Two Types of Empty Functional Heads as Hosts of Pronominal Clitics.

In Kayne (1993) two alternatives are conjectured for the adjunction of multiple clitics: a) each clitic adjoins to a different (empty) functional head; b) clitics adjoin to each other and the resulting complex to a functional head. In this paper I show that double object clitics in Standard Greek (SG) and Cypriot Greek (CG) provide evidence for the first option. Furthermore, I claim that Kayne's system, combined with economy principles underlying movement (Chomsky 1989, 1991) explains the ordering possibilities that double object clitics manifest in certain syntactic environments in Greek, and provides evidence for the existence of two types of empty functional heads, that is, place-holder functional heads that bear no features versus empty functional heads associated with features also shared by the verb.

While clitics precede finite verbs in SG, (1a), they follow imperatives and gerunds, (1b), (1c). Adopting Kayne's (1991) proposals for English and Romance infinitives and Rivero's (1988) for imperatives and gerunds in Greek, I consider the word order in (1b) and (1c) to be the result of the verb having moved past the clitics.

(1a) Mou to edoses. b. Dos' mou t.i! c. Diona DOS mou t.i...
me it gave-2s-IND give-2s-IMP me it giving-GER me it
'You gave it to me.' 'Give it to me!' 'Giving it to me!'

In contrast with finite structures, however, where double clitics demonstrate a fixed order (and precede the verb (1a) vs. (2a)), they may also demonstrate the reverse order when following imperatives (1b), (2b) or gerunds (1c), (2c).

(2a) *To mou edoses. b. [Dos' to] mou t.i c. [Diona DOS to] mou t.i...
it me gave-2s-IND give it me giving it me

I show that the flexibility illustrated by imperatives and gerunds is due to the fact that clitics may adjoin to different functional heads in Greek with the result that the verb may move via the functional head hosting the lower clitic (to) and carry it along to C (in 2b) or to I (in 2c). This possibility is available because the lower clitic is adjoined to the functional head dominating Tense, not lexically realized in gerunds and imperatives.

According to my proposal, the rigid order of clitics associated with finite verbs, (1a) vs. (2a), can be attributed to either or both of two separate factors:

a) Lack of movement in (2a).

b) In finite contexts clitics adjoin to empty heads that serve as place holders rather than to heads dominating inflectional morphemes (adjunction to the latter is excluded by Kayne's system as multiple adjunction). Movement of the verb through place-holder heads is excluded as these are not associated with features also found in the verb, which triggers and allows verb movement through them (Chomsky 1989, 1991).

Evidence for b) above as an independent factor is provided by CG. Like in SG, clitics follow imperatives and gerunds in CG. But contrary to SG, clitics have to follow the verb in finite contexts as well (cf. (3a) vs. (1a)). That is, CG is a Tobler-Moussafia language and clitics can never appear first. Following our predictions, where either order is available for double object clitics that follow imperatives and gerunds, that is, (1b-c), (2b-c) also hold for CG, only one order is possible for clitics that follow finite verbs (3b) vs. (3c).

(3a) *Mou to edokes. b. Edokes mou to. c. *Edokes to mou.
me it gave-2s-IND gave-2s-IND me it gave-2s-IND it me
'You gave it to me.' 'You gave it to me.' 'You gave it to me.'

Finally, I will show that the strict order that double clitics manifest in other languages exemplifies the parametric option instantiated by the second of Kayne's hypotheses, i.e., that clitics adjoin to each other, thus cannot be stranded by verb movement of the type that takes place in (2b-c).
Two Types of Empty Functional Heads as Hosts of Pronominal Clitics

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0. Introduction

This paper focuses on the flexible ordering possibilities that double object clitics demonstrate in Greek when they follow imperative verbs (1) or gerunds (2) and investigates two interrelated issues: a) the nature of the functional heads on which clitics adjoin, and b) the manner in which adjunction of multiple clitics occurs.

(1) a. Dos’ mou to!
give-2s-IMP me it
b. Dos’ to mou!
give-2s-IMP it me
‘Give it to me!’

(2) a. Diavazondas mou to ...
reading me it
b. Diavazondas to mou ...
reading it me
‘Reading it to me...’

Kayne (1993) proposes that clitics adjoin to empty functional heads rather than to heads that dominate lexical material at some level of representation. I will show that (1) and (2) provide evidence for two types of empty heads that may serve as hosts of clitics, distinguished on the basis of whether they bear V-related features, i.e., they are functional heads that check features of the verb, or are featureless place-holders.
The above distinction is manifested by the different manner in which verb movement past the clitics proceeds, depending on the type of the empty heads crossed, in compliance with the Shortest Move requirement (Chomsky 1993). Extending the Shortest Move requirement to instances of X0 movement and considering it to essentially reflect the idea that a head may not skip over a head capable of checking its features (Ferguson and Groat 1994), the dichotomy I establish correctly predicts that the ordering flexibility of Greek double object clitics in postverbal position is restricted to those contexts where clitics adjoin to V-related heads, and is not available when clitics follow a finite verb since they then are found adjoined to featureless place-holder heads. Thus, I derive the ordering options of double object clitics in Greek not simply from their postverbal position but also from the fact that, when postverbal, they follow verbs of a certain type, that is, with 'defective' tense.

With respect to the second issue, namely, the manner in which multiple clitics adjoin, I claim that it is open to parametric variation. While in languages of the Spanish/Italian type double object clitics are adjoined to each other and their complex to an empty functional head, each clitic may adjoin to a different empty head in Greek. This accounts for the fact that the ordering options illustrated by (1) and (2) are not possible in the Romance languages (3)-(4) despite the similarities that imperatives and gerunds of the latter languages share with their Greek counterparts (Rivero 1988, Rivero and Terzi 1994).
(3) a. Damelo!
give-2s-IMP-me-it
b. *Dalome!
give-2s-IMP-it-me

'Give it to me!'

