

## On Greek VSO again!<sup>1</sup>

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In the present paper we provide an account of VSO in Greek and its (relative) absence in Italian, despite the fact that both languages allow for postverbal subjects. We argue that this parametric difference reduces to different lexicalisation options regarding the D-system of the two grammars. We assume that the clause structure divides into three basic domains (V, T, and C), and that nominal (clitic) positions are available in each of these domains, which, as we argue, can be lexicalised not only by clitics but also by full DPs. On this basis, we argue that the subject and object DP in Greek can appear in the same domain (V), as they spell out different features depending on their grammatical function, while this is not so in Italian, given that DPs spell out the same set of features irrespective of their grammatical function. This basic difference is responsible for the presence of VSO in Greek but not in Italian. We also consider the implications of our approach for the interpretation of subjects and arguments in general.

### I. INTRODUCTION

The formulation of the pro-drop parameter (Rizzi 1982) correlates the availability of null subjects, the absence of *that-t* effects, and the presence of postverbal subjects. According to this formulation all three properties cluster together, yielding two types of languages: +pro-drop ones, such as Greek, Italian and Spanish, and –pro-drop, such as English and French, among others. Restricting our attention to the availability of postverbal subjects and comparing two +pro-drop languages, namely Greek and Italian, we observe that while both grammars behave more or less alike with respect to the availability of the VS order, the picture becomes more complex once the

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object is present. In particular, while both Greek and Italian permit VS and VOS, as in (1)–(2), only Greek readily allows VSO, as in (3).

- (1) (a) Eklapse **o** **Janis**.  
cried-3s the John  
(b) Ha pianto **Gianni**.  
has cried-3s John  
'John cried.'
- (2) (a) Episkevase ton ipoljisti mu **o** **Janis**.  
REPAIRED-3S the computer my the John  
(b) Ha riparato il mio computer **Gianni**.  
has repaired-3s the my computer John  
'John repaired my computer.'
- (3) (a) Episkevase **o** **Janis** ton ipoljisti mu.  
repaired-3s the John the computer mine  
(b) \*Ha riparato **Gianni** il mio computer.  
has repaired John the my computer  
'John repaired my computer.'

VOS in Italian is associated with a (non-contrastive, new information) focus reading of the postverbal subject, while this is not necessarily the case in Greek (see Philippaki-Warburton 2001, Haidou 2004, contra Alexiadou 1997). On the other hand, VSO in Italian is possible to the extent that the subject bears contrastive focus (Belletti 2001, 2004, Cardinaletti 2001).<sup>2</sup> However, no such restrictions appear to hold in Greek, where VSO may also converge with a neutral intonation, in the sense that (3a) is a natural answer to a wide-focus question of the 'What happened?' type. Due to this property, it has been claimed that VSO is the basic word order in Greek (see Philippaki-Warburton 1982 for an early account).<sup>3</sup> Unlike in Greek, wide-focus questions in Italian trigger SVO (*Gianni ha riparato il mio computer* 'John repaired my computer').

In the light of the VP-internal Subject Hypothesis (Koopman & Sportiche 1991), VSO can be derived in a straightforward way: the verb raises to a higher functional head (e.g. T), while both the subject and the object remain in their thematic positions, as in (4).<sup>4</sup>

[2] VSO is also possible when the object is a PP or a CP, when the object is doubled by a clitic, or when the subject is a pronominal (Belletti 2004). We discuss these constructions in more detail in section 2.2.

[3] On the other hand, narrow-focus questions (e.g. 'Who repaired your computer?') trigger SVO in Greek (e.g. *O Janis episkevase ton ipoljisti mu* 'John repaired my computer').

[4] This derivation does not extend to VSO of the Celtic type, as argued by McCloskey (1997), who provides empirical evidence that the subject at least is outside the VP in Irish (see also Roberts 2005 for Welsh).

(4) [<sub>TP</sub> (DP) [<sub>T'</sub> T [<sub>VP</sub> (DP) [<sub>V'</sub> V DP]]]]

VOS, on the other hand, can be derived in one of the following ways: either by right adjunction of the Subject in VP (or a higher functional head, cf. Philippaki-Warbuton 1985), or by raising both V and O to relevant positions in the functional domain above VP (separately, or as the result of remnant movement in a Kaynian style), thus stranding only S (see Ordoñez 1998 for Spanish; Belletti 2001, 2004, Cardinaletti 2001 for Italian; Alexiadou & Anagnostopoulou 1998, Spyropoulos & Philippaki-Warbuton 2001, Georgiagentis 2003, Sifaki 2003 for Greek, among others). Ignoring the split-I system for the moment, the question is what allows the subject to remain in-situ in Greek, yielding VSO, but not in Italian. In a Government-and-Binding (GB) style account the parameter reduces to the Case-assigning properties of T: Case is assigned in a Spec-head configuration (Italian, English), or under government (Greek). In Minimalism, the notion of government is abandoned, and some other mechanism, namely *Agree*, allows for a relation to be established between the uninterpretable phi-features of T and the interpretable phi-features of the subject in its thematic position; the latter also bears an uninterpretable Case feature that marks it as a Goal for the Probe T (Chomsky 2001, 2004).

Alexiadou & Anagnostopoulou (2001) argue that in Greek VSO both the subject and the object remain inside the VP. Assuming that the agreement affix on V behaves like a clitic and that clitics in Greek are the spell-out of formal features, they argue that V-movement to T suffices to check the Case feature of the subject as well, rendering DP-movement unnecessary. The obvious question is, of course, why Italian does not allow this option, given that it also has V-movement and rich agreement, as well as clitics. Alexiadou & Anagnostopoulou (2001) claim that the absence of clitic-doubling in Italian blocks this option. However, what remains unclear in their account is how exactly the correlation with clitic-doubling holds – in other words, why the availability of a certain type of cliticisation would affect the position of the subject, even in contexts where there is no object clitic present.

On the other hand, Belletti (2001, 2004) provides an analysis that rules out VSO in Italian in terms of locality, and in particular Relativised Minimality. The basic idea is that FocusP and TopicP, typically associated with the left periphery, may also project in the low IP area. Thus, the focus interpretation assigned to a postverbal subject in Italian is structurally derived: the DP subject occurs in the low Spec,FocP (see also Belletti & Shlonsky 1995), as in (5).

(5) [... V ... [<sub>(TopicP)</sub> [<sub>FocP</sub> DP [<sub>Foc'</sub> FOC [<sub>(TopicP)</sub> [<sub>VP</sub> t<sub>DP</sub> [<sub>V'</sub> t<sub>V</sub> DP]]]]]]]]

In VS, the canonical subject position in Spec,TP is realised by an expletive *pro*. In principle, both subject positions (Spec,TP and Spec,FocP)

can be simultaneously lexically realised, as is the case in the following example:

- (6) **Gianni** parlerà **lui**/\***egli** con Maria.  
 John will-speak he/he with Mary  
 ‘John will himself speak with Mary.’

The weak pronoun *egli* in (6) is not compatible with an emphatic interpretation, while the strong pronoun *lui* is. The fact that only strong pronouns can appear in the lower subject position provides further evidence for the presence of a low Focus position.

Belletti (2004) argues that VSO is blocked due to the intervening effect of the subject in Spec,FocP which blocks the association of the object DP with a higher functional position, indicated as v + Acc in (7), for the purpose of Case-feature checking:

- (7) [v + Acc [<sub>FocP</sub> DP<sub>subject</sub> [<sub>Foc'</sub> Foc [<sub>TopicP</sub> Topic [<sub>VP</sub> t<sub>DP</sub> [<sub>v'</sub> t<sub>v</sub> [<sub>VP</sub> t<sub>v</sub> DP<sub>Object</sub>]]]]]]]]]

As a result of this configuration, the object cannot be licensed, yielding ungrammaticality. However, VSO is allowed if the object is a PP or a CP:

- (8) (a) (?)Ha telefonato Maria **al giornale**.  
 has called Mary to-the newspaper  
 ‘Mary called the newspaper.’  
 (b) Ha detto la mamma **che ha telefonato Gianni**.  
 has said the mother that has called John  
 ‘The mother said that John had called.’

Unlike DPs, PPs and CPs do not require Case and therefore they do not give rise to a Relativised Minimality effect. The same locality condition that blocks VSO is predicted to block VOS, which is nevertheless acceptable in Italian, as the example in (2b) shows. Belletti (2004) argues that VOS can be derived through (remnant-)movement of the VO constituent to Spec,TopicP, leaving the subject in Spec,FocP, as is illustrated in (9).

- (9) [<sub>TopicP</sub> [V + O] Topic [<sub>FocP</sub> S Foc [<sub>VP</sub> ...]]]

Remnant-movement in (9), however, yields a rather marked status with respect to the interpretation assigned to the VOS order.

If VSO is ruled out on locality grounds, the question that immediately arises is why this restriction does not hold in the other Romance languages, such as Spanish (see Ordoñez 1998, Zubizarreta 1999). Following Zubizarreta (1999), Belletti (2001) argues that since in these languages the postverbal subject is not necessarily focused (new information), it is possible to assume that there is a Case position low in the clause structure, in addition to the proper one in T, to which the subject moves. Perhaps this position is only

available to pronominal subjects in Italian (see footnote 2 and Cardinaletti 1997, 2004). Zubizarreta (1998), on the other hand, proposes a rather different account: she argues that the availability of VSO in Spanish relates to the properties of T. According to her analysis, VSO is found in sentences where a topic or focus occurs in Spec,TP. Consider the examples in (10) (Zubizarreta 1998: 100f.).

- (10) (a) **En este bar** escribió Max su primera novela.  
           in this bar wrote Max his first novel  
           ‘In this bar, Max wrote his first novel.’  
       (b) **Todos los días** compra Juan el diario.  
           all the days buys Juan the newspaper  
           ‘Juan buys the newspaper every day.’

Nominative is checked in Spec,TP in Italian, while in Spanish it can be checked under feature-movement (of D, see Chomsky 2000, 2001). This property interacts with the status of T as a syncretic category in Spanish, which – unlike its Italian counterpart – can host features for both topic and focus (see (10) above). Furthermore the difference between the T features in Italian and Spanish is supposedly responsible for the lack of inversion in Italian focus constructions. In other words, focus or topic in Italian moves to the left periphery, leaving the subject and the verb in Spec,TP and T, respectively, engendering an XP–S–V order.<sup>5</sup> Note, though, that Greek can manifest VSO without focusing or topicalisation, as (3a) above shows. In this respect, Greek crucially differs from Spanish: Greek exhibits a wider distribution of VSO order than Spanish.

