter.
Rizzi assumes that pro must be also case-marked, although it is an
empty category.

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