(4) a. Dandomelo...
giving-me-it
b. *Dandolome...
giving-it-me

'Giving it to me...'

The paper is organized as follows: In the first section I examine the reasons that underly the V-cl order manifested by gerunds, imperatives and infinitives in languages like Greek or Spanish/Italian, where clitics standardly precede the finite verb. The second section focuses on the nature and properties of the empty heads to which clitics adjoin. I propose that all three categories that display V-cl order, i.e., gerunds, infinitives and imperatives are associated with a Tense projection headed by an empty T to which clitics attach. In finite structures clitics adjoin to featureless heads. In the third section I examine the manner in which multiple clitics adjoin, essentially elaborating on the two possible options conjectured in Kayne (1993). The fourth section offers a brief presentation of the clitic system of Cypriot Greek, focusing mainly on the aspect that differentiates it from Standard Greek, that is, on the ban on first position clitics. The fifth section
examines the adjunction and ordering possibilities of postverbal double object clitics in Cypriot Greek, and shows how they are related to the claims previously made.

2. Clitics in Postverbal Position

While pronominal object clitics precede the finite verb in Greek (5), they follow imperatives (6), or gerunds (7), patterning with the behavior of pronominal clitics in languages of the Spanish/Italian type.

(5)  
a. To diavasa.  
   it I-read  
b. *Diavasa to.  
   I-read it  
   'I read it.'

(6)  
a. Diavase to!  
   read-IMP it  
b. *To diavase!  
   it read-IMP  
   'Read it!'

(7)  
a. Diavazondas to ...  
   reading it  
b. *To diavazondas ...  
   it reading ...

I will take the clitics in the above paradigm to uniformly originate in a position to the left of the verb (cf. (8)) and consider the V-cl order of (6) and (7) to derive from the verb
having raised past the head hosting the clitic.

(8) \[ c \ldots \ [\text{Neg}^o \ [r, \text{CL} \ [r, \text{O} \ [r, \text{N} \ [v \ldots]]]]] \]

Although a detailed account of the landing site and the reasons that trigger the verb movement which leaves clitics behind in (6) and (7) is beyond the scope of this paper and does not affect our main objectives, it should be pointed out that both landing side and triggering factor are different in gerunds than in imperatives.

Rivero (1988) argues that true imperatives undergo an overt V-to-C movement in languages like Greek (or the Romance) triggered by illocutionary/imperative force (IF) features in C.\(^2\) Thus, V-to-C movement is responsible for the V-cl order of (6) and accounts for the incompatibility of imperatives with negation.

(9) *Mi diavase!

NEG rea-2s-IMP

'Don’t read!'

Taking into consideration that, unlike imperatives, gerunds may be negated one has to assume that verb movement past the clitics has as landing site a position lower than Neg\(^o\) in the context of gerunds.

(10) Mi diazavondas to...

Not reading it...

Rivero (1988) claims that gerunds move to N\(^o\) in Greek, a functional head higher than I\(^o\) but lower than C\(^o\) (and presumably lower than Neg\(^o\)). Considering the similarities that gerunds share with infinitives, the possibility of hosting a PRO subject
being the most relevant one, it is not surprising that - on
independent considerations - the above claim finds an approximate
counterpart in Kayne’s (1991) proposals concerning Romance
infinitives which also leave clitics behind and may be negated.’

(11)  

...no leerlo

NEG read-INF it

‘To not read it.’

The reasons that trigger verb movement past the clitics in the
context of gerunds is somehow less clear than with imperatives.
One might want to assimilate them though to the reasons that
trigger raising of (Romance) infinitivals, and licensing of a PRO
subject is a plausible common factor. Recall that in Kayne
(1991) raising of the infinitival verb and subsequent adjunction
of it to I' is indeed associated with licensing of PRO, an idea
that Terzi (1992) extends to the Balkan subjunctives with a PRO
subject, considering the finite verb to adjoin to M' in LF. In
an attempt to dispense with adjunctions of the above type, we
will rather take the verb to move to M0 in the Balkan languages
and extend this proposal to Romance infinitives as well. That
is, rather than having the verb to adjoin to I' in examples such
as in (6), we will take it to move to an empty head immediately
above I, which we will consider to be the counterpart of M' in
Romance infinitives.

(11)'}
Keeping in mind that, on independent considerations, Rivero (1988) takes gerunds to have M′ as their landing site, we are thus arriving at a convergence with respect to the verb movement that gerunds and infinitives involve. Consequently, we will consider the V-cl order manifested by gerunds and infinitives to be the result of V-(to-I)-to-M movement, while attribute the V-cl order of imperatives to the verb having raised to a higher position in the clause, that is to the C with [IF].

