

## SVO and EPP in Null Subject Languages and Germanic\*

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### Outline

In this paper we will examine SVO/VS(O) alternations across languages (Greek/Spanish, English, Icelandic<sup>1</sup>) within the framework of the Minimalist Program (cf. Chomsky 1995) that restricts optional operations. We will argue that SVO in Greek/Spanish involves Left Dislocation and that inverted orders lack an expletive unlike English/Icelandic. We will propose that although the above holds, Greek/Spanish are strong EPP languages. Crucially, we will propose that there exists a parametrization of EPP checking: UG provides two options; the strong features of I° can be checked either by Moving or Merging an XP to Spec,IP or by moving the verbal head to I° provided that this has a set of specific properties. English and Icelandic opt for the first possibility whereas Null Subject Languages (NSLs) for the Move X<sup>0</sup> one. In our discussion we will limit ourselves to Greek and Spanish as the most representative NSLs, since other languages that are included in this group, for instance Italian, present further complications. Under this proposal crosslinguistic differences are attributed to irreducible morphological variation and to universal rules, such as Move and Merge which are also governed by the particular morphological properties of the languages in question.

### 1. The Problem

#### A. SVO/VS(O) Alternations Crosslinguistically

As is well known languages like Greek or Spanish show a certain flexibility in their word order. (1) shows that both SVO and VSO orders are acceptable:<sup>2</sup>

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\*An earlier version of this paper was presented at the 11th Comparative Germanic Syntax Workshop hosted at the University of Rutgers. We would like to thank Viviane Deprez, David Embick, Anastasia Giannakidou, Eric Haeberli, Riny Huybregts, Sabine Iatridou, Giuseppe Longobardi, Jaklin Kornfilt, Francisco Ordoñez, Jamal Ouhalla, Ian Roberts, Ken Safir, Ur Shlonsky, Tim Stowell, Peter Svenonius and Jan-Wouter Zwart for comments and discussion. All errors remain our own.

<sup>1</sup> We assume that the Icelandic facts represent the situation that holds in German and Dutch.

<sup>2</sup> VOS orders are also possible:

- i. pandreftike tin Ilektra o Petros
- ii. leyo el libro Juan

As it has been argued in Ordoñez (1994) for Spanish and Alexiadou (1994) for Greek, VOS orders involve leftward object movement over the subject. However, this type of scrambling is different from the one we find in Germanic (cf. Alexiadou 1994, Anagnostopoulou 1994): i) the object always follows the participle in periphrastic constructions, so it is moved to a relatively low position and ii) in Greek, weak NPs can occur in VOS orders unlike Germanic where only strong DPs can 'scramble':

- iii. ehi agorasi vivlia o Janis  
has bought books the-John-NOM  
'John has bought books'

- (1) a. O Petros pandreftike tin Ilektra *Greek*  
 the-Peter-NOM married the-Ilektra-ACC  
 'Peter married Ilektra'
- b. pandreftike o Petros tin Ilektra  
 married the-Peter-NOM the-Ilektra-ACC  
 'Peter married Ilektra'
- c. Juan leyo el Libro *Spanish*  
 'Juan read the book'
- d. leyo Juan el Libro

As known, inverted constructions occur also in the Germanic languages, their properties being somehow different from the properties these orders have in NSLs. An overt expletive is present and the Definiteness Restriction Effect holds (cf. 2-3). Icelandic but not English has Transitive expletive constructions (TECs cf. 3a):

- (2) a. There arrived a man *English*  
 b. A man arrived
- (3) a. það lasu einhverjir studentar bokina *Icelandic*  
 there read some students the book  
 'Some students read the book'
- b. Einhverjir studentar lasu bokina  
 'Some students read the book'

### B. Facts

VSO orders in Greek/Spanish have a specific set of properties absent in Icelandic/English expletive constructions. These are:

i) the SVO/VSO alternation in Greek/Spanish is not restricted to root clauses but also occurs in embedded contexts (non CP-recursion contexts, cf. Iatridou & Kroch 1992 a.o.). (4) indicates that both orders are equally possible with a complex NP and an 'if clause':

- (4) a. i idisi oti (o Janis) episkeftike (o Janis) tin Ilektra  
 the news that the-John-NOM visited the-John-NOM the-Ilektra-ACC  
 'The news that John visited Ilektra' *complex NP*
- b. an (o Janis) episkefti (o Janis) tin Ilektra  
 if the-John-NOM visits the-John-NOM the-Ilektra-ACC  
 'If John visits Ilektra' *if-clause*

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For reasons why this scrambling takes place see Alexiadou (1994, 1995) for Greek, Zubizarreta (1994) for Spanish. Crucially, VOS orders in NSLs cannot be analysed as similar to object shift constructions in Icelandic. Note that the availability of object shift is argued to correlate with the availability of Spec,TP as a subject position in Germanic (cf. Jonas & Bobaljik 1993).

ii) postverbal subjects in NSLs (Greek/Spanish) occur with all eventive predicates (transitives/intransitives) as indicated in (5):

- (5) a. efige o Janis *unaccusative*  
left-3S the-John-NOM  
‘John left’
- b. epekse o Janis *unergative*  
played-3S the-John-NOM  
‘John played’
- c. ektise i Maria to spiti *accomplishment*  
built the-Mary-NOM the-house-ACC  
‘Mary built the house’
- d. kerdise i Maria ton agona *achievement*  
won the-Mary-NOM the-race-ACC  
‘Mary won the race’
- e. egrafe i Maria to grama olo to proi *process*  
wrote-IMP the-Mary-NOM the-letter-ACC all the morning  
‘Mary was writing the letter the whole morning’

In English on the other hand, inverted subject constructions display an intransitivity constraint (cf. Levin and Rappoport 1995 a.o. for a recent discussion).

iii) VS orders in NSLs do not display any Definiteness Restriction (DR) effects unlike English/Icelandic/Dutch/French e.t.c.. Thus, (6) with a postverbal strong DP (a universal quantifier in this case) is grammatical in Greek but not in English:

- (6) a. irthe kathe pedi *Greek*  
arrived every child  
‘Every child arrived’
- b. \*There arrived every child *English*

iv) in VSO orders in NSLs the subject is VP internal, unlike Irish (cf. McCloskey 1994, Carnie 1993) and Icelandic (cf. Jonas & Bobaljik 1993). Evidence for this claim is provided by the following set of constructions:

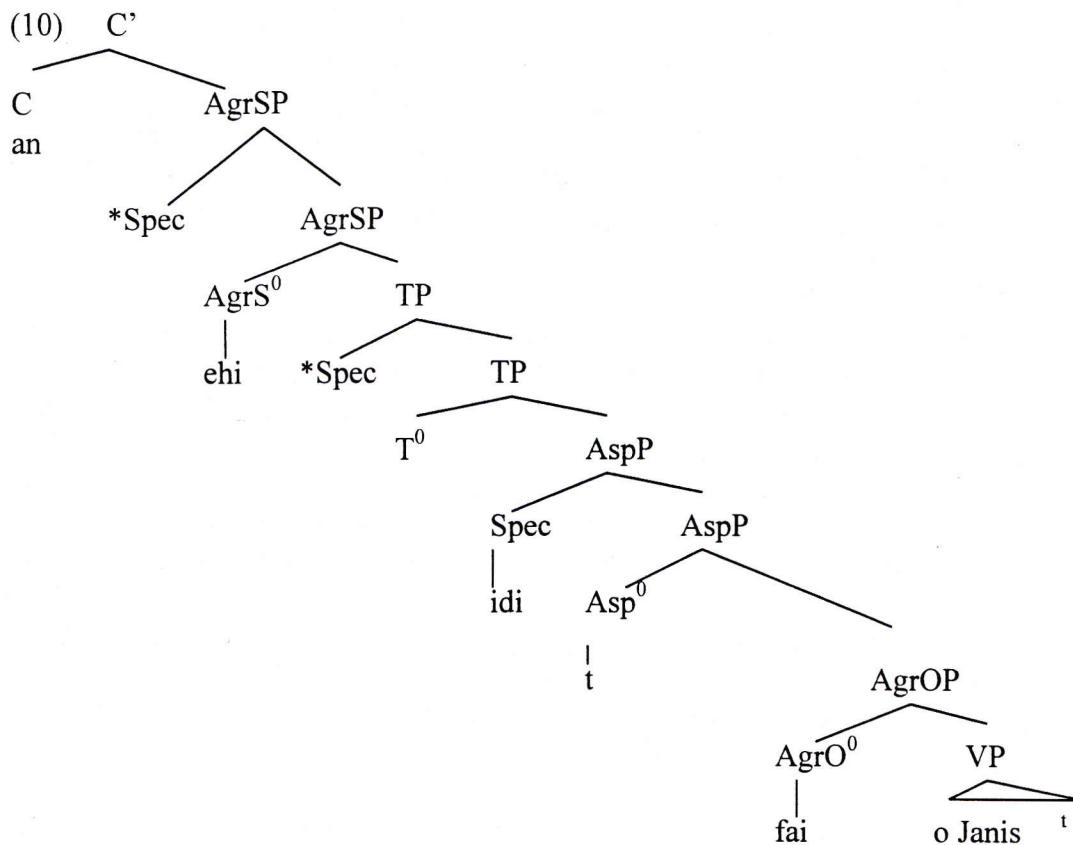
a) periphrastic tenses (cf. Alexiadou 1994, Anagnostopoulou 1994) show that subjects remain VP internal; in (7a-b) we see that the subject must follow the participle in Greek, but not in Icelandic (7c) or Irish (7d). Alexiadou (1994) and Anagnostopoulou (1994) have independently provided evidence that the participle moves out of the VP in Greek. Note that it is not the case that strict adjacency is required between the auxiliary and the participle as adverbs may intervene:

- (7) a. an ehi idi figi o Janis *Greek*  
 if has already left the-John-NOM  
 'If John has already left...'
- b. \*an ehi idi o Janis figi
- c. pad hafa sennilega margir studentar lesi\_ bokina *Icelandic*  
 there have probably many students read the book  
 'Many students have probably read the book'
- d. Ta an teangeolai ag ol na beorach *Irish*  
 bePRES the linguist PROG drink.DVM the beer  
 'The linguist is drinking the beer'

b) aspectual adverbs, which as it has been argued in Alexiadou 1994 are situated in Spec, AspectP, precede subjects in Greek but follow subjects in Irish. Moreover, VS sequences in VSO orders may be interrupted by adverbials in Greek unlike Irish (cf. 9):

- (8) a. an diavaze sinithos o Janis *Greek*  
 if read usually the-John-NOM  
 'if John usually read'
- b. \*an diavaze o Janis sinithos  
 if read the-John-NOM usually
- c. an pandreftike ktes i Maria ton Petro  
 if married yesterday the-Mary-NOM the-Peter-ACC  
 'Yesterday Mary married Peter'
- (9) deireann(\*i geona) siad (i geona) o paidir roimh am lui *Irish*  
 say always they always a prayer before time lie  
 'they always say a prayer before bed-time'

The above facts can be straightforwardly accounted for if we assume a phrase structure as the one in (10). The auxiliary is generated in Asp<sup>o</sup> and is moved to AgrS<sup>o</sup>, the participle is raised from within the VP to AgrO<sup>o</sup> (as it has been argued on the basis of participial agreement facts for French), the adverb is located in Spec,AspP and the subject remains in VP internal position:



From the discussion so far we conclude: VSO orders cannot be analysed as involving I-to-C movement, since there is an absence of root vs. embedded asymmetries. Additionally, we have shown that subjects in these constructions are VP internal. Given that no overt subject movement is triggered, the obvious conclusion would be that the N features of T/Agr are weak in Greek/Spanish.