As the above discussion shows, Italian differs from Greek and Spanish in that it does not (readily) allow for VSO. Furthermore, Greek and Spanish differ in that VSO appears to be more productive in Greek, since it does not depend on the presence of a topic or focus in clause-initial position. The analysis proposed by Alexiadou & Anagnostopoulou (2001), apart from the objections raised above, predicts that Greek and Spanish are essentially alike with respect to VSO (S and O remain inside the VP), as they both have clitic-doubling, contrary to fact. Belletti’s (2001, 2004) account, on the other hand, is too powerful, as it excludes VSO altogether and has to rely on some additional mechanism in order to distinguish Italian from Spanish (and Greek).

At this point, we would also like to express some objections regarding the postulation of a low Focus (and Topic, accordingly) projection for the syntactic expression of new information focus. According to É. Kiss (1998), (new) information focus, unlike identificational focus, does not involve

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[5] Zagona (2002: 27, 202) argues that the acceptability of VSO in Spanish varies across speakers. She also notes that VSO is more acceptable with non-agentive subjects. No such restriction seems to hold in Greek, though.

syntactic movement. Identificational focus is defined as [+exhaustive,  $\pm$ contrastive], targets a clause-initial position, and has quantificational properties. Focus-movement in this case can be overt or covert, and the contrastive feature may or may not be present. Indeed, clause-initial focus in Italian is necessarily contrastive (Rizzi 1997, but see Brunetti 2004 for a different view), while this is not the case in Greek (Tsimpli 1995). If we follow É. Kiss (1998), then the postulation of a low FocusP for the expression of new information through movement becomes problematic. Note that even in Belletti's (2001, 2004) approach, Spec,FocusP cannot be treated as an A'-position, since it blocks movement of the object to an A-position for Case-checking. If that were an A'-position, we would expect to find no locality effect, on the assumption that Relativised Minimality is sensitive to interveners of the same structural and feature type (Rizzi 2001). Thus, since the low FocusP blocks A-movement, it appears to lack the basic characteristics of an A'-(quantificational) position, which Focus in the left periphery has.

Despite its problems, Belletti's account makes two interesting claims: (i) argument DPs are licensed outside the VP (the thematic domain), and (ii) S and O DPs in Italian cannot be licensed simultaneously in the low IP area, that is, in the same domain. In the present paper, we elaborate on these claims and provide an account of VSO in Greek (and its absence thereof in Italian), as a function of the nominal (clitic) positions available in the clause structure and the inflectional properties of the DP. The background of our approach is that (i) the clause structure splits into (at least) three main domains defined by the heads C, T, and V, and (ii) DPs lexicalise different features in Greek and Italian. We then argue that subject and object DPs in Greek can appear in the same domain because they spell out different features depending on their grammatical function, while this is not so in Italian, because DPs spell out the same set of features irrespective of their grammatical function. This basic difference is responsible for the presence of VSO in Greek but not in Italian.

The main points of our account are discussed in section 2 below. In section 3, we consider the implications of our proposal for the interpretation of subjects depending on the domain they occur in. Finally, section 4 concludes the discussion, pointing out various typological implications that our approach gives rise to.

## 2. AN ALTERNATIVE APPROACH TO VSO

### 2.1 *Nominal features and clause structure*

We first consider the standard assumption that there is a correlation between free word order and inflectional morphology, especially of nominals. In Greek, grammatical functions are signalled by morphological case and, at the same time, subject and object DPs have a rather liberal distribution. In

English, on the other hand, subject and object DPs are not morphologically marked for case – except for pronouns – and thus occupy fixed positions in the clause structure. Consider the examples below:

- (11) (a) O Petros episkevase (o Petros) ton ipolojisti (o Petros).  
 the-NOM Peter repaired-3S the-ACC computer  
 (b) Episkevase ton ipolojisti o Petros (ton ipolojisti)  
 repaired-3S the-ACC computer the-NOM Peter  
 (c) Peter repaired (\*Peter) the computer (\*Peter).  
 (d) \*Repaired the computer Peter (the computer).

Abstracting away from the interpretation of the subject and the object in the various positions in (11a–b), the difference between Greek and English word order cannot be seen independently of nominal inflection, and case in particular. Some of the distributional properties of subjects are indeed associated with the null-subject nature of Greek, which is related to verbal morphology, as standardly assumed in the literature (see Rizzi 1982, and the relevant chapters in Jaeggli & Safir 1989). As already discussed in section 1, it is possible to claim that V(O)S derives from the pro-drop parameter. The remaining options for both subject and object, however, exemplified for Greek in (11a–b), are not subsumed under this parameter. In this respect, if it turns out that other null-subject languages, e.g. Italian, lack case morphology, the prediction is that they will also lack the liberal distribution of argument DPs, and in particular subject DPs. This was already pointed out in section 1, where it was shown that VSO is (largely) unavailable in Italian.

Let us examine the relevant morphological distinctions in more detail. As shown in (12)–(13), the contrast between nominative and accusative case in Greek is expressed primarily through the definite article, whereas in Italian neither the article nor the noun bears case morphology. Note that an additional difference between the two languages concerns the obligatory presence of the definite article introducing proper names in Greek but not in (Standard) Italian (Roussou & Tsimpli 1994 for Greek, Longobardi 1994, 2001 for Italian):

- (12) (a) Greek: **i efimeridha** vs. **tin efimeridha** (nominative vs. accusative)  
 (b) Italian: **il giornale** (**il** = nominative/accusative)  
 ‘the newspaper’
- (13) (a) Greek: **\*(o) Janis** = nominative, **\*(ton) Jani** = accusative  
 (b) Italian: **\*(il) Gianni** (nominative/accusative)  
 ‘John’

It has also been suggested that 3rd person object clitic pronouns and the definite article share categorial features. This similarity is expressed by morphosyntactic and semantic properties (see Sportiche 1995, Cardinaletti

& Starke 1999, Tsimpli & Stavrakaki 1999, Panagiotidis 2002, Wiltschko and Déchaine 2002, Manzini & Savoia 2004, among others):

(14) (a) *Greek*

	ARTICLE		CLITIC	
	Nominative	Accusative	Subject	Object
Singular	o, i, to	ton, tin, to	∅	ton, tin, to
Plural	i, i, ta	tus, tis, ta	∅	tus, tis, ta

(b) *Italian*

	ARTICLE	CLITIC	
	Nominative/Accusative	Subject	Object
Singular	il/lo, la	∅	lo, la
Plural	i/gli	∅	li, le

As the tables in (14) show, both Greek and Italian lack subject clitics and therefore the correlation between clitics and determiners does not involve the nominative paradigm. On the other hand, object clitics in Greek are non-distinct from the accusative form of the definite article (in all three genders).<sup>6</sup> This similarity is not found in the Italian comparison of clitics and articles, as the form of the object clitic is identical to what serves as both the ‘nominative’ and the ‘accusative’ form of the article, at least in the singular (in the plural the clitic and the article have different forms). The implication is that non-distinctness in the D system in Greek, including clitics and articles, involves sharing of both case and agreement features, whereas in Italian only agreement features are shared. Drawing on the similarities with clitics, we could reinterpret the distinction between nominative and accusative in the definite article system as a distinction between a ‘subject’ and an ‘object’ definite article (in line with the distinction between subject and object clitics). Building on the above observations, we will attempt to provide an analysis of Greek and Italian which takes the morphological properties of the DP in the two languages as the locus of variation.

In order to provide a formalisation of the parametric difference with respect to VSO order, we first need to discuss the structural positions of

[6] We use the term ‘non-distinct’ as the two systems are not completely identical, as pointed out to us by a *JL* referee. In particular, while the definite article takes the form *ton* in the genitive plural, the clitic takes the form *tus* (i.e. the accusative form). In the latter case, *tus* shows feature syncretism in terms of case (genitive/accusative); see Panagiotidis (2002: chapter 2) for discussion.



arguments in the clause structure which we take to be universally available. It should be stressed that the similarities between clitics and determiners discussed above form the basis of the structural positions that DPs occupy either as clitics or as Ds introducing NPs.

According to Sportiche (1995, 1999), clitics are generated in distinct functional positions outside the VP; these positions are characterised in terms of Case-features (Nominative, Accusative, Dative, etc.) and match the corresponding AgrP positions (AgrS, AgrO, AgrIO) immediately above VP, which are realised by DP arguments:

- (15) [<sub>NomP</sub> Nom [<sub>AccP</sub> Acc [... [<sub>AgrSP</sub> AgrS [<sub>AgrOP</sub> AgrO [<sub>VP</sub> ...]]]]]]

While Agr projections are mainly responsible for Case-licensing, Clitic projections (and especially Nom(inative) and Acc(usative), unlike Dat(ive)) bear features, such as specificity, which assimilate them to operators. In an object clitic-doubling construction, for example, the clitic is the Acc head, while the DP is in Spec,AgrOP; from that position it moves covertly to Spec,AccP, yielding a spec-head agreement configuration with the clitic. The overt presence of the clitic and the DP in the same projection is blocked under a PF-filter that rules out the simultaneous lexicalisation of a head (clitic) and its specifier (DP). The essence of this filter is that features are allowed to be lexicalised once within a phrasal projection: either as a head or a specifier.

The idea that clitics correspond to designated positions in the clause structure has been further developed in the light of data from various Italian dialects (Poletto 2000 on subject clitics, Manzini & Savoia 2001, 2004 on clitics in general). In particular, Manzini & Savoia (2004) argue that clitic heads form a cluster, a 'clitic-shell' that can repeatedly appear above V, T (I in their terms), and C, as in (16) below (CL<sub>1</sub> and CL<sub>2</sub> stand for two clitic positions, roughly corresponding to subject and object clitics, respectively).

- (16) [<sub>α</sub> CL<sub>1</sub> – CL<sub>2</sub> C [<sub>β</sub> CL<sub>1</sub> – CL<sub>2</sub> T [<sub>γ</sub> CL<sub>1</sub> – CL<sub>2</sub> V]]]

There can be more than two individuated clitic positions, which are hierarchically ordered and distinguished in terms of their feature specification, e.g. D (for subject clitics, subsuming the EPP feature), Num/Q (for plural), Person (for 1st/2nd), Loc (for locative/dative clitics), N (for 3rd singular clitics), etc.; thus, different clitics may lexicalise different features. The clitic-shell can be viewed as the 'unfolding' of the DP structure on the clausal branch. The recursion of the clitic-shell in the V domain (let us call it  $d_V$ ), the T domain ( $d_T$ ) and the C domain ( $d_C$ ), apart from its empirical motivation outlined in Manzini & Savoia (2004), is consistent with independent proposals (Platzack 2001, Grohmann 2003) regarding the tripartite division of the clause structure into the 'thematic' domain above V (or as part of the VP-shell), the T domain where grammatical relations are established, and the

C domain where discourse properties and the information structure of the clause are represented.