In conclusion, we established in this section that the postverbal position of clitics in the context of imperatives and gerunds in Greek (and the infinitives of languages like Spanish and Italian) is not an indication that clitics are adjoined to the right of the verb but rather that the verb has moved higher than I, or more precisely, higher than the functional head to which clitics are found. On the other hand, since the verb has remained in I in finite structures like (5), it surfaces to the right of the clitics roughly manifesting the base-generated order of (8). The above is illustrated in brief in (12) where the initial position and the landing site of the verb movement is shown, with the details of it to be developed in subsequent sections.

\[(12) \begin{align*}
\text{a. } & [C \quad [\text{Inf}] \quad [r, CL \quad [r, O \quad [r, \text{Agr} \quad [v \ldots]]]]] \quad \text{Imper.} \\
\text{b. } & [C \quad [\text{Inf}] \quad [r, CL \quad [r, O \quad [r, \text{Agr} \quad [v \ldots]]]]] \quad \text{Ger/Inf} \\
\text{c. } & [C \quad [\text{Inf}] \quad [r, CL \quad [r, O \quad [r, \text{Agr} \quad [v \ldots]]]]] \quad \text{Fin}
\end{align*}\]

Following Kayne (1993) we take the clitics in (5)-(7) to adjoin to an empty functional head $F$ that takes IP as its complement, as illustrated in (8) and is repeated in the schema below:

\[ (13) \]

If Kayne (1993) is right in that clitics may only adjoin to empty heads, the nature of $F$ is rather straightforward in configurations such as (5)=(14).

\[ (14) \quad [c \ldots [r, To [r, 0 [r, diavasa, [\alpha_0, e_i, [v, e_i]]]]]] \]

'I read it.'

Since the verb is finite in (14), the functional heads that check verbal features, that is, tense and agreement, dominate lexical material at some level of representation, thus adjunction of clitics to either one of them is excluded as an instance of multiple adjunction. Thus, in finite structures such as (14) an extra head $F^0$ is projected for clitics to adjoin to and it is presumably a mere place-holder devoid of features associated with the verb. In this sense, $F^0$ is reminiscent of the head of Clitic Phrase (Sportiche 1992).

Examination of gerunds, as in (6), and imperatives, as in (7), reveals different possibilities, however. Let us start with
gerunds, keeping in mind their similarities with infinitivals. It has been a rather common assumption (Stowell 1982 and thereafter) that infinitives involve defective Tense of some sort rather than lack Tense entirely. Within recent theoretical developments that dispense with head government and licensing of PRO via the PRO theorem (Chomsky and Lasnik 1991, Chomsky 1993) the Tense of infinitives is considered to correspond to the nonlexical head $T^0$ in Infl, which checks null Case and licenses PRO (see Martin 1993, for English). In the Romance languages the empty $T^0$ of infinitivals is considered the functional head to which pronominal clitics adjoin (Kayne 1991). Taking into account that PRO may be the subject of gerunds as well, an (empty) $T^0$ is presumably present in gerunds and checks null Case. Thus, both gerunds and infinitives involve a TP projection headed by a $T^0$ which constitutes a legitimate adjunction site for pronominal clitics as it does not dominate lexical material.

Consequently, I propose that, while in finite structures such as (5) the empty $F^0$ we see in (13) is a place-holder devoid of features, the $F^0$ to which clitics attach in gerunds (and infinitives) corresponds to $T^0$.

Within the same line of reasoning, and based on the defective Tense of imperatives, which according to Beukema and Koopman (1989) corresponds to [-tense] Infl, we will extend the above idea to imperatives as well. That is, contra Zanuttini (1991), who argues that imperatives lack a Tense projection, we will hold that imperatives involve a $T^0$ which is not lexical and
thus may host pronominal clitics. Therefore, what (6) and (7) have in common, apart from the V-cl order that distinguishes them from (5), is that their clausal make up involves an empty functional head corresponding to their defective Tense, that is, the F° of (13) corresponds to T° in both imperatives and gerunds. In (5), on the other hand, T° is lexical in the overt syntax, thus it may not host clitics.

The above dichotomy with respect to the types of (empty) heads that may host clitics provides a straightforward explanation for the preverbal vs. postverbal position of clitics correlating with finite vs. non-finite structures respectively. Recall that we are uniformly assuming left adjunction of clitics to an empty functional head F° that precedes IP. In the case of finite structures, such as (5), verb movement to Agr° and T° does not continue to F° since the latter is not a head that checks features of the verb, (15). Furthermore, no additional factor is there to trigger verb movement past F°.

(15) \[ [c \ldots [r, CL [r, 0 [r, V, [Agr, e_i [v, e_i \ldots]]]]]]\]
The result is that clitics surface to the left of the verb, adjoined to a functional head other than the one where the verb is found, thus verb and clitics do not from a complex.

In gerunds and imperatives (but also in infinitives of languages which, unlike Greek, have infinitives) clitics adjoin to Tense.

(16) \[ [c \ldots [r, V+CL [r, e_i [Agr, e_i [v, e_i \ldots]]]]]]\]
The verb raising to C° and M° that imperatives and
gerunds/infinitives respectively involve proceeds through F°. Since F° bears features that the verb checks, it cannot be skipped by verb raising as this violates the Shortest Move requirement (Chomsky 1993, Ferguson and Groat 1994). The verb movement through F° (as manifested by the order V-cl rather than cl-V) suggests subsequent incorporation of the verb into the clitic with the result that the V-cl order surfaces as an unanalyzed unit.

\[(17)\]

Thus, the well-attested contrasts in coordinate structures arise with respect to whether clitics appear in preverbal or postverbal position Bosque (1987), Benincà and Cinque (1993), Rivero (1994).

\[(18)\]

a. Lo leggo e lo leggerò sempre con piacere.

b. Lo leggo e leggerò sempre con piacere.

'I read it and reread it always with pleasure.'

\[(19)\]

a. Per leggerlo e rileggerlo.

b. *Per leggerlo e rileggere.

'In order to read it and reread it.'