### C. Two analyses within MPLT

The existence of word order alternations is problematic for a framework that does not permit optional operations. Crucially, if (1a) is analysed as involving subject movement to Spec,IP, then why is the alternative in (1b) altogether possible? Depending on whether one assumes the proposal in Chomsky (1993) or the most recent one in Chomsky (1995), the above alternations can be dealt within the Minimalist Program in two ways:

I. Within the framework of Chomsky (1993), where i) movement is regulated by the strong version of the Principle of *Greedy* and ii) there is no clear way to define reference set which determines more economical derivations, there are the following potential solutions to the SVO/VSO puzzle:

a) One option would be to assume that the N-features of T/Agr are optionally strong, thus deriving SVO and weak, thus deriving VSO. Similar proposals have been made in Chomsky 1993 for Arabic which exhibits a similar alternation with different agreement patterns in each case, and in Branigan 1992, Branigan & Collins 1993 for Object Shift. However, there seems

to be no independent evidence that this is true at least in Greek/Spanish. Additionally, the possibility of developing a more restrictive theory should be preferred.

b) The other option would be to assume that VSO actually reflects the strength of the N features of Agr/T. In other words, in VSO orders there is no subject movement involved. If this is so, then SVO is best analysed as involving Topicalization (in the sense of **Left Dislocation**).

II. Within the framework of (1995) which we assume throughout, the *reference set* which determines optimal derivations is clearly defined: in evaluating derivations for economy only alternatives with the same *Numeration* are considered. An additional claim in Chomsky (1995) is that the EPP can be seen as involving checking of a categorial nominal feature. SVO in languages like English/Icelandic is related to EPP. Given that the nominal features of I° are strong in English/Icelandic, overt subject movement has to take place. Expletives are also inserted to check the strong feature of I°. Assuming Chomsky's definition of the reference set,<sup>3</sup> we would like to point out that the two derivations, the one with the expletive and the one without cannot be compared: SVO is derived from a numeration without an expletive. Expletive Constructions on the other hand, are derived from a numeration with an expletive. Expletive Merge is less costly than overt Movement of the subject when both are part of the same numeration.

In this framework there are again two potential solutions to the SVO/VSO puzzle:

a) One is to assume that VSO in Greek involves an expletive, i.e. it is really *pro<sub>expl</sub>* V S O as traditionally assumed (cf. Rizzi 1982). This would lead us to conclude that EPP is strong in Greek and thus one has to analyse SVO orders as involving EPP driven movement, Case and Agreement being checked as free riders. The implication of this solution would be that SVO in Greek and English should behave alike. The crucial assumption behind this is that VSO and SVO cannot be compared as they involve different numerations.

b) An alternative would be to propose that VSO does not involve an expletive. That would lead us to assume that Greek does not respect the EPP (Case and Agreement being checked covertly). In that case, SVO should be analysed as involving Left Dislocation. Under this proposal, SVO in Greek and English are expected to behave differently. The crucial assumption this analysis relies on is that SVO as involving subject Movement to Spec,IP will always be ruled out as a Procrastinate violation given that VSO/SVO have the same numeration. In other words, VSO should be always preferred by the computational system.

In this paper we will argue that (b) is on the right track but crucially we will propose that EPP \*is\* strong. We will proceed as follows: comparing Greek/Spanish to Germanic, first we will provide independent evidence that SVO involves Left Dislocation. Then we will show that VSO orders can be analysed as lacking an expletive. We will propose that although both facts about SVO/VSO orders are true, Greek/Spanish respect the EPP. They differ from the germanic languages in that they choose another mode to satisfy it.

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<sup>3</sup> But see Fox (1994), Reinhart (1995) for alternative proposals.

## 2. Evidence for (b)

### A. SVO = Left Dislocation (LD)

If SVO in Greek/Spanish involves a dislocated subject,<sup>4</sup> then we would expect these orders to behave differently in the two language groups. As a matter of fact, this is correct:

i) First of all note that in Greek, for which it has been argued that it involves V-raising to AgrS°, SVO does not involve a Spec-head configuration. It is important to notice that Greek allows multiple dislocations. As we can see in (11), adverbs intervene between subjects and verbs in Greek but not in English:

- (11) a. O Janis xtes meta apo poles prospathies sinandise ti Maria  
the-John-NOM yesterday after from many efforts met the-Mary-ACC  
'John finally met Mary yesterday'
- b. \*John yesterday has met Mary

Moreover, subjects can precede complementizers in Greek, but not in English:

- c. o Janis an erthi  
the-John-NOM if comes  
'John if he comes'
- d. \*John if comes

ii) In Spanish, where multiple topicalizations are not allowed, other elements compete for the preverbal position (cf. Zubizarreta 1992, Ordoñez and Treviño 1995). Thus (b) is ungrammatical as both the adverb and the subject compete for the topic position:

- (12) a. Temprano salia Julia de casa  
early left Julia the house
- b. \*Temprano Julia salia de casa

iii) The interpretation of QPs/Indefinite preverbal subjects is different in the two language groups (cf. Sola 1992 for Catalan and Barbosa 1994 for Romance):

- (13) a. Enas heretise ti Maria  
one greeted the-Mary-ACC *strong(partitive/specific)*  
'A certain person/one of the people greeted Mary'
- b. heretise enas ti Maria  
'Someone greeted Mary'
- c. ?Enan ton heretise i Maria  
one-ACC cl-ACC greeted the-Mary-NOM  
'Mary greeted one of the people'

<sup>4</sup> See also Philippaki-Warbuton (1985), Tsimpli (1990) a.o.

The preverbal subject has strong (partitive/specific) interpretation in (13a), but weak in (13b). This is not the case in English where the QP is ambiguous. The subject in (13a) behaves like the clitic left dislocated (CLLDed) object in (13c).

Similar observations can be made concerning the scope of existential quantifiers:

- (14) a. kapjos fititis arhiothetise kathe arthro  
 some student-NOM filed every article
- b. arhiothetise kapjos fititis kathe arthro
- c. kapjo pedi to eksetase kathe kathigitis  
 some child -ACC CI-ACC examined every professor-NOM

Wide scope of *kapjos* over the universal QP is strongly preferred in preverbal position, whereas narrow scope is preferred in postverbal position. The subject in (14a) behaves like the CLLDed object in (14c) with respect to scope possibilities.

One potential objection against the claim that preverbal subjects are left dislocated in (13, 14) might be that that quantifiers are generally not assumed to be able to occur in left dislocated positions, because these positions mark 'topichood' and quantifiers/indefinites are generally not capable of functioning as topics. However, note that at least in Greek quantifiers/indefinites are clearly permitted in positions involving LD; in (15) the bare quantifier *kapjos* precedes a CLLed object; thus, the subject is unequivocally left dislocated.