Putting these two assumptions together (i.e. the assumption about the availability of clitic-shells and the assumption about the tripartite division of the clause structure), and given the similarities between clitics and DPs presented at the beginning of this section, we propose that the recursion of the clitic-shell involves not just clitics but also argument DPs. In other words, the features associated with these positions can also be lexicalised by full DPs. In section 2.2 below we will show how this proposal accounts for the parametric difference with respect to VSO. One implication of this extension is that formally (or derivationally) the very same DP can appear in any of these three domains. However, as we will show in section 3, its interpretation can vary depending on the domain in which it occurs, as a by-product of the properties of the head (C, T, or V) that defines the relevant domain.

For the moment, it is important to clarify the feature content of the clitic heads, as well as that of the head that defines each of the three domains ( $d_C$ ,  $d_T$ , and  $d_V$ ). Let us start with the last of these. With respect to  $d_V$ , namely the domain defined between T and V, we assume that it represents the event or aspectual information associated with the predicate, which further interacts with the thematic interpretation of the arguments (see Borer 1994, 2005, Arad 1998).<sup>7</sup> With respect to  $d_T$ , the temporal features of the (T, V) dependency in relation to the (C, T) dependency are responsible for aspects of the interpretation of the DP arguments in this domain. For example, anticipating the discussion in section 3 below, generic subjects or subjects of statives are spelled out in  $d_T$  (or in  $d_C$ , subject to certain interpretative requirements), and cannot be spelled out in  $d_V$ . This has to do with the generic operator in the case of generic subjects and the combination of aspect and tense features in the case of subjects of statives. Finally,  $d_C$  is associated with properties that relate to the interpretation of the proposition, including discourse-related features, such as topic and focus. It is the latter in particular that add to the interpretation of DP arguments at the relevant interface. In a nutshell, the DP in  $d_V$  is affected by the event/aspectual properties of the predicate, in  $d_T$  by the temporal properties of the clause, and finally in  $d_C$  by discourse properties.

Consider next the feature content of the clitic heads. In (16) we simply indicated two positions, CL1 and CL2, roughly corresponding to subject and object clitics. The question that arises is whether these positions are

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[7] Borer (1994, 2005) argues that arguments are not ordered inside the VP, but rather licensed as such in designated functional projections (cf. the VP-configurational approach of Hale & Keyser 1993, 2002). In our terms, these projections are partly encoded on the 'clitic-shell'. Since clitic positions can appear in more than one domain, we can assume that DPs, just like clitics, are directly merged in the (clitic) position where they surface (see Manzini & Roussou 2000), while their thematic interpretation is derived through the association of the clitic head that licenses them with the predicate under Agree. In the following sections we discuss the implications of this approach.

somehow distinguished in terms of the features they bear, or whether we simply have an instance of CliticP recursion, necessitated by the presence of more than one argument. The idea of recursion is rather stipulative, as it cannot predict how and why arguments appear in a relatively fixed order, for example. Thus, recourse to features appears to be necessary. Let us assume that each clitic position carries a set of nominal formal features, known as D- and phi-features. In Chomsky's (2000, 2001, 2004) system, abstract Case is also part of this set. However, the status of Case is rather dubious as it is the only uninterpretable feature that appears on the DP Goal without having a matching interpretable feature on the relevant Probe. On the other hand, morphological case looks 'real' in the sense that it has a PF-expression, forms a morphological paradigm, and so on. In this connection, it can be treated as the spell-out of a formal feature. For example, the nominative–accusative distinction in languages like Greek marks grammatical functions such as subject and object (and accusative at least is sensitive to thematic roles). The question then would be what sort of features are prototypical for subjects and objects, respectively. Drawing on the similarities with clitics, it is worth pointing out that the literature on clitics (see the discussion above) views the various types and forms of clitics as the manifestation of different features. Thus, if we want to maintain the parallelism between clitics and DPs, we can provide an answer to our question by considering how subject and object clitics differ, and then extend this distinction to DPs.

In the system of Manzini & Savoia (2001, 2004), for example, subject clitics are merged in the higher clitic head, which is labelled D in their system (CL<sub>1</sub> in our terms), while object clitics are merged in the lower head, which they label N (CL<sub>2</sub> in our terms). 1st and 2nd person clitics target an intermediate position specified for person, and depending on whether the person clitic is a subject or an object, it may or may not lexicalise the higher D position. It is possible for a clitic to lexicalise more than one feature at once, depending on its lexical properties. More precisely, feature-lexicalisation can be done either internally, that is, as part of the morphological structure of the clitic, or externally as part of the clause structure, namely by merger to the appropriate position in the clitic-shell. Under this approach, then, terms like 'subject/object' clitics or 'nominative/accusative' case simply reduce to descriptive devices. We will use them as such in the work that follows.<sup>8</sup>

For present purposes, and given that we are mainly concerned with subject and object (3rd person) DPs, we will use the generic labels CL<sub>1</sub> and CL<sub>2</sub>. We will further assume that merger of a D(P) in one of the two positions lexicalises a certain feature, along the lines discussed above; which feature

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[8] It should be noted that the terms 'nominative/accusative' or 'subject/object' clitics are perhaps the only morphological terms that could be used descriptively to distinguish between the two Clitic positions.

is lexicalised is determined by the morphological structure of the DP. On the interpretation side, we could say that the D(P) ‘values’ one (or more) of the features of each clitic head. In other words, the internal make-up of the D(P) determines which features will be valued through lexicalisation. For example, accusative case, which is lexicalised on object DPs, will be valued as a cluster of phi-features which also map to a thematic interpretation via the predicate. Once the relevant features have been valued and lexicalised by merger of the D(P), they cannot be further lexicalised by another DP in the same shell, i.e. in the same domain. This can be understood as a restriction that relates to both interfaces: interpretation at PF (through lexicalisation) and at LF (valuation); see Roussou 2002.<sup>9</sup> As we will show below, the ordering found with clitics is also found with DPs: by and large, subject DPs precede object DPs in the same shell (but see the discussion in section 3.1 below). This fact lends further support to the idea that the positions under consideration bear features (hierarchically ordered) that can be lexicalised by either a clitic or a full DP. Certain differences in the distribution of the two follow from the structural differences of clitics and DPs, as we will discuss in section 3.

Having outlined the basic idea regarding the partition of the clause structure into three basic domains and the availability of argument positions inside each of them, we now turn to the derivation of VSO in Greek and provide an account of its absence in Italian. In section 3, we will investigate whether there are constraints on the spell-out of arguments associated with one or all of the three domains and, if there are, what the nature of these constraints is.

## 2.2 *VSO revisited*

Recall the two basic assumptions presented in the preceding section. The first is that Greek, but not Italian, exhibits a feature-based similarity between clitics and determiners, realised as a binary distinction of nominative and accusative case, bearing in mind that nominative involves a gap insofar as the clitic paradigm is concerned. The second assumption concerns the availability of a recursive clitic-shell that can host subject and object nominals (clitics or DPs). The standard analysis of Greek is that V-to-T-movement always takes place and thus the spell-out of the verb is never in the lowest position. Following the schema in (16), VSO may in principle be the output of two derivations: the first would involve V in T, and S, O in  $d_V$ , while the second would involve V in C, S in  $d_T$  and O in  $d_V$  (or  $d_T$ , although

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[9] The relationship between lexicalisation and valuation is an issue that requires further discussion as to the possibility of ‘interpreting’ all lexicalised features or only a subset of them (at LF). We leave this issue open since it does not affect the argument here.

we will show that this possibility is not found for independent reasons – see section 3.2).

- (17) (a) [<sub>T</sub> Estile [<sub>CL1</sub> o Petros [<sub>CL2</sub> to grama [<sub>V</sub> *t<sub>v</sub>*]]]  
 sent-3s the Peter the letter  
 ‘Peter sent the letter.’
- (b) [<sub>C</sub> Estile [<sub>CL1</sub> o Petros [<sub>CL2</sub> [<sub>T</sub> *t<sub>v</sub>* [<sub>CL1</sub> [<sub>CL2</sub> to grama [<sub>V</sub> *t<sub>v</sub>*]]]]]]]]<sup>10</sup>  
 sent-3s the Peter the letter  
 ‘Peter did send the letter./Did Peter send the letter?’

Both structures in (17) are possible, and they are identical at the surface level, but they differ in their interpretation. (17a) is a declarative sentence that can be used as an answer to a wide-focus question (‘What happened?’), as already mentioned in section 1. (17b) involves verb-focusing and is ambiguous, as indicated in the English translation above: the sentence can be used either as an emphatic statement or – if it bears the interrogative intonation – can be a yes–no question. Furthermore, if C also bears the Q feature, the order yields a yes–no question. (17b) illustrates a structure in which one clitic position per domain is activated, and therefore spelled out, whereas in (17a) both clitic positions in the same domain are filled.

Leaving aside (17b) due to the C features it involves, let us consider the derivation in (17a). Recall that VSO in Italian is blocked in the corresponding example, implying that the relevant derivation is impossible. In descriptive terms, Greek allows both arguments to appear in *d<sub>V</sub>*; that is, inside the same (lower) clitic-shell. This is not the case in Italian, where only the object can appear in this domain, while the subject will either be null or spelled out in a higher position (that is, in a higher domain). The question then is, what does this difference stem from? In the preceding section we showed that the determiner system in the two languages differs. More precisely, Greek distinguishes between a nominative (‘subject’) and an accusative (‘object’) definite article, while in Italian this distinction is neutralised. The existence of two distinct sets of determiners in Greek points towards their lexicalisation of different features on the clitic-shell, whereas the availability of a single series in Italian shows that the same element can lexicalise both features, namely those relating to a subject and an object DP.

On these grounds, then, the absence of VSO in Italian follows in a straightforward way: the incompatibility of a subject and an object DP in the same domain in Italian is due to the fact that D can spell out the nominal features associated with either the subject or the object. If it introduces an object DP, the presence of a subject DP in the same domain is blocked. In

[10] We use the standard notation *t<sub>V</sub>* to show that V and T are positions relating to the verbal predicate, for those cases where the verb is spelled out in a higher position.

Greek, on the other hand, these two features are distinguished, given that there are distinct definite articles. Thus, each of them, when it introduces a DP, spells out a different feature and the co-occurrence of DPs in the same domain is not excluded. This difference correlates with the morphological make-up of the definite article in the two languages, already discussed in the previous section and illustrated in (12)–(13). Note that in those cases where there is no definite article present, as with proper names, the feature content of D is directly subsumed by N. As argued by Longobardi (1994, 2001) proper names in (Standard) Italian raise to D. In other words, proper names lexicalise not only N but also D, as is consistent with their semantic properties. In Greek, on the other hand, a proper name is obligatorily introduced by the definite article (see the contrast in (13) above). Thus, the N is a proper name, remains *in-situ*, and the D position is independently lexicalised by the definite article (Roussou & Tsimplici 1994).