According to our claims clitic(s) and verb end up in different head positions in finite clauses (cf. (15)) thus stranding of verb and clitics becomes possible in coordinate structures such as (18b). This possibility is not available in infinitivals, as
(19b) shows, since the verb incorporates into the clitic after moving through the empty functional head that hosts it, (16)-(17)." Notice that in languages with second position restrictions (henceforth 2P languages), counterparts of (19b) are grammatical, (20), despite the fact that imperatives presumably involve an empty T° as well, thus verb movement should proceed through it and result in clitics and verb forming an analyzed unit. (20) Kupu je i čita! 'Buy it and read it!' The well-formedeness of (20) from Serbo-Croatian (SC) above is not explained by some type of exceptional mechanism utilized by the V-to-C movement that the structure involves, a solution that would weaken my proposals with respect to the clausal make up of imperatives. The grammaticality of (20) follows from the fact that clitics do not adjoin to T° in 2P languages, thus verb movement through the empty T° of imperatives does not bring verb and clitics on the same head position therefore they may be stranded. Rather, clitics are in Spec(WP) (the Wackernagel Phrase) in languages with strict second position restrictions with the consequence that that V-to-C movement skips them:

(21) \[ [c [w CL [w W ... [r O [aer [v ...]]]]]] \]

To summarize, I claimed in this section that clitics may be hosted by two types of empty functional heads. While the clitics that are associated with finite structures adjoin to an empty head that serves as a place-holder and is devoid of features, the
ones associated with gerunds and imperatives adjoin to T°. The
latter option is available to imperatives and gerunds because
Tense does not dominate lexical material and adjunction to it
does not result to multiple adjunction. The dichotomy I
establish explains the preverbal versus postverbal position of
clitics in the languages of the Greek/Romance type and the
coordination facts they manifest." In what follows, I will show
that this distinction is further supported by and is also
(partially) responsible for the exceptional ordering options that
double object clitics demonstrate in Greek."

3. Adjunction of Double Clitics.
Just like the single clitics we discussed in the previous
section, double clitics precede the finite verb in Greek, (22),
while they follow imperatives and gerunds (23)-(24) patterning
with their counterparts in languages of the Spanish/Italian type.

(22) Mou to diavase.
   me it read-3s
   'S/he read it to me.'

(23) Diavase mou to.
    read-2s-IMP me it
    'Read it to me.'

(24) Diavazondas mou to ...
    reading me it
    'Reading it to me...’
As previously, we will take clitics to uniformly adjoin to the left of the verb in (22) through (24) and derive the V-cl order of (23) and (24) from verb raising to a position higher than the head(s) hosting the clitic(s).

A striking property of double object clitics in Greek, not shared by the comparable structures of Romance languages (with the dubious exception of French), is that while only the unmarked order dat-acc clitic is available when clitics precede the verb (25), either ordering is possible when clitics are postverbal (26)-(27).

(25)  
   a. Mou to diavase.  
        me it read-3sa.  
   b. *To mou diavase.  
        it me read-3s  
        'S/he read it to me.'

(26)  
   a. Diavase mou to.  
        read-2s-IMP me it  
   b. Diavase to mou.  
        read-2s-IMP it me  
        'Read it to me.'

(27)  
   a. Diavazondas mou to.  
        reading " me it  
   b. Diavazondas to mou.  
        reading it me  
        'Reading it to me.'

Notice that, unlike comparable facts of French, the form of the
clitics that precede the verb is identical to those that follow it (cf. (25a)-(26a)). Furthermore, the alternation demonstrated by (26) and (27) is not restricted to the specific combination of 1sg-3sg clitics. The examples below show that a combination of two 3sg clitics displays identical ordering options.

(28)
  a. Tis to diavasa.
     her it I-read
  b. *To tis diavasa.
     it her I-read
     'I read it to her.'

(29)
  a. Diavase tis to!
     read-2s-IMP her it
  b. Diavase to tis!
     read-2s-IMP it her
     'Read it to her!'

In other words, provided we obtain a legitimate dat-acc combination preverbally, it is always the case that the order acc-dat is possible in postverbal position. Our main concern here is not to identify the permissible clitic combinations in Greek (see Perlemutter 1971, Bonet 1991 for extensive investigation of this issue in the context of Romance clitics) but rather to account for the flexible ordering they manifest when postverbal. An answer to this question will presumably be able to extend to the French facts in (30).

(30)
  a. Donnez moi le!
     give me it
b. Donnez le moi!
give it me
'Give it to me!'

I would like to claim that the ordering options that postverbal clitics manifest in Greek is partially due to the manner in which multiple clitics adjoin and partially a result of the different status of the empty functional heads to which they adjoin, along the lines argued for in the previous section. Following Kayne (1993), I will hold that two options are available for the adjunction of double (or multiple) clitics.

a) Each clitic adjoins to a different functional head as in (31a).

b) Clitics adjoin to each other and their complex to a functional head as in (31b).

(31) 

\[ \text{The claims I have made so far with respect to the status of the empty heads on which clitics adjoin remain the same. That is, irrespectively of whether the option in (31a) or (31b) is utilized, F1 corresponds to a featureless place-holder in finite structures but amounts to T* in imperatives and gerunds. The functional head F2 is presumably always a place-holder.} \]
I would like to propose that the option in (31a) is available to Greek. More precisely, while the dative clitics adjoin to the higher functional head F2, the accusative ones adjoin to F1 as illustrated below:

(32)

The V-to-C movement triggered by the [IP] features in C\textsuperscript{0} may not skip over F1. This is because F1 corresponds to T\textsuperscript{0} in the context of imperatives, or else, it is a functional head that checks features of the verb and crossing over it violates the Shortest Move requirement as formulated in Ferguson and Groat (1994). Rather, the verb movement in (33) proceeds via F1, to which the accusative clitic adjoins, the verb incorporates into the clitic, just like in (17) earlier, and their complex moves along to C\textsuperscript{0} skipping over the dative clitic in F2. Thus, the order V-cl\textsubscript{acc}-cl\textsubscript{dat} is created. Similar considerations explain the acc-dat order of clitics that follow gerunds.