- (15) Kapjos ton Petro ton sinelave  
 someone-NOM the-Peter-ACC CI-ACC arrested-3S  
 'Someone arrested Peter'

iv) Another piece of evidence pointing at the same direction as the previous examples comes from Relative Clause Extraposition. As observed in Cinque 1982, (and see Barbosa 1994, Kayne 1994 for a more recent discussion) Relative Clauses do not undergo extraposition in NSLs, as opposed to Germanic (cf. 16a vs. 16c). Extraposition, as known, is blocked when the 'head' of the relative clause is a definite (cf. 16b):

- (16) a. A man came that wanted to talk to you  
 b. \*The man came that wanted to talk to you
- c. \*Enas andras irthe pu ithele na su milisi  
 a man came that wanted SUBJ you-GEN talk-2SG

For Kayne (1994), who analyses relative clauses as CPs complements of a determiner, *a man* forms a unit which raises further, stranding its clause. However, *the* and *man* do not form a unit as *the* is located under  $D^{\circ}$  and *man* in Spec,CP. Hence, further raising is not possible. Kayne attempts to account for the contrast between NSLs and non-NSLs by arguing that the preverbal position in NSLs cannot tolerate QP subjects. This line of explanation can be restated in theory neutral terms in terms of the *Specificity Constraint* of Fiengo & Higginbotham 1991. Preverbal indefinites in NSLs are, as we saw, specific, and extraposition is expected to be ungrammatical.



v) The following asymmetry between pre- and post verbal subject pronouns indicates that preverbal subject positions have a different status from postverbal ones. As pointed out in Sola (1992) and Barbosa (1994) pronouns can be bound only in the latter. This is shown in (17) with a catalan example. This test cannot be reproduced for Greek because Greek doesn't have third person personal pronouns making use of demonstratives instead: demonstratives cannot be construed as bound variables (they are subject to principle C):

- (17) a. \*Tots els estudiants<sub>i</sub> es pensen que ells<sub>i</sub> aprovaran *Catalan*  
 all the students think that they will-pass  
 'All the students think that they will pass'
- b. tots els jugadors<sub>i</sub> estan convencus que guanyaran ells<sub>i</sub>  
 all the players are persuaded that will-win they'  
 'All the players are persuaded that they are the ones who will win'

Sola (1992) and Barbosa (1994) account for these facts on the basis of the assumption that only post verbal subjects occupy an A-position, thus being able to be construed as bound variables.

vi) The behavior of preverbal subjects in 'Triggered' inversion constructions (cf. Torrego 1984, Canac Marquis 1991, Anagnostopoulou 1994) indicates that they behave similarly to topics:

- (18) a. Pjon (\*o Petros) ide (o Petros)?  
 whom (the-Peter-NOM) saw (the-Peter-NOM)
- b. Pote (o laos) apofasise (o laos) na andidrasi?  
 when (the-people-NOM) decided (the-people-NOM) SUBJ react  
 'When did the people decide to react?'
- c. Pjon apo tus filus tu (o Petros) agapai (o Petros)  
 whom from the friends his (the-Peter-NOM) loves (the-Peter-NOM)  
 perisotero?  
 more  
 'Which one of his friends does Peter like most?'
- (19) a. \*Pjos ton Petro ton ide?  
 who the-Peter-ACC Cl-ACC saw  
 'Who saw Peter?'
- b. Pote tin tenia tin provalan ja proti fora?  
 when the-movie-ACC Cl-ACC showed-3PL for first time  
 'When did they show the movie for the first time?'
- c. Pjos apo tus fitites tin askisi tin elise  
 who from the students the excersice-ACC Cl-ACC solved-3SG  
 amesos?  
 immediately?  
 'Which one of the students solved the excersice immediately?'

As (18) and (19) show subjects/CLLDed objects are not allowed to interfere between the wh-phrase and the Verb when the fronted element is a non D-linked argument. Torrego (1984) and Canac Marquis (1991) analyse this as a Subjacency effect which Anagnostopoulou (1994) attributes to the status of preverbal subjects as LDs.

From the above discussion we conclude that SVO involves LD.

Before concluding the present section, we would like to discuss a number of aspectual restrictions on word order (stative vs. eventive, cf. Vendler 1967) that occur in NSLs. These facts can be viewed as evidence for the A' character of preverbal subjects in Greek/Spanish, and they also provide support for the claim that VSO orders can be analysed as lacking an expletive. Consider the sentences in (20):

(20) a. \*misi/agapai/fovate/kseri i Maria ton Petro  
hates/loves/fears/knows the-Mary-NOM the-Peter-ACC

vs. (1a)=b. pandreftike o Petros tin Ilektra  
married the-Peter-NOM the-Ilektra-ACC  
'Peter married Ilektra'

c. i Maria misi/agapai/fovate/kseri ton Petro  
the-Mary-NOM hates/loves/fears/knows the-Peter-ACC

but: (21) misise/agapise I Maria ton Petro  
hated-PERF-3S/loved-PERF-3S the-Mary-NOM the-Peter-ACC

Stative predicates do not permit VSO orders (20a), unlike eventive ones (20b). Whenever perfective aspect is present on the verbal morphology, VS-orders with stative predicates become possible (21). Notice, though, that the meaning of the verb in (21) changes: "loved" is understood as "fell in love" (episodic reading).

It has been observed that VSO orders in NSLs are understood as answers to the question "what happened" (cf. Philippaki 1985, Comorovski 1991, Anagnostopoulou 1994, Zubizarreta 1994). SVO orders are unacceptable in these contexts (cf. 22).

- what happened?