To maintain a parallel with clitics, we expect to find a grammar that allows a subject and an object clitic (3rd person, as 1st and 2nd person clitics involve a different feature altogether) to co-occur, which would be the correlate of Greek at the clitic level. Similarly, we expect to find a grammar that disallows the co-occurrence of a subject and an object (3rd person) clitic; this would be the correlate of Italian at the clitic level again. The first case is well-attested in the various Northern Italian dialects. The second is perhaps less obvious. Interestingly, according to Manzini & Savoia (2004), the dialect of Tavullia exhibits this pattern: a 3rd person object clitic blocks the presence of a subject clitic (1st and 2nd person clitics are allowed). Subject and object clitics in this case coincide morphologically (*el* = 'he/him', *la* = 'she/her', *i* = 'they-masc.', *le* = 'they-fem.')

- (18) (a) *el/la/i/le*                                      *te* 'c<sub>ε</sub>ma  
            he/she/they-MASC./-FEM. you call(s)  
            'He/she/they call(s) you.'  
       (b) (\**el*) *la* 'c<sub>ε</sub>ma  
                he her calls  
                'He calls her.'

The sentence in (18b) becomes grammatical once the subject clitic is dropped, leaving the object clitic present, thus creating a pro-drop context. Thus, the two examples in (18) can be viewed as the correlate of the distribution of DPs in Standard Italian, and provide further empirical support for our account, which argues that the positions in the clitic-shell can also be lexicalised by full DPs.

One important aspect of our analysis is that it accounts for the absence of VSO in Italian in those cases where both DPs occur in the same domain and carry the same feature specification. Interestingly, though, it does not exclude the derivation of VSO in Italian altogether. As shown in the Greek example in (17b) above, if S and O are in different domains and

the verb is raised to a higher position, the resulting word order can still be VSO. Thus, we expect to find configurations of this type in Italian.

The option of having VSO in Italian is illustrated by the following examples (Belletti 2004):

- (19) (a) Di quel cassetto ho **io** le chiavi.  
of that drawer have I the keys  
‘I have the keys of that drawer.’  
(b) L’ha comprato **Maria**, il giornale.  
it has bought Mary the newspaper  
(c) Ha comprato **Maria**, il giornale.  
has bought Mary the newspaper  
‘Mary bought the newspaper.’

Let us start with (19a), which also involves a PP in clause-initial position. This, within our account, could imply that V is in C (preceded by a topicalised PP), the subject is in  $d_T$  and the object is in  $d_V$ . Given this derivation, the two DPs occur in different domains. However, it is also possible to assume that both arguments occur within the same clitic-shell in this construction, given that the subject is a pronominal element and as such lexicalises a different set of features (manifested as 1st person, as well as Nominative); in terms of the system employed here, the pronoun can be seen as activating another clitic position, specified for (1st/2nd) person. Either possibility is compatible with our account; the relevant point is that pronominalisation of the subject renders VSO possible even if we assume that the subject and the object are in the same domain in Italian (that is,  $d_V$ ).

Consider next (19b). Belletti (2004) argues that O occurs in a low TopicP, that is, below FocusP in the IP area. No Relativised Minimality effect arises, since the object does not have to be related to its Case position due to the fact that Case is checked by the clitic. Thus, the Subject does not count as an intervener. In the same spirit, we could say that what allows S and O to occur in the same domain, that is,  $d_V$  in our terms, is precisely the presence of a clitic in a higher clitic position (in  $d_T$ ), which makes the disambiguation between S and O possible (in the absence of any case morphology).

The structure in (19c) differs from that in (19b) in two ways: first, there is no object clitic and, secondly, the subject has contrastive stress (Belletti 2001, 2004, Cardinaletti 2001). Following Rizzi (1997), Belletti (2004) assumes that contrastive focus in Italian is associated with the external FocusP in the left periphery and that TopicP may project on either side of FocusP. She then argues that both S and O are in the left periphery in Spec,FocusP and Spec,TopicP, respectively, while the remnant IP has topicalised to the Spec,TopicP above FocusP, as in (20).

- (20) [[IP<sub>k</sub> e<sub>i</sub> ha comprato e<sub>j</sub>] Top [[Maria] Foc] [[il giornale] Top] ... IP<sub>k</sub>]

Thus, VSO is possible, although it is only possible in the left periphery.<sup>11</sup> In terms of our analysis, S and O cannot both occur in  $d_V$ . If we adopted and adapted Belletti's (2004) approach, we could take S and O to appear in the same clitic-shell in the peripheral domain ( $d_C$ ), on the assumption that there are different features involved in this case (such as Focus or Topic; but see section 3.1 below). In other words, the features that S and O lexicalise in this context are not related to the D system but are quantificational (or not, in the case of Topic). The derivation would also have to allow for remnant IP-movement in order to derive the right word order. There is an alternative derivation though, which maintains that S and O occur in different domains, namely  $d_T$  and  $d_V$ , respectively, as is the case with SVO. The difference between SVO and VSO then reduces to the distinct positions the verb occupies in the two orders. If V is in T in SVO, then it would have to be in a higher position, namely C, in VSO, as shown in (17b) for Greek. If this is correct, the implication would be that contrastive focus is not uniquely identified with the left periphery in Italian. Moreover, contrastive stress on S would play a 'compensatory' role: it would disambiguate grammatical functions in those cases where word order would fail to do so, or where there is no morphological case available (as in Greek, for example). A variant of this approach is to assume that S is actually in  $d_V$  and that O is right-dislocated, that is, right-adjoined to VP (but see Cardinaletti 2001).

We have presented three possible derivations for VSO in Italian. In the present paper, we leave the choice between them open. What is important for our purposes is that VSO can be derived in Italian, albeit differently than in Greek, which accounts for its more restricted distribution.

Let us next consider Spanish, which also allows VSO. Recall from our discussion in section 1 that VSO in Spanish appears to depend on the presence of a topic or focus (an XP of some sort) in clause-initial position (see (10) above). Within Zubizarreta's (1998) account, this derives from the syncretic nature of T in Spanish. Note that Spanish, like Italian, has no case morphology on its D-system (see Zagona 2002: chapter 1); hence, grammatical functions such as subject and object are not morphologically marked. On this basis, then, Spanish would be expected to behave like Italian in blocking VSO. However, this is not the case. In fact, Spanish is a cross between Greek (VSO is possible) and Italian (no case morphology on D).

The problem that arises with respect to Spanish is only apparent, if we bear in mind that in our system VSO can be the output of different derivations. In

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[11] For Cardinaletti (2001) both S and O are inside the VP. The contrastive stress on S is accounted for under the Contrastive/Emphatic Rule (Zubizarreta 1998). In terms of our approach, S and O would have to be in  $d_V$ . However, we have argued in connection with (19) that this is impossible, given that both DPs spell out the same set of features. Moreover, this would make Greek and Italian alike, contrary to fact. In Italian VSO is possible, only when the subject is focused, as (19c) shows. No such restriction holds in Greek, as already argued in section 1 (see also Haidou 2004).



fact, Italian also allows some kind of VSO order, provided S and O occur in different domains. Bearing this in mind, VSO could also be argued to have a different derivation in Spanish from that in Greek. Suppose that, in Spanish, S and O lexicalise different clitic-shells, namely  $d_T$  and  $d_V$ , respectively, while V is in C (see also the possible derivation of (19c) above). The resulting VSO is illustrated in (21).

- (21) [<sub>XP</sub> en este bar [<sub>C</sub>escribió] [<sub>CLI</sub>Max [<sub>T</sub>  $t_V$ ] [<sub>CL2</sub> su primera  
           in this bar wrote-3s Max his first  
           novella [<sub>V</sub>  $t_V$ ]]]]  
           novel  
           ‘In this bar, Max wrote his first novel.’

If we accept the derivation in (21), then there is no need to assign a syncretic status to T, but instead we can derive the XP–VSO order as the result of V-to-C-movement. Note that the structure in (21) is reminiscent of verb-second (V2) structure: movement of V to C is accompanied by XP-fronting. In fact, Zubizarreta (1998) attributes VSO in Modern Spanish to a residue from Old Spanish, which exhibited full V2 (Fontana 1997). The difference, for Zubizarreta, is that V2 in Old Spanish was also connected to the syncretic status of T, which could attract any XP to its specifier, and not just the subject. In the present analysis, however, we adopt the more standard approach to V2, one which links it to the C projection.<sup>12</sup> While this is a rather sketchy approach, it can account for the availability of VSO in Spanish, although derived differently from VSO in Greek; thus, there is no contradiction as far as the absence of case morphology on D is concerned. Spanish, then, is more like Italian in the latter respect,<sup>13</sup> and only superficially appears to resemble Greek. The representation of Spanish VSO does not involve the realisation of both DP arguments in  $d_V$ , which is thus the parameter that distinguishes Greek from Spanish.<sup>14</sup>

[12] Alexiadou (2001) argues that the difference between VSO in Greek and XP–VSO in Spanish derives from the fact that C in Spanish is syncretic with respect to topic and focus, and that it is this property which is a residue from Old Spanish. In our analysis, however, we take V to be in C, regardless of the topic or focus status of the initial XP, and, more crucially, we assume that the subject is in the domain of T rather than in the domain of V.

[13] Spanish allows VSO without an XP in narratives, as well as when the subject is contrastively focused, as is also the case in Italian (Zubizarreta 1998: 107f.).

[14] There is an alternative account available with respect to VSO in Spanish. More precisely, we could assume that VSO has the same derivation in Spanish as in Greek, i.e. both arguments occur in  $d_V$  in both languages. This could be supported because some objects (mainly animate or specific ones) in Spanish are marked by the preposition *a* (see Zagana 2002: chapter 1), thus reflecting some ‘residual’ morphological distinction between subjects and objects (see also Belletti 2004). Perhaps this derivation is open to those speakers (see footnote 5) who can accept VSO without either XP-fronting or contrastive stress on S: for them, the absence of morphological case still has a syntactic residue, which is ‘cued’ to the learner by the availability of *a*-marking. However, this alternative would require further empirical support.

In the present section we have provided an account of the differences regarding VSO in Greek on the one hand, and Italian and Spanish on the other, as the result of different derivations. We next turn to some remaining questions that need to be addressed: (a) whether in Greek the possibility of having two full DPs in the same domain extends to  $d_T$  and  $d_C$ , and (b) how the features of the head of the domain affect the interpretation of the arguments occurring within this domain. These questions will be discussed in the following section.