(33)
It appears at first glance that the same parametric option is available in French and is responsible for the order in (34b).

(34)  a. Donnez moi le!
give me it
b. Donnez le moi!
give it me
'Give it to me!'

Notice, that (34b) may be derived from (34a) via the mechanism in (33) irrespectively of the status of 'moi'. Namely, even if 'moi' does not have the status of the X° pronominal clitics of the Romance/Greek type, as the facts in (35) and (36) indicate, the unambiguous status of 'le' as an X° element places it adjoined to F1 as in (33). Therefore, the imperative verb raising that proceeds via F1, incorporates into 'le' and reverses its order with respect to 'moi', giving rise to (34b).

(35)  a. Qui a fait ça?
    'Who did this?'
b. Moi/Pas moi.
    'Me/Not me.'

(36)  Pierre et moi sommes allés.
    'Pierre and I left.'

The impossibility of the acc-dat ordering in the rest of the Romance languages (cf. (3b)-(4b) repeated below) suggests that the parametric option in (31a) is not available to them.

(37)  a. Damelo!
    give-2s-IMP-me-it
(38)  a.  Dandomelo...
giving-me-it

b.  *Dandolome...
giving-it-me

'Giving it to me...'

Rather, clitics adjoin to each other and their complex to a
functional head as (31b)=(39) below.

(39)

Consequently, V-to-C movement in the context of imperatives (or
gerunds), although proceeding via the lower head F1, may not
carry the accusative clitic along since this leaves the dative
clitic stranded behind. The impossibility of both types of clitic
ordering in examples like the following from French indicates
that X° clitics in French also lack the option in (31a) and
suggests that 'moi' has a status different from that of the
pronominal clitics (cf. (34) vs. (40).

(40)  a.  *Donnez lui le!
give    him it.
b. Donnez-le lui!
give it him.
'Give it to him!'

At the same time, the option in (31b) is also available in Greek and is the result of the surface order dat-acc clitic:

(41)

To sum up, I have attributed the ordering flexibility that Greek double object clitics manifest in the context of gerunds and imperatives to the following factors:

a) Multiple clitics may adjoin each one to a different (empty) functional head in Greek.

b) The verb movement past the clitics that occurs in the context of gerunds and imperatives, proceeds through the head that hosts the lower clitic (i.e., the accusative) and carries it along moving over the dative clitic and giving rise to the v-cl<sub>acc</sub>-cl<sub>dat</sub> order.

c) The aforementioned verb movement stops via the head that hosts the lower clitic because this is a head that checks features of the verb and skipping over it violates the Shortest Move requirement.

It follows from a) that the lack of clitic ordering flexibilities from imperatives (and gerunds) of languages like
Spanish/Italian does not reflect a different clausal make up of these structures from their Greek counterparts. Indeed, it has been argued that imperatives of Greek and Spanish have similar properties (Rivero and Terzi 1994). Rather, the lack of the acc-dat order of clitics from the latter reflects the fact that double clitics adjoin to each other rather to different functional heads, with the consequence that they cannot be stranded should the verb move through the head that hosts their complex.

It follows from b) that double clitics in preverbal position may only manifest one order as no overt verb movement occurs to carry the lower clitic along and create the alternative ordering. This is demonstrated by Greek finite structures where clitics surface preverbally and only the dat-acc order is permitted.

Finally, it follows from c) that when double clitics adjoin to different functional heads, verb movement past them alters their ordering in the context of gerunds and imperatives because the lower clitic adjoins to a head that checks features of the verb, thus the verb moves through it and carries it along reversing its order. Alternatively put, had the lower clitic adjoined to a featureless functional head, V-to-C movement could presumably skip it. More precisely, and following predictions of the Shortest Move requirement not only is verb movement over a featureless head possible, but the verb is prohibited from moving through such a head. This amounts to saying that given a context like the one below, where two clitics are hosted by
featureless heads, verb movement past them cannot reverse their order.

(42)

The facts from Cypriot Greek in the following sections confirm that verb movement does not proceed via featureless heads and provide support to the proposed account of the flexible ordering of double object clitics in Greek which crucially relies upon the distinction between two types of empty functional heads to which clitics may attach.

4. Clitics in Cypriot Greek

This section describes the distribution of pronominal clitics in Cypriot Greek (CGr) and its aim is twofold: first to show that despite the different positions in which clitics surface in CGr they actually occupy the same position in the clausal structure as those of Standard Greek (SGr). That is, the clitic systems of both varieties are essentially characterized by the representation in (12) repeated below as (45), with clitics adjoined to an empty functional head F\(^e\), immediately preceding IP.

(45) \[ [C\ O\ _{[\text{neg}]]} [\_\ [\_\ [\_\ [\text{CL} [\_\ [\_\ [\_\ [\text{AGR} [\_\ \ldots ]]]]]]]]]}

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A first consequence of the above conclusion is that the claims we made concerning the nature of the empty heads that host clitics on the basis of SGr can extend to CGr as well. Furthermore, since clitics in CGr appear postverbally even in the context of finite structures, (46), they allow us to test whether the flexible order of double object clitics in Greek is simply the result of their postverbal position or it is also related to the nature of the verbs preceding them, and consequently, to the nature of the heads that host them.

(46) Ekaama to.
    I-did it
    'I did it.'

Second, it is also the purpose of this section to give a formal characterization of the clitic system of Cypriot Greek and of the ban on first position clitics it manifests.

As already mentioned, contrary to SGr (47), clitics may not appear first in CG (48a), but they have to immediately follow the verb (48b).