(22) a. molis espase o Janis tin kristalini lamba  
just broke the-John-NOM the crystal lamp  
'John just broke the crystal lamp'

b. \*molis o Janis espase tin kristalini lamba

The generalization appears to be that only non-stative stage level-predicates can appear in VSO orders in NSLs. According to Zubizarreta (1994), this has to do with the fact that VSO-orders in NSLs correspond to all-focused sentences because of the way focus propagates from the object to the subject when both are VP-internal. Statives cannot appear as answers to the question "what happened" , as they are inherently incompatible with these contexts. Generic sentences are also expected to be excluded: they correspond to categorical judgements, they

are non-stage level (cf. Kuroda 1972, Ladusaw 1993). In fact, this prediction is borne out, as the following examples show. Generic readings are suppressed under VSO (cf. 23a vs. 23b):

- (23) a. I gata kinigai pondikia *generic*  
 the-cat-NOM chases mice-ACC  
 ‘Cats chase mice’ or ‘The cat chases mice’  
 b. kinigai i gata pondikia *cannot be generic*  
 chases the-cat-NOM mice-ACC  
 ‘The cat chase mice’

The Greek examples in (23) are strongly reminiscent of Japanese generic sentences which always have the topic marker *wa* as shown in (24). The presence of a different marker (i.e. the nominative marker *ga*) forces a non-generic interpretation. Greek differs from Japanese in that it expresses the same distinction with the choice of a specific word order:

- (24) a. Inu **wa** hasiru *Japanese*  
 Dogs TOP run  
 ‘Dogs run’  
 b. Inu **wa** neko o oikakeru  
 Dogs TOP cats chase  
 ‘Dogs chase cats’  
 c. Inu **ga** neko o oikakete iru  
 ‘The dog is chasing a cat’

We propose that (20c) should be analysed as Left Dislocation which is an obligatory process with statives due to the special discourse function associated with VSO orders and the inherent incompatibility of statives with this function. This instance of LD is a process of defocusing in the sense of Reinhart (1995), necessary to avoid the clash that is produced from the movements that take (V-movement) or do not (DP-movement) take place for reasons of feature checking and the discourse function of the structure. Under this analysis, whenever morphologically triggered movements give rise to "inappropriate" information structures, LD of the subject or the object are expected to apply. Witness the following example:

- (25) ton Petro ton misi/agapai/fovate i Maria  
 the-Peter-ACC cl-ACC hates/loves/fears the-Mary-NOM  
 ‘Peter Mary hates/loves/fears’

In (25), left dislocation of the object has applied. The structure is as acceptable as (20c) and they both contrast with (20a).

The same facts could be accounted for under the *pro*VSO hypothesis by appealing to the function of the expletive *pro*: *pro* can be viewed as an expletive included in a numeration associated only with certain readings (and only with certain predicates, namely eventive ones). However, there are two main objections to this analysis:

(a) The postulation of *pro* is not really necessary under the theory of the interaction between phrase structure and information-structure developed in Zubizarreta (1994), which is needed for independent reasons.

(b) If we take this line of reasoning, we will be in trouble with example (25) where an expletive *pro* would have to be assumed (since NSLs would qualify as strong EPP languages): this *pro* would be associated with stative predicates and its role would be completely vacuous.

So far we have shown not only that there is evidence that SVO involves LD but also that VSO can be analysed as lacking an expletive. Let us now see whether we have reasons to assume the presence of an expletive in inverted constructions.

## B. VSO = VSO

Is there independent evidence for assuming that VSO orders do (not) involve expletive Merge? Note that according to the tradition (cf. Rizzi 1982 and related literature) inverted (VOS) constructions involve an expletive *pro*. Chomsky (1995) adopts this analysis. For NSLs it is difficult to decide how to analyse VSO orders since the expletive is not overt. A potential argument for the presence of *pro* in VSO orders would be the existence of DR effects.

As known, DR effects show up with 'there' type expletives and 'il' type expletives across languages (cf. 26):

- |      |    |  |                |
|------|----|--|----------------|
| (26) | a. | There arrived a man/*the man/*every man                                      | <i>English</i> |
|      | b. | il est arrive un homme/*l'homme  | <i>French</i>  |
|      | c. | er heeft iemand/*Jan een huis gebouwd<br>there has someone/Jan a house built | <i>Dutch</i>   |

However, it has been observed (cf. Jaeggli 1980, Rizzi 1980, Burzio 1981, Chomsky 1981, Safir 1985, Calabrese 1990 and see (28)) contra Belletti (1988) that DR effects are absent in NSLs. The fact that in unaccusative (and some unergative) constructions DR effects do not show up in all languages shows that in these constructions, DR effects are syntactically triggered, but not in existential and 'donkey anaphora' contexts. For this reason, we will adopt Chomsky's (1995) and Frampton's (1995) analysis of DR effects in unaccusative and transitive expletive constructions, namely that they arise because 'there' is a Determiner which takes an NP complement, hence the DR effects (cf. Chomsky 1995, Frampton 1995). Consider now the sentences in (27):

- |      |    |  |              |
|------|----|--|--------------|
| (27) | a. | eftase ena pedi/ o Jorgos/ kathe filos mu            | <i>Greek</i> |
|      |    | arrived a child-NOM/the-George-NOM/every friend mine |              |
|      |    | 'A child/John/every friend of mine arrived'          |              |
|      | b. | diavase ena pedi/kathe pedi to vivlio                |              |
|      |    | read-3S a child/every child the-book-ACC             |              |
|      |    | 'A/every child read the book'                        |              |

- c. pad lasu einhverjir studentar bokina  
 there read some students the book  
 'Some students read the book'

*Icelandic*

There is a sharp contrast between (27a,b) and (27c): the Icelandic TEC in (27c) shows obligatory DR effects. The systematic absence of DR effects in NSLs, on the other hand seems to suggest that there is no expletive in inverted constructions in these languages.

Of course, it could be claimed that the presence vs. absence of DR effects is related to the nature of the expletive: overt vs. covert. Greek has a covert expletive, and as a result it lacks DR effects, Icelandic has an overt expletive and, therefore, it shows DR effects. However,

(i) there are Arabic dialects which do not display any DR effects with covert expletives and there are languages like Dutch which display DR effects with covert expletives (Riny Huybregts p.c.). Hence, the correlation between the (c)overtness of the expletive and the presence of DR-effects seems to break down.