### 3. CLITIC POSITIONS AND DP INTERPRETATION

#### 3.1 *The interpretation of arguments in $d_C$*

Having identified the parametric difference between Greek and Italian as an aspect of the different properties that DPs lexicalise in the two grammars, we accounted for the option of lexicalising two arguments in the same domain in Greek – evidenced by the VSO order – but not in Italian. This option involves  $d_V$ , but is also predicted to hold for  $d_T$  and  $d_C$ . Let us now consider some alternative word orders in Greek.

As the examples in (22) and (23) show, the option of filling two Clitic positions in the same domain is indeed valid.

- (22) (a) O Petros to grama to estile.  
 the-NOM Peter the-ACC letter it sent-3s  
 ‘Peter sent the letter.’  
 (b) [<sub>CL1</sub> o Petros [<sub>CL2</sub> to grama [<sub>C</sub> [<sub>CL1</sub> [<sub>CL2</sub> to [<sub>T</sub> estile] ... ]]]]]
- (23) (a) O Petros to estile to grama  
 the-NOM Peter it sent-3s the-ACC letter  
 ‘Peter sent the letter.’  
 (b) [<sub>CL1</sub> o Petros [<sub>CL2</sub> to [<sub>T</sub> estile [<sub>CL1</sub> [<sub>CL2</sub> to grama [<sub>V</sub>  $t_V$ ]]]]]]]  
 (c) [<sub>CL1</sub> o Petros [<sub>CL2</sub> [<sub>C</sub> [<sub>CL1</sub> [<sub>CL2</sub> to [<sub>T</sub> estile [<sub>CL1</sub> [<sub>CL2</sub> to grama [<sub>V</sub>  $t_V$ ]]]]]]]]]]]

Let us start by describing the configurations in (22)–(23). Consider first (22a), where both arguments are in a preverbal position and the object is doubled by a clitic. Assuming that the verb is in T, the clitic must occupy a higher position in  $d_T$ . This position is identified by CL2 in  $d_T$ . The immediate question is where the object DP is realised. In other words, if the feature content of CL2 is lexicalised by the clitic, it cannot be further lexicalised by the DP. This is consistent with Sportiche’s (1995) approach to cliticisation, according to which the clitic and its coreferential DP must appear in different projections for reasons having to do with PF (see also Kayne 1994, Koopman 1996 on Spec-head configurations in general). If this is correct, then the DP object should appear in a Clitic projection that is distinct from that of the

clitic. Given the recursive character of the clitic-shell, the object DP can only appear in  $d_C$ , that is, in CL2 of  $d_C$ . Consequently, the subject DP will also be in  $d_C$  (in CL1), since it precedes the object. Thus, both S and O may appear in the same domain in the left periphery, as is illustrated in (22b).

Consider next (23a), where, as in (22a), there are a preverbal DP subject and an object clitic that doubles the object DP. However, in this construction the object appears in a postverbal position. Assuming, as before, that the verb is in T and the clitic in CL2 in this domain, the object DP can only merge in  $d_V$ . The subject DP, however, has two options: it may lexicalise CL1 within  $d_T$ , as in (23b), or CL1 within  $d_C$ , as in (23c). In principle, either derivation is possible, but the question that arises is whether these two configurations amount to the same interpretation with respect to the subject. Leaving aside (23b), which involves the subject in  $d_T$  and will be dealt with in the following section, we observe that the subject in (23c) can be interpreted either as topic or as focus. Suppose next that the choice between the two readings derives from the properties of C. More specifically, if C bears a focus feature, then the subject is assigned a focus reading. In the absence of such a feature, the subject is interpreted as a topic. The presence or absence of a focus feature translates to the presence vs. absence of quantification as part of the interpretation of the DP. As has been argued in the literature, focus in the periphery is quantificational, while topic is not (Tsimplici 1995, 1998, Rizzi 1997, É. Kiss 1998, among others). This further correlates with the fact that topics can iterate, while foci cannot.

Note that in (22b) both arguments occur in  $d_C$ ; however, neither can be focused. As far as the object is concerned, it is ‘doubled’ by a clitic in  $d_T$ . Thus, the focus reading is excluded, as a result of the non-variable status of the clitic, which is incompatible with the need for a variable imposed by the quantificational nature of focus.<sup>15</sup> The subject cannot be focused either and is therefore necessarily interpreted as a topic. Recall that this is not the case in (23c), where either reading is available for the subject. It is important to note, though, that in (23c) there is no DP intervening between the subject and C, while there is such a DP in (22b). If the Focus feature is borne by C, then the contrast between (22b) and (23c) indicates a locality restriction between C, which is lexicalised by V, and the focused phrase. In other words, the object DP in (22b) counts as an intervener between the higher DP and C, giving rise to a locality violation. Alternatively, this requirement could be derived from the properties of topics, which have to appear in the outermost layer of the left periphery since they do not interact quantificationally with elements inside the inflectional domain. Both alternatives give rise to a locality condition, which reduces to the presence vs. absence of a quantificational property associated with foci vs. topics, respectively.

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[15] On the availability of a clitic in apparent Operator-variable constructions in Greek, see Tsimplici (1998, 1999).

In the preceding discussion, we attributed interpretations such as topic and focus to an interaction between the feature specification of C and the availability of Clitic positions in  $d_C$ . If our analysis is on the right track, then there is no need to assume that topic and focus project independently in the left periphery. More precisely, there is no need to postulate a TopicP or a FocusP (see also Alexopoulou & Kolliakou 2002, Sifaki 2003, Haidou 2004). In the present paper, we maintain the difference between topics and foci advocated in previous work by attributing a focus feature to C (and consequently to  $d_C$ ); this allows us to derive the quantificational nature of focus, which contrasts with the non-quantificational nature of topic. The presence of the focus feature affects the interpretation of the DP in  $d_C$  that enters a local relation with C, as in the examples discussed above. Note that the focus reading is not restricted to a DP only. The verb itself can bear focus once it appears in the designated C head, as was indeed suggested for (17b) above.

According to what we have said so far, the ordering of DPs in  $d_C$  seems to be regulated by the possibility of focus as a feature on C, so that topic occupies a hierarchically higher position in this domain (but see Rizzi (1997), who argues that topics can be iterated on either side of Focus in Italian). In other words, two DPs can appear in any order irrespective of their grammatical function. To be more precise, in the left periphery, either SO or OS order is available, as the following examples illustrate (we use capital letters to indicate focus):

- (24) (a) O            Petros, TO            GRAMA estile.  
           the-NOM Peter    the-ACC letter    sent-3S  
           ‘It was the letter that Peter sent.’
- (b) To            grama, O            PETROS to estile.  
           the-ACC letter    the-NOM Peter    it sent-3S  
           ‘It was Peter who sent the letter.’

In view of the ordering of the Clitic positions suggested in the present paper, what emerges from the examples in (24) is that each of the Clitic positions can host either a subject or an object in the left periphery. The question is whether this ‘freedom’ in the ordering of arguments is also found in  $d_V$  and  $d_T$ , and, if not, what properties of  $d_C$  allow for this variation. Let us for the moment consider the second alternative, i.e. the properties of  $d_C$  which allow the Clitic positions to host a subject or an object in any order. On the assumption that C can bear discourse-related features of focus (and quantification in general), and that these features determine the interpretation of elements in the left periphery, we further expect that it is precisely these features that will be activated in  $d_C$ . Perhaps the best way to illustrate our point is by considering another set of data, namely *wh*-phrases. The *wh*-feature, which introduces a variable, becomes relevant and interpretable in connection with C and not with the heads of the lower domains, that is, T or V. On the other hand, the lower domains encode features that relate to the

thematic/argumental interpretation associated with the variable introduced by the operator; in standard terms, the *wh*-phrase is in an A'-position, while its variable occupies an A-position (at least for argumental *wh*-phrases).

The issue to consider next is whether formal features relevant to the inflectional domain, i.e. case and phi-features, are also active in  $d_C$  and, if so, in what way. We would like to argue that these formal features are inactive in  $d_C$  in that their value can only be determined in connection with T and the predicate V, i.e. in  $d_T$  and  $d_V$ . At this point, it is important to distinguish between features being INACTIVE in a particular domain and the same features participating in a dependency between Clitic positions across domains. More precisely, those features realised by inflectional elements such as subject and object clitics (the relevant D and phi-features, morphologically expressed by case) are responsible for determining grammatical relations in the domain where these features are active, i.e.  $d_V$  and  $d_T$ . The activation of features is linked to the properties of the head that defines the corresponding domain: V, as part of the event structure, and T, as part of the temporal structure (see also Platzack 2001, Grohmann 2003). The relation between the two is formally expressed through the formation of the (T, V) dependency, mediated by *Agree*.<sup>16</sup> The same operation relates the formal features of the clitic heads which are relevant to these domains, as argued above, to the features of T and V, accordingly. In other words, (some version of) *Agree* establishes two types of relations: one between the relevant features of the clitic heads with the head of the domain (T or V), and another between the two heads that define these domains (T and V). When a DP appears outside these domains, namely in  $d_C$ , the features relevant to the lower domains remain visible on the DP in the left periphery, as part of its internal syntactic structure. It is the visibility of these features that allows the DP to enter into an *Agree* relation with the corresponding Clitic heads in the lower domains. However, they cannot be activated in  $d_C$ , as they are not relevant in this domain. Instead, it is the features relating to quantification that are activated and *Agree* with C. We can then assume that the clitic heads carry not only formal features, such as D and phi, but also features associated with quantification. The latter can also become activated in the left periphery.<sup>17</sup>

Bearing the above clarification in mind, let us return to the examples in (24). If indeed what is manifested as case (and phi-features) is irrelevant in  $d_C$ , then we have an account of what allows both SO and OS in this domain. More precisely, the two clitic positions, CL1 and CL2, are not distinguished

[16] We take *Agree* to correspond to a feature-matching mechanism, in the sense of Chomsky (2001, 2004), without, however, requiring the postulation of uninterpretable features as diacritics. For the purposes of our discussion this definition of *Agree* suffices.

[17] Perhaps these quantificational features can also be activated in the lower domains in the relevant contexts. This wouldn't necessarily be incompatible with our approach, as what we are actually saying is that some of the features that are part of the clitic projections cannot be activated (i.e. are not relevant) in  $d_C$ .

in terms of these features, but in relation to focus instead. Indeed, there is an ordering imposed on the DPs determined by the quantificational status of focus reflected in the locality requirement between the focused phrase and C. Recall that a non-focused DP in  $d_C$  has to be interpreted as topic; in the case of object DPs this translates to the requirement for a clitic. We would like to argue that the clitic, which is merged in  $d_T$ , realises the *Agree* relation between the corresponding Clitic positions in  $d_C$  and  $d_V$ . As already mentioned, the visibility of the nominal features is morphologically expressed in Greek on the DP and the clitic as well, as part of the same dependency. The presence of the clitic is, of course, regulated by the (non)-quantificational properties of the DP in  $d_C$ .