(47) To diavasa. (SGr)
    it I-read
    'I read it.'

(48) a. *To edkiaavasa. (CGr)
    it I-read

    b. Edkiaavasa to.
    I-read it
    'I read it.'
Although never in first position, however, clitics do not have to appear in some specific position in the clause in CGr, as long as they are adjacent to the verb.

(49)      a.   I Maria edkiavasen to.
                  Maria   read-3s  it

     b.   *I Maria to edkiavasen.
                  Maria   it read-3s
              'Maria read it.'

(50)      a.   Poli anthropi panda kamnoun to sosta.
                  Many people  always do-3p it correctly

     b.   *Poli anthropi panda to kamnoun sosta.
                  Many people  always it do-3p correctly
              'Many people always do it correctly.'

In this, CGr differs from languages with strict second position restrictions, such as Serbo/Croatian (SC), where clitics may not be adjacent to the verb but they always follow the first constituent in the clause.

(51)      Maria ga je pročitala.     (SC)
                  Mary it has read.
              'Mary has read it.'

(52)      Mnogi ljudi ga pazljivo čitaju.
                  Many people it carefully read
              'Many people read it carefully.'

In CGr, clitics may follow the verb in embedded contexts as well.

(53)      Ksero oti i Maria edkiavasen to.
                  I-know that Mary read it
'I know that many read it.'

(54) Ksero oti poli anthropi kamnoun to sosta.
I-know that many people do it correctly.
'I know that many people do it correctly.'

Serbo/Croatian shows, on the other hand, that clitics must immediately follow the complementizer in embedded contexts, while they do not have to be adjacent to the verb.

(55) Znam da ga mnogi ljudi pažljivo čitaju.
I-know that it Many people carefully read
'I-know that many people read it carefully.'

(56) Ivan kaže da nam Olga ništa ne daje.
Ivan says that us Olga nothing NEG gives
'Ivan says that Olga is not giving us anything.'

The above minimal pairs intend to show that despite the ban on first position clitics that CGr manifests it should not be considered parallel to languages with 2P restrictions. While in SC clitics must appear second, in CGr clitics may not appear first but they have to be adjacent to the verb, supporting the idea that while a position higher in the clause serves as host of clitics in the former type of language (the WP projection following CP, thus clitics immediately follow C0 in embedded clauses) clitics are lower in the clausal structure in the latter (see Rivero 1994)." "

Clitics are not always postverbal in CGr but in a number of instances they may only appear preverbally, just like in Standard Greek." This is the case when they are preceded by Neg° as in
(57a), by M as in (58a) or by Foc as in (59a).

(57)  
   a. En ton iksero.  
       NEG him I-know  
   b. *En iksero ton.  
       NEG I-know him  
       'I don't know him.'

(58)  
   a. Thelo na ton do.  
       I-want PRT him I-see  
       I-want PRT I-see him  
       'I want to see him.'

(59)  
   a. Tuto to vivlio sou edoken i Maria.  
       This the book you gave-3s Mary  
   b. *Tuto to vivlio edoken sou i Maria.  
       This the book gave-3s you Mary  
       'This book Mary gave you.'

In all environments discussed so far, clitics may only appear strictly preverbally in SGr, just like in Spanish and Italian.

I propose that, despite the different positions in which pronominal clitics surface in a number of contexts in CGr, they occupy the same position in the clausal structure as in SGr. That is, in both varieties pronominal clitics adjoin to an empty functional head that takes IP as its complement, as in (45), repeated below:

(60)  
[C 0 [θo ([w] [r CL [r 0 [r [arg [v ...]]]]])]]
I consider the different order of SGr vs. CGr clitics with respect to the verb, namely, the fact that in a number of finite contexts clitics follow the verb in CGr, while they always precede it in SGr, to reflect a difference in the level of representation at which clitics are formally licensed by an X₀ element (see Rizzi’s 1986 licensing of pro). CGr clitics have strong features that must be licensed in the internal domain of a functional head before spell-out, a type of licensing that involves a head-complement rather than Spec-head relation (see Uriagereka 1988, Rivero 1994). This requirement is responsible for verb movement to a position preceding the clitic and explains why clitics follow the verb in examples like (48b), (49a), (50a), (53), (54). On the other hand, clitics are licensed in the internal domain of Neg₀, M₀ and Foc₀ respectively in (57a)-(59a) thus surface preverbally. Moreover, verb movement to a position preceding the clitics is now prohibited as an economy violation hence the ungrammaticality of (57b), (58b), (59b).

Another functional head that may license pronominal clitics in its internal domain is the factive complementizer pou.

(61) a. Lipoume pou i Maria to dkiavazi.  (CGr) regret-1s COMP Mary it read-3s

   b. *Lipoume pou i Maria dkiavazi to.  
      regret-1s COMP Mary read-3s it
         ‘I regret that Mary read it.’

A complementizer with wh-features has similar results, as (62) illustrates:
(62)  a. Pics ton ide?
      who  him saw

b. *Pics ide ton
      who  saw him

'Who saw him?'

On the other hand, the empty complementizer of recursive CPs, as I consider the structures in (63) and (64) to amount to, cannot license the strong features of the clitic and verb movement takes place creating the V-cl order of (63a) and (64a).

(63)  a. Ksero (oti) i Maria edkiavasen to.
      I-know that Mary read it

b. *Ksero (oti) i Maria to edkiavasen.
      I-know that Mary  it read

      'I know that Mary read it.'

(64)  a. Ksero (oti) poli anthropi kamnoun to sosta.
      I-know that many people do  it correctly.

b. *Ksero (oti) poli anthropi to kamnoun sosta.
      I-know that many people  do correctly.