(ii) Moreover, Greek and Spanish (cf. Suñer 1982, Safir 1985) have constructions for which we have reason to assume that they are null expletive constructions: these are "impersonal-have" constructions which show default agreement and DR effects. The reason why it can be argued that an expletive is present in these constructions is that the overt argument has accusative Case, so there must be some covert NP in the structure receiving Nominative Case:

- (28) ehi anthropus/\*kathe anthropo edo  
 has peopleACC/every person-ACC here

If an expletive is present in (27a, 28) then we must conclude that Greek/Spanish have two covert expletives with completely different properties: one associated with DR effects and one which does not. It is not clear why Greek and Spanish are like that while, for instance, French has DR effects in both types of constructions (cf. *il est arrive un homme* vs. *il y a des enfants*).

Notice that whenever we have reasons to postulate a null expletive in Greek we always have default agreement (cf. 29):

- (29) a. fenete oti tha erthun  
 seems that FUT come-3PL  
 'It seems that they will come'
- b. prepi/ bori/ na erthun ta pedja  
 must-3S/might-3S SUBJ come-3PL the-children-NOM

Naturally, it is possible to postulate several types of expletives, as has been done for English (*it* vs. *there*). The question is whether it is necessary to analyse VSO orders as a transitive expletive construction.

McCloskey (1994) has reached a similar conclusions for Irish; the lack of DR with unaccusative constructions and with transitives seems to indicate that no expletive is present:

- (30)           deireann siad i geona o paidir roimh am lui  
               say       they always a prayer before time lie  
               'they alwas say a prayer before bed-time'

We believe that VSO orders are not TECs, i.e. Greek VSO orders should not be assimilated to Icelandic VSO orders. Jonas & Bobaljik (1993) have established a correlation between the availability of subject inversion with transitive predicates and the availability of Spec,TP. In English inverted orders the subject must remain VP-internal and there is always an intransitivity constraint on inverted constructions. We have shown that Greek and Spanish are like English in that they always have VP-internal subjects (cf. the position of subjects in participial constructions (7)). Moreover, Greek and Spanish, like English, do not display scrambling/object shift of the Germanic type. Hence, they are not expected to license TECs, if Jonas and Bobaljik are right.

Jonas & Bobaljik divide languages into two types: those that license Spec, TP and those that do not.<sup>5</sup> In Greek/Spanish/English, Spec, TP as a subject position is not licensed, thus there is only one (if any for NSLs) external specifier position for subjects. This position is related to the EPP, Case being checked as free ride in English. In Icelandic, Spec, TP is licensed thus, there are 2 VP external Spec positions for subjects, 1 devoted to Case and 1 to the EPP. Moreover, Celtic is assumed to be a language that licenses Spec,TP as a subject position, but the licensing is devoted to Case not to EPP (cf. Carnie 1993).

So far we have shown that a) SVO = LD and b) VSO = VSO. That SVO involves LD does not necessarily imply that VSO lacks an expletive, because one might assume that there is always an expletive. That VSO lacks an expletive implies that SVO involves LD, since lacking an expletive the language would qualify as a no-EPP language and SVO could not be analysed as EPP-driven movement.

Note that if McCloskey is right in his claims about Celtic VSO orders, it follows that Celtic SVO structures are necessarily Topicalization structures. As a matter of fact this is the case; evidence is provided from the obligatory presence of a special topicalization marker in Celtic SVO orders (examples from McAulay 1992). Thus, SVO is never related to EPP:

<sup>5</sup> Thrainsson (1995) and Bobaljik (1995) propose a similar but not identical division: they claim that languages vary with respect to the functional projections they instantiate. Some languages have both AgrSP and TP (Icelandic), whereas others (English) have an 'unsplit Infl' (cf. Iatridou 1990). It is argued that overt morphology determines the number of projections in the structure: a 'fused' Agr and Tense morphology indicates that the language in question has only one functional projection, whereas evidence for separate tense and agreement morphology is taken as evidence for separate agreement and tense projections. We would like to point out that Greek provides arguments against this correlation: in Greek we have overt morphological evidence for separate tense and agreement morphology, but syntactic behavior (in the relevant aspects) similar to languages where agreement and tense are not separated:

i.	Icelandic: kasta 'throw'		English: tremble		Greek: rihno 'throw'	
	Present	Past	Present	Past	Present	Past
2sg	kasta-r	kasta-ði-r	3sg tremble-s	tremble-d	3sg rihn-i	e-riks-e
	TWO morphemes		ONE morpheme: *tremble-d-s		TWO morphemes	

For this reason we would like to suggest that at least for Greek, the solution outlined in Jonas & Bobaljik (1993) for English is preferred: they argue that in English functional head movement of Tense to Agr takes place prior to verb movement, thus Spec,TP is not licensed. We would like to suggest that it is presumably this movement that leads to the fusion in Greek, movement that takes place before the verb raises overtly to Agr<sup>o</sup> (see Kissock 1995).

- (31) a. carr a bhuaill an coisi *Irish*  
 car REL.PART hit ART pedestrian  
 ‘It was a car that hit a pedestrian’
- b. Mair a fwrodd ef *Welsh*  
 Mair REL.PART hit-she him  
 ‘Mair hit him’

### 3. A Proposal: GB meets the Minimalist Program

Given the results of our discussion so far we may be led to two different conclusions: a) NSLs are no-EPP languages or, perhaps not so obvious, b) they are strong EPP languages where the EPP feature is not checked by Move/Merge XP but by a different mode. We believe that the latter option is preferred and we propose that this different mode is **V-movement**. To make this proposal work we need to capitalize on the nature that verbal agreement morphology in NSLs as traditionally assumed and combine it with the ideas about the nature of EPP in Chomsky (1995).

The basic intuition in the GB literature about NSLs is that they have **(pro)-nominal agreement** (cf. Taraldsen 1978, Rizzi 1982, Chomsky 1981, Safir 1985 a.o.). In Chomsky 1995, EPP is seen as checking of a nominal feature in I°. Thus, it can be claimed that *pro-drop* languages have agreement properties that permit them to satisfy the EPP via verb-raising. Crucially, then V-movement is sufficient to check the nominal feature of I°, since the verb itself contains the nominal feature needed. In our proposal EPP checking is reduced to Agr checking in the sense of [nominal] feature checking (not Case).