To summarise, the question we addressed at the beginning of this section was whether or not there was a possibility of lexicalising both Clitic positions in domains other than  $d_V$ . With respect to  $d_C$ , the answer is positive, given the availability of both OS and SO ordering in the left periphery. We have shown that the latter is due to the distinction between ‘active’ and ‘visible’ features, arguing that the features that are activated in  $d_C$  are quantificational, yielding the focus interpretation.<sup>18</sup> If quantification is absent, the dislocated DP receives a topic reading from the discourse.

We next turn to the properties of  $d_T$  in relation to the possibility of lexicalising both Clitic positions, the ordering of the DPs, and the interpretation they give rise to.

### 3.2 *The interpretation of arguments in $d_T$*

We will begin with preverbal subjects and objects which are full DPs and are not focused or topicalised, as in the following examples (# indicates oddness, as opposed to ungrammaticality):

- (25) (a) O Petros egrapse to grama.  
           the Peter wrote-3s the letter  
       (b) #To grama egrapse o Petros.  
           the letter wrote-3s the Peter  
           ‘Peter wrote the letter.’

Consider first (25a), which exhibits SVO. In the absence of any intervening material between the DP and the verb, the subject could in principle be either in  $d_C$  or in  $d_T$ . The first option has been proposed in various studies concerning preverbal subjects in Greek, and is based on a number of different assumptions. The basic assumption is that the canonical subject position is postverbal and, more precisely, inside the VP (Spyropoulos & Philippaki-

[18] It is worth pointing out that clitics, even if they appear in  $d_C$ , cannot have any of the discourse properties discussed in the text, presumably due to their reduced structure (see Manzini & Savoia 2004 for a more detailed account).

Warburton 2001). Additional suggestions concern the motivation for satisfying the EPP either by the agreement affix (Alexiadou & Anagnostopoulou 1998) or by a null clitic (Spyropoulos & Philippaki-Warburton 2001) in the T projection, leaving the thematic subject position either unrealised or realised as a postverbal DP. In either case, the implication is that a preverbal (non-focused) DP subject has to be a topic occupying an A'-position situated in the periphery of the sentence (for a slightly different view, see Horrocks 1994).

In terms of our approach, topics are restricted to  $d_C$ . Thus, the question that arises is whether preverbal subjects are necessarily topics. Alexiadou & Anagnostopoulou (1998) argue, on the basis of scopal effects, that this is indeed the case. In particular, they argue that an indefinite preverbal subject can only take wide scope, as is shown in (26a), indicating that it is in an A'-position. On the other hand, a postverbal indefinite subject can take either wide or narrow scope, as in (26b).

- (26) (a) **Enas astinomikos** stekotan brosta se kathe spiti  
 a policeman stood.IMP-3S in-front of every house  
 xtes vradhi.  
 yesterday night  
*a policeman > every house*
- (b) Stekotan **enas astinomikos** brosta se kathe spiti  
 stood.IMP-3S a policeman in-front of every house  
 xtes vradhi.  
 yesterday night  
*a policeman > every house, every house > a policeman*  
 'A policeman was standing in front of every house last night.'

We do not, however, share the judgements of Alexiadou & Anagnostopoulou (1998) regarding the construction in (26a). We do agree that the wide scope reading is perhaps the most salient one in (26a). This, however, does not imply that the narrow scope reading is unavailable.<sup>19</sup> Indeed, it is possible to imagine a context where the indefinite subject can take narrow scope, giving rise to the interpretation where it was the same policeman who stood outside every house (i.e. the same policeman moved and stopped outside each house for a while). Note that the narrow scope reading is also facilitated by the presence of imperfective aspect on the verb. In this sense, both (26a) and (26b) are ambiguous, and scope ambiguity is resolved pragmatically. If our intuitions are correct, then the data in (26) cannot be used as evidence for the claim that the preverbal subject is necessarily in a dislocated (A'-)position. This leaves open the option that the preverbal subject may also appear inside the inflectional domain (see Cardinaletti (1997, 2004) for a similar claim in Italian, and Costa (2004: chapter 2) for (European) Portuguese). In our terms, the subject in (26a) could be either in

[19] Our judgements are shared by one of the anonymous *JL* referees.

CLI within  $d_T$  or in CLI within  $d_C$  (in which case it can be either topicalised or focused, depending on the feature content of C).

The examples in (26) show that there is no straightforward evidence for analysing preverbal subjects as necessarily dislocated elements. On the other hand, there is a set of data that shows that some preverbal subjects are closely related to the properties of T, and for that reason it would be reasonable to assume that they occur in the relevant domain, i.e. in  $d_T$ . Consider the following examples:

- (27) (a) I fitiria kseri (#i fitiria) tin apandisi.  
 the student know-3S the student the answer  
 'The student knows the answer.'
- (b) I falenes ine (#i falenes) thilastika.  
 the whales are the whales mammals  
 'Whales are mammals.'
- (c) I fitites pijenun (#i fitites) se dhiadhilosis.  
 the students go-3P the students to demonstrations  
 '(The) students go to demonstrations.'
- (d) Ta lina plenonde (#ta lina) efkola.  
 the linens be-washed-3P the linen easily  
 'Linens wash easily.'

The constructions in (27) share the property of not allowing a postverbal subject, unless V bears emphatic stress; if it does, the derivation involves V in C, leaving the subject in CLI within  $d_T$ , thus triggering the postverbal effect. Regarding the preverbal subjects in (27), the question that arises is whether or not these preverbal subjects are necessarily dislocated.

Let us examine the above examples in more detail. (27a) involves a stative verb, while (27b) and (27c) have a generic subject with a stage- and individual-level predicate, respectively. Finally, (27d) is a middle construction and the preverbal subject has a generic interpretation; thus, it is in the same category as the examples in (27b–c). Following Carlson (1977) and Diesing (1992), among others, we assume that genericity is closely related to the tense properties of the clause. It should be emphasised that the interpretation of the subject in (27c–d) cannot be seen independently of the temporal (and aspectual) specification of the verbal predicate, which is [–past, –perfective]. Thus, the presence of the subject in a preverbal position and, more precisely, in  $d_T$  comes as no surprise. A similar effect is found in (27a), where the crucial property concerns the distinction between statives and other predicates. The characteristic property of statives is that they do not define a starting and a final point in their event structure (Smith 1991), and, due to this property, do not affect the thematic interpretation of the subject. Thus, the subject is expected to occur outside the VP, or  $d_V$  in our terms, and, more precisely, to be merged directly in  $d_T$  (see Arad 1998). Note that there are two more pieces of evidence that support this conclusion with respect to the data in (27): (i) in



(27c), if the subject is postverbal (and the verb is not focused), then it is interpreted as definite/specific, and the generic reading is lost; and (ii) in (27d), if the subject is postverbal but in bare plural (and the verb is not focused), as in *plendonde lina* ‘linens are being washed’, the middle reading is lost, and only the passive interpretation is available. Thus, the modal reading associated with middles can only arise in relation to the higher verbal system. Since in (27) the temporal and aspectual properties of the clause directly affect the interpretation of the subject, we can safely conclude that the subject is in  $d_T$ . If preverbal subjects were necessarily dislocated, then it would be difficult to explain the link between the temporal and aspectual properties of the clause and the position of the subject.

Another interesting aspect of preverbal subjects is that they disallow determinerless DPs; in other words, bare nominals are not available. This is illustrated in (28).

- (28) (a) \*(Merikes/I) kopeles sinandisan ton Petro.  
           some/the girls met-3P the Peter  
           ‘(Some/The) girls met Peter.’  
       (b) \*(Kapji/I) sinadelfi dhiamartirithikan ston pritani.  
           some/the colleagues protested-3P to-the rector  
           ‘(Some/The) colleagues protested to the Rector.’

According to Longobardi (1994), the obligatoriness of an overt determiner (referential or expletive) is related to the preverbal position of the subject and is due to a (head-)government requirement (see also Roussou & Tsimplici 1994): the empty D is not governed in this position and therefore must be lexically filled. As will be shown in the following section, subjects in postverbal position can appear bare, in contrast with the data above. In current minimalist terms the ‘government’ requirement cannot be maintained; thus, the empirical facts should follow from some other grammatical primitive.

Note that the examples in (28) become grammatical when the determinerless subject is focused and therefore appears in  $d_C$ , as in (29).

- (29) (a) FITITES sinandisan ton ipurgo.  
           students met-3P the minister  
           ‘It was students who met the Minister.’  
       (b) SINADELFI dhiamartirithikan ston pritani.  
           colleagues protested-3P to-the rector  
           ‘It was colleagues who protested to the Rector.’

The contrast between (28) and (29) suggests that the position of the subject is related to the possibility of a null determiner introducing it. If the examples in (28) were to be accounted for with reference to (lack of) government, then we would expect to find the same effect, namely ungrammaticality, in the left periphery, contrary to fact. To be more precise, when the subject is in the

left periphery, the determiner can be null, whereas when it occurs in  $d_T$ , the determiner has to be overt. Recall that in  $d_C$ , the nominal features manifested as case and phi-features are not activated due to the properties of C. The null D and, by implication, the noun in this domain acquire an interpretation by means of the focus feature of C. Note that the possibility of interpreting a null D is closely linked to its position in  $d_C$ . In other words, the focus feature that allows D to be null, yielding a ‘kind’ reading of the noun, can only be found in this domain.

This account gives us a clue as to why the determiner is obligatory in  $d_T$  (in the absence of focus). Recall that the definite article (and determiners in general) in Greek is the spell-out of formal nominal features, i.e. D and phi-features. Depending on the properties of the head of each domain, different constraints are imposed on the lexicalisation of the article and the interpretation it receives. The examples in (29) illustrate this claim with respect to  $d_C$  as far as the option of a null D is concerned and the resulting interpretation. When the DP is merged in  $d_T$ , the definite article is required in connection with the T properties. In Greek, the *Agree* relation between T and the subject DP is manifested by the obligatory presence of the definite article. In other words, there is some feature-matching between T and D, which could be linked, depending on the temporal/aspectual features of T, to different interpretations of the lexicalised D.<sup>20</sup> This formal requirement is also compatible with a number of interpretations of the subject depending on the feature content of T (e.g. generic, statives).<sup>21</sup> Anticipating the discussion that

[20] Pesetsky & Torrego (2001) argue that D has an (uninterpretable) T feature, and T has an (uninterpretable) D feature. However, this alternative cannot account for the fact that D has to be lexicalised by the definite article in this context. On the other hand, Borer (2005: 269–271) argues that only existentially closed DPs can appear in subject position (CL<sub>I</sub> in our terms, EventPhrase (EP) in her terms), as these are capable of assigning range to the open value provided by the E position (or the event argument on T, in our system). It is in this context that what takes place in the nominal domain has effects on the clausal structure. More precisely, a lexicalised D provides range assignment to the open value of the D head, and closes off the DP. The absence of a lexicalised D (or of N-to-D raising, accordingly) leaves that position open; thus, a bare (weak) DP cannot appear in subject position (CL<sub>I</sub> within  $d_T$  in our terms), as it lacks the internal properties to assign range to the event. In other words, it lacks the features that would make it compatible with the requirement of E. This approach ensures that there is some sort of matching between nominal and verbal features.