      'I know that many people do it correctly.'

That licensing of the strong features of CGr clitics is related to the presence of an immediately preceding head is confirmed by the following contrast involving a preverbal CLLDeed (65) and Focused element (66).

(65)  a. *Touto to vivlio to edkiavasa.
     this  book   it I-read
b. Touto to vivlio edkiavasa to.  
this book I-read it  
'As for this book, I read it.'

(66)

a. Touto to vivlio sou edoken i Maria.  
this the book gave-3s you Mary  

b. *Touto to vivlio edoken sou i Maria.  
this the book gave-3s you Mary  

'This book Mary gave you.'

Recall that CLLDed elements, contrary to focused NPs, are adjoined to CP (Cinque 1990, Iatridou 1991). Thus, no functional head is present to license the strong features of the clitic in configurations such as (65a) and verb movement takes place resulting in the V-cl order of (65b). The focused NP of (66a) is located in the Specifier position of Focus Phrase, headed by an empty Focus Head (Tsimpli 1991) which licenses the strong features of the clitic. Consequently, the verb movement that gives rise to the order V-cl in (66b) is excluded as an economy violation.

To summarize, I proposed in this section that the different position in which clitics surface with respect to the verb in SGr and CGr is due to a parametric variation with respect to the level of representation at which their licensing conditions are satisfied. I argued that pronominal clitics occupy the same position in the clausal structure in both varieties, but in CGr they bear strong features, which in the absence of a preceding functional head, are licensed by verb movement to a position
establishing the precedence relation. In SGr the features of the clitics are weak; thus no verb movement takes place in the overt syntax and the surface order is cl-V in finite structures. The V-cl order that the latter manifest in the context of gerunds and imperatives is triggered by independent reasons, as argued in section 2.

4. Cypriot Greek and Double Object Clitics

Having laid out the main properties of the clitic system of CGr and having essentially argued that CGr clitics adjoin to similar types of empty heads as in SGr, let us now see how double object clitics behave in CGr.

Just like in SGr, double object clitics may follow the imperative verb in either order, as (70) and (71) illustrate:

(70) a. Dos’ mou to.
    Give-IMP me it

b. Dos’ to mou.
    Give it me
    'Give it to me!'

(71) a. Dkiavase mou to
    read-IMP me it

b. Dkiavase to mou.
    read-IMP it me
    'Read it to me!'

Following the arguments of the previous sections, we will consider the flexible order of clitics in (70) and (71) to result
from the fact that each one of the clitics adjoins to a different functional head in the order dat-acc of (32):

(32)

The order of (70b) and (71b) is obtained after the verb moves via the head that hosts the lower clitic and their complex moves further up (to C). I argued that this process takes place in the imperatives (and gerunds) of Standard Greek, not simply because it is the only instance where clitics appear postverbally — indicating that the verb has moved past them — but because imperatives and gerunds are associated with a Tense projection that hosts the lower clitic. Thus, the verb movement to T°, which is followed by incorporation of the verb into the clitic, is an inevitable step, since the alternative would involve skipping over T°, a process not allowed by the Shortest Move requirement.

CGr clitics may be postverbal in structures other than imperatives as well (72b), or else, they may not be preverbal if not preceded by some functional head (72b).

(72) a. *Mou to edkiavasen.
    me it read-3s.
b. Edkiavasen mou to.

read-3s me it
'S/he read it to me.'

Following the reasoning exposed in previous sections, in finite clauses such as (72) T^0 dominates lexical material at some level of representation, therefore clitics cannot adjoin to it. Consequently, both clitics in (72) adjoin to functional heads that are place-holders devoid of features as illustrated in (73).

(73)

The flexible ordering of clitics manifested in the context of imperatives (71)-(72) indicates that the option of adjoining each clitic to a different functional head is available to CGr. Accordingly, we take the dative clitic to adjoin to the higher functional head F2 in (73) and the accusative to F1, reminding that both F1 and F2 are featureless empty heads.

The version of the Shortest Move requirement, as applied to head movement by Ferguson and Groat (1994), makes the prediction (confirmed by N^0 incorporation in S. Tiwa, as discussed by Baker and Hale (1990)) that head movement is not allowed to proceed via heads that are devoid of features (we took this to be related to the fact that this movement is associated with the additional process of incorporation). In the case under consideration,
i.e., the configuration in (73), this amounts to saying that verb movement past the clitics may not stop via F1, since this is a heads that does not check features of the verb, thus the acc-dat order of clitics cannot be obtained. The prediction is borne out by CG, as illustrated below:

(74)  
  a. Dkiavas mou to  
       read-IMP me it  
  b. Dkiavas to mou.  
       read-IMP it me  
       'Read it to me!'  

(75)  
  a. Edkivasen mou to.  
       read-3s me it  
  b. *Edkivasen to mou.  
       read-3s it me  
       'S/he read it to me.'  

While double object clitics follow both imperatives and finite verbs, it is only in the former case that both orders of clitics may be obtained (cf. 74b) vs. (75b)).

To conclude, I argued in this paper that the flexible order manifested by double object clitics in postverbal position in Greek is not only a result of their being able to adjoin to different empty heads and thus be stranded by verb movement past them. Rather, it is also related to the type of (empty) functional heads to which each clitic adjoins, providing evidence for the existence of two different type of heads that may host clitics.
NOTES

1. Adjunction to the latter amounts to multiple adjunction, which is disallowed by Kayne’s system.

2. See Philippaki (1993) for a similar proposal for Greek.

3. Kayne (1991) actually proposes that Romance infinitives adjoin to $I'$, but the core idea both proposals share is that the landing site of verb movement is a position between CP and $I^0$.