That the verbal agreement morphology in NSLs includes a nominal element is claimed on the basis of the following example. In (32), the agreement affixes play exactly the same role as the pronouns in the English paradigm:<sup>6 7</sup>

<sup>6</sup> The implication of our proposal is that referential *pro* does not exist either. Ouhalla (1994) has reached a similar conclusion to the one presented here. He argues that the EPP is related to the relative richness/impoverishment of agreement morphology. English has to insert an overt expletive in subject positions not filled with a noun phrase argument to check the EPP feature. NSLs do not have to insert an expletive because the features of AgrS are ‘identified’ in terms of agreement morphology. See also Philippaki-Warbuton (1989).

<sup>7</sup> A question that arises is how our proposal can be implemented to account for control and raising structures. One potential answer would be to assume mechanisms of feature percolation common in computational frameworks. ECM constructions might raise potential problems for the analysis outlined in the text. As Lasnik (1995) points out, ECM constructions show EPP effects, even though the subject of an ECM infinitive is not a case position. For Spanish, it is not clear what the prediction would be, since the embedded verb is infinitival and thus the agreement is of a different type. However, Greek lacks embedded infinitival complements; thus in ECM constructions the embedded verb is inflected for person and number (cf. Iatridou 1993). These constructions should be analysed in terms of Case, because crucially the subject does not have to raise in ECM contexts requiring a clitic (cf. Schneider-Zioga 1994). It is not an EPP problem, otherwise we would not expect this alternation:

- i. a. perimeno ton Petro na erthi  
 expect-1S the-Peter-ACC SUBJ come-3S  
 ‘I expect Peter to come’
- b. ton perimeno na erthi ton Petro  
 cl-ACC expect-1S SUBJ come-3S the-Peter-ACC

Similar effects obtain in double object constructions where when the dative is doubled by a clitic, it cannot move, while when it is not it must be adjacent to the verb:

- |      |    |           |    |         |
|------|----|-----------|----|---------|
| (32) | a. | I love    | b. | agapo   |
|      |    | you love  |    | agapas  |
|      |    | he loves  |    | agapa   |
|      |    | we love   |    | agapame |
|      |    | you love  |    | agapate |
|      |    | they love |    | agapane |

What we are suggesting is that verbal agreement morphology has the status of a clitic which is part of the lexical verb and not of I° (cf. Safir 1985). An alternative possibility would be to derive the nature of verbal agreement from pronoun incorporation (cf. Hale 1987, Taraldsen 1993 a.o.). We believe that the basic problem for the incorporation analysis is the status of the subject argument. One would have to assume that the subject is somehow peripheral to the VP. Under our proposal, what we actually have is a doubling effect.<sup>8</sup> It would be interesting to examine the differences and similarities between this type of doubling and object doubling which occurs in Greek and Spanish.<sup>9</sup>

However, it seems that examining the agreement affixes only is not enough (cf. Trentino/Fiorentino, Brandi & Cordin 1989):

	Fiorentino	Trentino	
(33)	(e) parlo	parlo	I speak
	tu parli	te parli	you speak
	e parla	el parla	he speaks
	la parla	la parla	she speaks
	si parla	parlem	we speak
	vu parlate	parle	you speak
	e parlano	i parla	they (masc.) speak
	le parlano	le parla	they (fem.) speak

- |      |    |                                 |                   |
|------|----|---------------------------------|-------------------|
| (34) | a. | *(tu) parli                     | <i>Fiorentino</i> |
|      | b. | Mario e parla<br>‘Mario speaks’ |                   |
|      | c. | *Mario parla                    |                   |
|      | d. | gli e venuto la Maria           |                   |

- 
- |     |    |   |  |
|-----|----|---|--|
| ii. | a. | edosa tu Petru to vivlio                  |  |
|     |    | gave-1S the-Peter-GEN the-book-ACC        |  |
|     |    | ‘I gave Peter the book’                   |  |
|     | b. | *edosa to vivlio tu Petru                 |  |
|     | c. | tu edosa to vivlio tu Petru               |  |
|     |    | cl-GEN gave-1S the-book-ACC the-Peter-GEN |  |

We believe that whatever the solution for the doubling constructions is, it will also apply to the ECM examples.

<sup>8</sup> Ordoñez (p.c.) informed us that he has reached a similar conclusion about Spanish.

<sup>9</sup> Crucially, Sportiche’s Filter (1993) would apply to both Agr Projections. Note that Greek and Spanish which are the ‘most well-behaved’ wrt to VSO also have object clitic doubling. Italian and Catalan on the other hand which do not fit the classification, lack object clitic doubling and show VOS orders, VSO ones being marginal. VOS orders in Italian/Catalan seem not to be similar to the VOS orders in Greek/Spanish, but to the Object Shift constructions in Icelandic. If this is really so, then it correlates with the fact that they seem to show some ‘strong EPP’ properties.



is come the Maria

Trentino/Fiorentino are similar to Greek with respect to the lack of DR effects, but they differ in that subject clitics are present. The verbal agreement in Trentino/Fiorentino is similar to Italian, yet the clitics are obligatory. The above paradigm shows that it is not enough to look at the richness of the paradigm to conclude that Agreement is pronominal or not, but one has to look at the syntactic properties of the language.

A potential counterargument to the correlation between agreement and subject clitics we are trying to establish might be French, a language that has subject clitics but is similar to English in all other relevant aspects (Word Order, DR effects, e.t.c):

- (35) a. Il mange  
b. Jean, il mange  
c. Jean mange  
d. \*il est arrive Jean

However, we believe that this case is not problematic: we assume that there is a distinction between two types of subject clitics (cf. Cardinaletti & Starke 1994 a.o.), the French type with **XP properties** and the Fiorentino/Trentino type with **X<sup>0</sup> properties** (cf. Brandi & Cordin 1989 a.o.). It follows that these two types behave differently and crucially, only the Fiorentino/Trentino clitics have the same effects as agreement affixes.

The implications of the proposal outlined here are: a) EPP is universally strong because it is a formal property of sentences, b) the mode of EPP satisfaction is parametrized, c) EPP triggers V-raising in NSLs and d) linguistic variation reduces to morphological variation.