[21] Nouns which can be ‘kind’-denoting are acceptable without a determiner in the news register:

(i) **Fitites** dhiamartirithikan ston ipurgo pedhias.  
Students protested-3P to-the minister of-education  
‘Students protested to the Minister of Education.’

In narratives, determinerless subjects are also possible:

(ii) Sti sinelefsi simera, **fitites** dhiamartirithikan, **kathijites** tsakothikan ...  
in-the meeting today students protested-3P professors quarreled-3P  
‘In the meeting today, students protested, professors quarreled, ...’

In the above examples, the interpretation of the bare plural is indefinite and the possibility of using a bare preverbal subject should be related to the temporal properties of narratives

follows in section 3.3, the spell-out of the definite article in subjects occurring in  $d_V$  is not obligatory. However, the interpretation of the bare subject is different from that in  $d_C$  in that a bare subject in  $d_V$  has an existential reading. On this basis, we derive the contrast in grammaticality between (28) and (29) via the properties of the heads of each domain.

Having discussed the position and properties of preverbal subjects, let us turn to the preverbal object in (25b). This construction is marked as odd, as the object bears no focus, and is not a topic either, since there is no associated clitic present. In the absence of any focus or topic reading assigned to it, the implication is that the object in this case cannot be in the left periphery. The question that arises next is whether the oddness of the construction can be attributed to the presence of the object DP in  $d_T$ . Note that if instead of a full DP there is a clitic, the sentence is fully grammatical:

- (30) To egrapse o Petros.  
 it wrote-3s the Peter  
 ‘Peter wrote it.’

Given the contrast between (25b) and (30), we can draw the preliminary conclusion that the oddness of (25b) is not related to the filling of CL2 in  $d_T$  as such, but is, rather, associated with the presence of a full DP in this domain.

We next need to consider whether the presence of a full DP in this position is blocked derivationally, or whether the problem arises on the interpretational side. Note that OVS is actually fully acceptable and, indeed, very common, in the narrative context of the news register, as illustrated by the following examples:

- (31) (a) **Ti sinavlia** parakoluthisan poli politiki.  
 the concert attended-3P many politicians  
 ‘Many politicians attended the concert.’  
 (b) **To neo tis album** parusiase stin Kolonia i  
 the new her album presented-3s in-the Cologne the  
 Kylie Minogue.  
 Kylie Minogue  
 ‘Kylie Minogue presented her new album in Cologne.’

It is worth pointing out that the intonation pattern associated with sentences such as those in (31) is ‘unmarked’ in that it is similar to the intonation pattern in SVO sentences in the same register. Moreover, the structures in (31) are subject to two restrictions: (i) the subject is obligatorily overt and postverbal, and (ii) there can be no other phrase preceding the clause-initial

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that license the null D. In addition, the news register differs not only with respect to the position of the bare plural subject, as in (i), but also as regards the object position and interpretation (cf. (31)).

object.<sup>22</sup> We take these properties to be related to the stylistic character of these constructions and thus to the interpretation associated with them. Specifically, both the subject and the object are new information. This, in turn, accounts for why the subject has to be overt, and also suggests that an analysis whereby the object is in the left periphery but the subject is in the inflectional domain runs counter to the interpretation assigned to the two elements. If new information is not associated with the left periphery, as argued by É. Kiss (1998), it follows that the object (and the subject) is below the C domain. Thus, in derivational terms, a merger of the DP object in CL<sub>2</sub> in  $d_T$  is possible. Finally, the absence of a clitic is also consistent with this approach since, as argued above, the clitic is obligatory when the object is dislocated in  $d_C$ . The role of the clitic in dislocation structures is to express the formal features within the inflectional domain. If the object DP is in  $d_T$  then the absence of the clitic follows directly.

Let us now consider the possibility of lexicalising both Clitic positions in  $d_T$ . This is illustrated in (32a) and (32b) with SOV and OSV orders, respectively.

- (32) (a) \*O Petros to grama egrapse.  
           the Peter the letter wrote-3s  
       (b) \*To grama o Petros egrapse.  
           the letter the Peter wrote-3s  
           ‘Peter wrote the letter.’

The examples in (32) are ungrammatical. Recall that in the preceding section we discussed the relative ordering of subject and object DPs in  $d_C$ . We showed that OS and SO are both available, since what determines the choice between the two is quantificational rather than inflectional features. The ungrammaticality of (32b) shows that this is not the case in  $d_T$ . This is to be expected if inflectional features, which play a primary role in this domain, match (or respect) thematic properties.<sup>23</sup> Thus, the requirement that S be higher than O in  $d_T$  and, as we will see, in  $d_V$  as well, holds. The

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[22] In some cases, there can be a deictic expression, such as ‘this moment’, which also requires that the verb be in the present tense. This corresponds to a live narrative style:

(i) Afti ti stigmi, ti sinavlia parakolouthun poli politiki.  
     this the moment the concert attend-3P many politicians  
     ‘At this moment, many politicians are attending the concert.’

[23] In this system, ‘accusative’ would correspond, among other things, to the lexicalisation of the proto-typical Patient, and ‘nominative’ to the lexicalisation of the proto-typical Agent, roughly speaking. Given that the matching with inflectional features is relevant in  $d_T$ , the fact that an ordering is at stake comes as no surprise. At the same time, it supports our claim that when interpretations such as topic and focus are involved, the inflectional features under consideration are not relevant for the ordering of DPs, hence the availability of OS in the left periphery.

ungrammaticality of (32a) is more problematic, as here the SO order is respected. Note that if the object is a clitic, the sentence is grammatical:

- (33) O Petros to egrapse.  
 the Peter it wrote-3s  
 'Peter wrote it.'

The contrast between (32a) and (33) indicates that both arguments can be realised in  $d_T$  as long as the object is a clitic. In other words, it is possible to have a derivation whereby both arguments appear in  $d_T$ . The problem arises only when the object is a full DP. This points towards a correlation with the different categorial status of clitics and DPs.

In order to provide an account of this pattern, we need to consider the kind of features that are activated (i.e. are relevant) in  $d_T$ . As already shown, the structure and interpretation of the DP subject are clearly affected by the temporal (and aspectual) properties of the clause. We exemplified this correlation with respect to bare subjects, generic subjects, and subjects of statives. On the other hand, the interpretation of the object is not dependent on the properties of T, but only on those of V (thematic/aspectual). Thus, the referential properties of the subject are somehow intrinsically linked to those of T, especially when the subject is in  $d_T$ . If there is a close relation between the subject and T in this domain, we expect that this will be structurally expressed in some way. Recall that a similar effect has been suggested for C and the focused phrase in  $d_C$ , where a locality condition is forced in order for the *Agree* relation to hold between the two elements. We could extend this approach to the 'active' features of T which are responsible for imposing referentiality properties on the subject. In this way, the presence of another DP in CL<sub>2</sub> blocks this relation and the result is ungrammatical, as expected. If the object is a clitic in CL<sub>2</sub>, no such effect is found, for reasons that have to do with the structural properties of clitics. More precisely, the lack of this effect derives from the fact that clitics are purely inflectional elements with a reduced structure, which lack a referentiality index, along the lines of Cardinaletti & Starke (1999) or Wiltschko & Déchaine (2002).<sup>24</sup>

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[24] Given this account, the OVS word order found in the news register, discussed above, raises the question of whether in this case the object in  $d_T$  agrees with T and, as a result, shows referentiality effects. Note that in this register the object is specific and as such is compatible with referentiality, as well as with its topicality; furthermore, bare nouns (either subject or object) are acceptable without a focus reading:

- (i) Afksisi ton apodhoxon tus iposxethike o prothipurgos stus panepistimiakus.  
 raise the pay theirs promised-3s the prime-minister to-the academic-staff  
 'The Prime Minister promised a pay-raise to the academic staff.'
- (ii) Omadha fititon episkefthike ton pritani.  
 group students visited-3s the rector  
 'A group of students visited the Rector.'

Alexopoulou & Kolliakou (2002) discuss 'topicalised' constructions of this type, and argue that, in the news register, the topicalised element has to be specific (definite or indefinite).

To summarise, the question we began this section with was whether lexicalisation of both Clitic positions is possible in  $d_T$ , as had been shown to be the case in  $d_C$ . The answer is negative when both arguments are full DPs for reasons that have to do with the agreement relation between T and the subject DP, and the interpretative effects on distribution discussed above. When the object is a clitic, no blocking effect arises due to the different structural properties of clitics.

### 3.3 *The interpretation of arguments in $d_V$*

In section 2, we proposed an account of the parametric difference between Greek and Italian with respect to the possibility of VSO, based on different features being lexicalised in Greek as opposed to Italian DPs. In Greek, the representation of the VSO order was argued to involve merging the subject DP in  $CL_1$  and the object DP in  $CL_2$  within  $d_V$ . In Italian, this option is not available due to the fact that Italian Ds lexicalise the same set of features irrespective of grammatical function. As a result, subject and object DP arguments in Italian are forced to appear in different domains.

A question that we need to address now is whether the ordering of arguments within  $d_V$  is free, as it is in  $d_C$ , or fixed, as in  $d_T$ . Relevant examples involve the VOS order:

- (34) (a) Egrapse to grama o Petros.  
           wrote-3s the letter the Peter  
       (b) To egrapse to grama o Petros.  
           it wrote-3s the letter the Peter  
           ‘Peter wrote the letter.’

(34a) is amenable to a number of alternative derivations and interpretations (see Philippaki-Warbuton 2001, Georgiafentis 2003, among others). With respect to the interpretation, either the subject or the object may be emphatic (contrastive, or not), or the VO constituent may be emphatic, in which case the subject has a clear dislocated reading. The example in (34b) also involves a clitic: the verb is part of the focused constituent, whereas the object DP and the subject are in the lower domains.

Concerning derivation, VOS in (34a) can involve the verb in C (focused), the object in  $d_T$ , and the subject in  $d_V$ , as is shown in (35a). In this derivation, neither the object nor the subject is marked as focus and topic, respectively. Alternatively, the verb can be in T, the object in  $d_V$  and the subject right-dislocated, as in (35b).