4. As for English infinitives, we will take the infinitival verb to adjoin to ‘to’ after spell-out, thus consider ‘to’ to be dominated by the functional head M as in Terzi (1992) and Pollock (1993).

5. But see Haegeman (1994) for a view that considers Romance clitics adjoined to heads that bear both N-related and V-related features (while in West Flemish each feature type is hosted by a different head).

6. Thus, our proposal differs from Kayne (1991) who considers infinitival verb raising to skip over the $T^0$ that hosts pronominal clitics in the Romance languages. We believe that this is a desirable direction as it does not resort to right incorporation of the clitic to the verb for the explanation of the coordination facts in (19b) as Benincà and Cinque’s (1993) analysis does.

7. V-to-C movement in (20) should not be attributed to the same reasons that underly V-to-C in Greek/Spanish imperatives, namely to [IF] features in C (Rivero and Terzi 1994). Notice that the verb raises to C in indicative structures as well, and similar coordination facts obtain.

(i) Kupuje je i čita svai dan.  
(‘He) buys it and reads (it) every day.’ (Rivero 1994).  
In both (20) and (i) above V-to-C movement is related to the 2P restrictions of S/C, and since clitics are located in Spec(WP), they are skipped by verb movement, thus verb and clitics may be stranded.

8. Rooryck (1992) explains the lack of preverbal clitics from imperatives and infinitives by associating the latter with anaphoric AgrS, which blocks the government relationship between
clitics and their traces in the sense of Rizzi’s (1990) Relativized Minimality. By relating anaphoric Agr to the occurrence of a PRO subject (i.e., control configurations) the above account does not explain why in languages such as Greek or Salentino, where control involves finite clauses, clitics are always preverbal. Furthermore, it fails to predict the possibility of preverbal clitics with imperatives of 2P languages.

(i) Knjige *ne* čitajte!
books they NEG read-IMP
‘Read books to them!’

While in terms with empirical evidence of the above type, our account is also also accounts for the different behavior of postverbal clitics in coordination structures crosslinguistically.

9. Once the dichotomy between two types of heads that may host clitics is established, it is difficult to see how the notion of Clitic Phrase (Sportiche 1992) can be maintained as such a phrase is expected to not vary in behavior.

10. To be precise, we will not address for the moment the issue of whether the V-cl complex incorporates into the dative clitic in F2 or moves over it. The latter option is certainly permitted by the Shortest Move version we adopt, as F2 is a place-holder devoid of V-related features.

11. Ferguson and Groat base their formulation of the Shortest Move requirement pertinent to head movement mainly on N° movement over an intervening D° and its subsequent incorporation into the verb (Baker and Hale 1990, for S. Tiwa). Baker and Hale report that the determiner cannot incorporate along with the noun, a fact consistent with our idea that a head that does not check features of another head must be skipped in the process of head movement. This conclusion is at first glance in contradiction with Chomsky’s (1993) notion of economy (which is, however, based on head movement) as there seems to be in principle no reason why one step movement is to be preferred from a two step one if what counts is the number of chains formed rather than the number of links in a chain (see also Collins 1994). It seems to us that what makes head movement through a featureless head more costly than skipping over it is not the movement per se but the fact that in both cases under consideration (S. Tiwa, Greek) verb movement via a featureless head is also followed by an additional process, namely, incorporation into some element (D° in S. Tiwa, accusative clitic in Greek).
12. Compound tenses are not available in Cypriot Greek, thus
(i) *(48b)* stands for the Standard Greek (ii) as well.

(i) Edkiavasa to.
   I-read  it
   'I read/have read/had read it.'

(ii) (To) eho/ha diavasi.
   it  I-have/I-had read.
   'I have/had read it.'

13. Rivero (1994) argues for two different projections in the
clauses where clitic pronouns in a variety of languages may
surface: a Complementizer or C-oriented position and an
Inflection or I-oriented position. A similar view is held by
Martin (1993) for Portuguese clitics.

14. As to why CGR clitics are not in C, see Rouveret's (1992)
analysis against such a line proposed for Portuguese by Madeira

15. But they always have to immediately precede the verb.
Namely, Cypriot Greek lacks the interpolation facts, found in Old
Romance and (arguably) in some varieties of Northern Portuguese

(i) Que ellos te non digan en que puede finar ...
that they you not tell in what can end
'Let them not tell you how it can end.' (from Rivero 1994)

16. The position of clitics with respect to the future particle
'tha' cannot be tested as 'tha' is unavailable in CGR. Its
counterpart structure utilizes an embedded 'na'-introduced clause
complement of an impersonal verb.

(i) Tha pao.  (SGR)
      FUT I-go

(ii) E na pao.  (CGR)
      is(?) SUB I-go
      'I will go.'

17. A different position (higher in the clause) has been
considered to host clitics of Portuguese (Barbosa 1993, Madeira

18. That is, the position of clitics in both SGR and CGR differs
from SC, where clitics occupy a higher position in the clause,
i.e., the Specifier position of WP (Rivero and Terzi 1994).
19. Alternatively, we may consider the $F^0$ that hosts clitics in CGr to have strong features that trigger verb movement and create the V-cl order, a la Uriagereka 1993 and his $F$ position in Western Romance (which we consider to be distinct from the $W$ position in languages with 2P restrictions), but we then would be unable to explain the preverbal position of clitics in the presence of negation and the subjunctive marker.

20. For the time being, we will follow Uriagereka (1993) and consider the verb movement that gives rise to the V-cl order to have as landing site the $X^0$ that hosts the clitic.

21. I omit gerunds from the rest of the discussion as they are not productive forms in CGr.

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