#### 4. Typology

From the above discussion it became clear that there are two parameters which regulate word order variation in the IP domain:

- a) **the Spec, TP parameter** (cf. Jonas & Bobaljik 1993, Carnie 1993)  
b) **the EPP parameter** (XP vs. X<sup>0</sup>)

Tense is linked to Case and is EPP linked to the Agr, all movement being triggered by [-interpretable] features of I<sup>o</sup>. Combining these two parameters we arrive at 4 possible language types:

(36)	EPP(XP)	Spec,TP
a.	+	-
b.	+	+
c.	-	-
d.	-	+

These combinations have the following properties: (a) will have i) ECs with intransitivity and VP-internal subjects ii) DR effects. (b) will have i) TECs with external subjects ii) DR effects. (c) will have i) VSO with internal subjects, ii) no DR effects, (d) will have i) VSO with external subjects ii) no DR effects. We believe that (a) is English, (b) is Icelandic, (c) is Greek/ Spanish and (d) is presumably Celtic.

If (d) is Celtic, then we can explain why it is never SVO (unlike Icelandic): the subject will never have to move beyond Spec,TP to satisfy the EPP. Additionally, we expect (c) to differ from (d) in that only in (c) word order would be highly sensitive to aspectual restrictions. This is in fact true. Moreover, we expect that different language types will emerge as soon as interactions between the complementizer and the INFL system come into play. A potential candidate would be Arabic.

In Celtic and the Italian dialects of Trentino and Fiorentino,<sup>10</sup> different agreement patterns occur depending on the presence or position of an overt subject respectively. In the Italian dialects, fully referential agreement is used in SVO orders, whereas default, i.e. 3sg agreement is used in VSO orders (cf. 38a-b). In Celtic, default, 'analytic', agreement is used in VSO orders and fully referential one, 'synthetic', in structures lacking an overt lexical subject (cf. 38c-d), i.e. subject/verb agreement and overt subjects are in complementary distribution:

- (38) a. Mario e parla *Fiorentino*  
       " Mario speaks'  
       b. gli e venuto la Maria  
       is come the Maria  
       c. canodd/\* canasant y bechgyn yn yr eglwys *Welsh*  
       sang-3S sang-3PL the boys in the church  
       d. canasant/\*canodd yn yr eglwys  
       cang-3PL / sang-3S in the church

We believe that these agreement patterns do not affect our proposal concerning the nature of the EPP checking. The data from the Italian dialects can in fact be seen as supporting the view that preverbal subjects are topics; as Barbosa (1994) points out in a language where there is a distinction between referential and default agreement it is expected that the former will always occur with dislocated subjects. Agreement is 'inherently' nominal. In NSLs, where fully inflected paradigms exist, it is expected that there is going to be a default form used in specific contexts.<sup>11</sup>

The Celtic paradigm, however, demands a different explanation, which is related to the ability of verbal morphology to check case: we would like to suggest (cf. Roberts and Shlonsky 1994 for similar ideas) that in (c) the verbal head does not check case (it checks the EPP only), thus the subject can overtly occur. On the other hand in (d) the verbal head checks case (and the EPP) thus the presence of an overt DP is not licensed. Case-checking is mediated via incorporation: it has been argued that in Celtic synthetic forms are derived from pronoun incorporation (cf. Taralsden 1993, Roberts & Shlonsky 1994 a.o.) and it has been

<sup>10</sup> Many thanks to Ian Roberts for bringing this 'asymmetry' to our attention.

<sup>11</sup> In a way this is what happens with the Greek examples that show 3sg verbal morphology. A potential and rather speculative explanation for the use of the alternation in these dialects might be the following: the dialects lack object clitic doubling; we have hinted that VSO orders and object clitic doubling are parallel. Now if a language lacks doubling altogether it will not be able to use the doubling forms for the subject either.

claimed, independently, that incorporation is an alternative (to spec-head) case checking mechanism provided by UG (cf. Baker 1988, Rizzi & Roberts 1989, Sportiche 1993).<sup>12</sup> This suggestion does not contradict our claim that agreement/EPP checking is not linked to Case checking; the nominal properties which are responsible for the EPP checking are not derived via incorporation. The only thing that additionally happens is that once the pronoun incorporates into the verbal head, its case is licensed (see footnote 12). Notice that an incorporation approach is more favorable for Celtic since, as expected, -given that Spec-head and incorporation are two alternative mechanisms-, when it takes place, no overt DP in Spec,TP is acceptable.

The question that immediately arises is what happens with the case of the subject in Greek/Spanish/Italian dialects, where, as we claimed, the nominal properties of agreement are not derived by incorporation either. Crucially, NSLs seem to lack both mechanisms for the licensing of Nominative Case, at least overtly. We have shown that Case is weak in NSLs and that there is no case specifier available. With respect to the case of the overt DP, one would have to say one of the following two things: either case is checked covertly (as it happens in English inverted constructions cf. Chomsky 1995) or the GB literature is right in assuming that there is no Case to be checked, since nominal agr absorbs case. If we follow the latter option we are led to assume that Nominative Case is a default case in Greek/Spanish and as such it need not be checked (cf. Chomsky 1995).<sup>13</sup> Nominative Case is not a default case in Celtic though, thus the various patterns.

## 5. Conclusion

In this paper we have examined word order alternations across languages, comparing Greek/Spanish to Germanic. We have shown that SVO orders in the former involve LD, whereas they involve EPP driven movement in the latter. Moreover, VSO orders lack an expletive in NSLs. We argued that in spite of these facts, NSLs respect the EPP and check it via V-raising due to the nominal properties of their verbal agreement morphology. Combining the EPP parameter with the Spec,TP parameter proposed in Jonas & Bobaljik (1993), we arrived at four language types with a specific set of properties, which we were able to identify.

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<sup>12</sup> Presumably the incorporation alternative is chosen as the pronominal element has a clitic like status, hence it must actually incorporate (cf. Chomsky 1995).

<sup>13</sup> This claim can be reinforced by the fact that nominative Case is the case used in dislocation:

- i. o Janis, den ton boro me tipota  
 the-Jonh-NOM NEG cl-ACC stand-1S with anything

Moreover, the agreement features of the DP do not have to be checked, as they are [+interpretable] and as such are visible at LF (cf. Chomsky 1995). Crucially, there is no overt or covert DP movement for reasons of feature checking.

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