- (35) (a) [C egrapse [ $CL_1$  [ $CL_2$  to grama [ $T$  tv [ $CL_1$  o Petros [ $CL_2$  [v tv]]]]]]]]  
       (b) [T egrapse [ $CL_1$  [ $CL_2$  to grama [v tv] [ $XP$  o Petros]]]]

In the derivation in (35b), the subject is interpreted as topic, and the sentence is associated with an intonational break which becomes more prominent

when other material intervenes between the object and the subject (Philippaki-Warburton 2001):

- (36) Egrapse to grama **prosextika** o Petros.  
 wrote-3s the letter carefully the Peter  
 ‘Peter wrote the letter carefully.’

That the subject can appear in a right-dislocated position with a topic interpretation is further supported empirically by the fact that a response to a narrow-focus question involving the object can include the subject in clause-final position, as is shown in (37).

- (37) A: Ti aghorase o Janis?  
 what bought-3s the John  
 ‘What did John buy?’  
 B: Aghorase ipolojisti o **Janis**.  
 bought-3s computer the John  
 ‘John bought a computer.’

Given that the postverbal subject is old information, as it is part of the *wh*-question in A, the only new information is the object. Thus, we would like to suggest that not all VOS orders have the same derivation and that the option of right-dislocating the subject is independently available.<sup>25</sup>

In relation to (34a), it is also possible to derive VOS by movement of the constituent [V + object] to the left periphery,<sup>26</sup> leaving the subject in  $d_V$  or even in  $d_T$ . Recall from section 2.2 that, regarding VSO in Italian, Belletti (2004) also assumes movement of the VO constituent; however, in her analysis, this type of movement targets the topic projection in the low IP area, while the subject, being new information, appears in the low Focus projection. Belletti refers to this movement as ‘clause-internal remnant topicalisation’. In our approach, the focus interpretation associated with the subject is the result of the VO constituent appearing in the left periphery, where it is interpreted as a topic. In other words, focus on the subject arises as a by-product of fronting VO and leaving the subject in one of the lower

[25] Whether the dislocated subject is right-adjoined to VP or to some other position is left open. If we assume, following Kayne (1994), that right-adjunction is prohibited, then there will have to be an alternative way to derive the dislocated subject, perhaps a post-syntactic operation.

[26] We could assume either that VO moves as a single constituent through some process of remnant movement or, alternatively, that V and O target distinct positions in the left periphery. More precisely, we could assume that O is in CL<sub>2</sub> within  $d_C$ , while the verb occupies the higher C (similar to Rizzi’s (1997) Force). The fact that V in this case lexicalises the higher C, rather than the lower one that can bear the focus property, ensures that neither V nor O in the left periphery can be interpreted as focalised elements.

domains; this way we do not have to postulate the presence of a focus feature as part of a (low) FocusP.

Another possible derivation of VOS in (34a) involves the presence of both the object and the subject in  $d_V$ . The implication of this alternative would be that  $d_V$  is similar to  $d_C$  in that there is no fixed ordering between S and O. Recall, though, that in terms of our approach the absence of ordering of S and O in  $d_C$  is only apparent, as their relative order is actually determined not by inflectional features but by features that relate to C. The apparent availability of reverse ordering in  $d_V$  would imply either that there are no features on V that impose constraints on the merging of arguments in this domain or that, if there are V features, they do not obey a locality constraint of the kind invoked for  $d_C$  and  $d_T$ . We would like to reject the first option, given that the number of arguments and their thematic properties are determined by the predicate. Similarly, we would like to reject the second option. Note that in all approaches to argument structure there is an asymmetry between what counts as an ‘internal’ and an ‘external’ argument, an asymmetry which is hierarchically realised. We would like to maintain this hierarchy by assuming that the ordering between the Clitic positions is fixed. Furthermore, it is also a standard assumption that there is a more local relation between the verb and its object than the relation between the verb and the subject.

The results of the local relation between verb and object are manifested in a number of different ways. For example, the aspectual interpretation of the predicate can be partly determined by the properties of the DP object (Smith 1991, Borer 1994, 2005, Tenny 1994). In addition, it has been shown that a generic reading of the object is possible with a certain class of experiencer predicates. While in English, in this case, the object is realised as a bare plural, in Greek it is necessarily introduced by the definite (expletive) article:

- (38) (a) *Andipatho tus kavgadhes.*  
 detest-IS the quarrels  
 ‘I detest quarrels.’  
 (b) *Fovame tis katejidhes.*  
 fear-IS the storms  
 ‘I fear storms.’

Recall that the generic interpretation of the subject is determined by the tense properties of the clause and, consequently, generic subjects in Greek are forced to appear in preverbal position (also introduced by the definite article). In the case of objects, however, this reading arises from the properties of the predicate.

Another property of postverbal subjects whose interpretation is also determined by the predicate is the possibility of bare DPs in  $d_V$ . Consider the following examples, which can be understood as responses to



wide-focus questions ('What happened?') (see Georgiagentis & Sfakianaki 2004):

- (39) (a) Sinandisan fitites ton ipurgo (ja na zitisun  
met-3P students the minister for PRT ask-3P  
epidoma stejis).  
benefit housing  
'Students met the Minister (to ask for housing benefit).'
- (b) Dhiamartirithikan sinadelfi ston pritani (kata  
protested-3P colleagues to-the rector during  
ti xtesini sinandisi).  
the yesterday meeting  
'Colleagues protested to the Rector (during yesterday's meeting).'

The intonation pattern associated with the examples in (39) does not necessarily involve emphatic stress on the subject. When it does, the 'kind' reading is possible, as is the case with bare subjects in  $d_C$ . In the absence of stress, however, the reading of the bare subject is existential. This is consistent with Diesing's (1992) approach, according to which the VP (in our terms, the Clitic-shell above V) forms the nucleus of the sentence and is responsible for the existential interpretation of the subject. In this respect, we note a contrast between bare subjects in  $d_T$  and  $d_V$ : the former are excluded, while the latter are allowed. Recall that an overt determiner is required when the subject is in  $d_T$  due to the fact that it lexicalises features which relate to T. On the other hand, these features are not relevant in  $d_V$  and therefore a null D is possible, albeit with the existential reading. This explanation provides an attractive parallel between the interpretations of null D in  $d_C$  and  $d_V$ . Specifically, in both cases, the absence of lexicalisation associated with D forces a different valuation based on the features of the head of each domain; in other words, the feature content of each head assigns the corresponding reading to D.

In the present section we have considered the ordering and interpretation of arguments in the domain of V. We have shown that the ordering is not free, given that the relevant features of the clitic positions in this case respect thematic properties. VOS is only an apparent counterexample; we have argued that this order can be derived in a number of different ways which involve the presence of the object and the subject in different domains, mapping to the corresponding interpretations. A number of issues regarding VOS remain open, as their discussion in the present paper would have taken us too far afield. Finally, we have discussed bare subjects in  $d_V$  and provided an account for their existential reading.

#### 4. CONCLUDING REMARKS AND IMPLICATIONS

In the present paper, we began our discussion by considering the contrast between Greek and Italian as regards VSO order. Unlike previous accounts,

we argued that this parametric difference can reduce to a lexicalisation parameter which relates to the D-system of the two grammars: while in Greek DPs inflect for case and phi-features, in Italian they do not. As a result of this difference, and assuming the presence of (recursive) Clitic-shells in the clause structure, a subject DP and an object DP cannot both occur in the same domain in Italian, but they can in Greek.

Our approach has a number of theoretical implications which need to be investigated. We will outline three of them. The first concerns the correlation, if there is one, between VSO and the null-subject parameter (cf. Ouhalla 1991). In section 1, we discussed two pro-drop languages, Greek and Italian, which allow postverbal subjects, although with certain differences when it comes to VSO. As has emerged from our discussion, if there is any correlation between pro-drop and VSO order, this would have to be expressed as a one-way implication. More precisely, if a language has VSO (in  $d_V$ ) then it also has null subjects (but not the other way round). This typological statement appears to be empirically confirmed by the two languages we have examined in the present paper. The question of course is how this correlation could be expressed at a more theoretical level, i.e. what it actually amounts to. Note that while the presence of verbal agreement suffices to derive the availability of (referential) null subjects, it appears to be only a necessary but not a sufficient condition with respect to the availability of VSO of the Greek (but not the Spanish) type. In our analysis of Greek VSO, the crucial difference between Greek and Italian involves the D system and, more precisely, the presence vs. absence of inflectional morphology on D, respectively. Thus, the link between VSO and null subjects could be expressed as a link between verbal agreement and nominal inflection on D.

According to what we have said above, a VSO language of the Greek type has nominal inflection on the DP, as well as on the verb (although it is possible to argue that this kind of inflection is not interpreted in the same way in both cases; see Chomsky 2000, 2001). The implicational statement expressed above ('If a language has VSO in  $d_V$ , then it has null subjects') can now be seen to reduce to the following property: If a language has nominal inflection on DP, then it also has nominal inflection on V. In other words, if nominal features are expressed on DP then they also have to be expressed on the predicate, but not the other way round. This could perhaps derive from the fact that nominal features on the DP form part of its inherent properties, while those on V are relational (Collins 1997). Once a grammar has a way to lexicalise these features on DP, it has to do so whenever they become relevant. It remains an open question and subject to future research whether this correlation actually holds and, if it does, to what degree.

The second issue we would like to mention concerns the implications of our analysis for word-order typology. For example, we showed that

although Greek and Spanish both exhibit VSO order, they choose different derivations (subject to lexicalisation parameters) to express this order. In this connection, it would be interesting to see how VSO of the Celtic type is derived in this system, and whether it matches Greek or Spanish, or neither. Apart from VSO, our approach opens up an alternative way to view SOV. According to what we have said so far, SOV is subject to at least two derivations. One would involve no movement of V, with S and O appearing either in the same or in different domains ( $d_V$ ,  $d_T$ , or  $d_C$ ). The other derivation would involve movement of V, again, either in T – in which case S and O could appear in the same or distinct domains – or even in C – in which case S and O would appear in the same domain (essentially all the elements would be lexicalised in the left periphery in this case). It is possible to assume that some of these derivations, although available, do not arise for interpretative reasons, or that the same language may select one or the other in different syntactic contexts, as we have shown for VSO and SVO in Greek.

The last issue concerns SVO. According to what we have said, S and O in this case would appear in distinct domains, while V would (at least) be in T. If this is correct, then SVO in English would be subject to the same derivation, implying that there is V-raising in English after all. In order to support this claim we would of course need to examine the empirical arguments that have been put forward to account for the absence of V-to-T raising in English. We leave this open for future research (but see Julien 2002: 263–273).

To conclude, in the present paper we have proposed a novel account of VSO in Greek and its absence in Italian, which was based on the inflectional properties of the D system in each language and certain assumptions regarding the clause structure.

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