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PARAMETRIZING AGR:
WORD ORDER, V-MOVEMENT AND EPP-CHECKING*

The paper investigates a number of asymmetries in the behavior of subjects in Germanic, Celtic/Arabic, Romance, and Greek. The languages under investigation divide into two main groups with respect to a cluster of properties, including the availability of pro drop with referential subjects, the possibility of VSO/VOS orders, the A/A' status of subjects in SVO orders, the presence/absence of Definiteness Restriction (DR)-effects in unaccusative constructions, the existence of verb-raising independently of V-2, and others. We argue that the key factor in this split is a parametrization in the way the Extended Projection Principle (EPP) is checked: move/merge XP vs. move/merge X^0. The first option is taken in Germanic, the second in Celtic, Greek, and Romance. According to our proposal, the EPP relates to checking of a nominal feature of AGR (cf. Chomsky 1995), and move/merge X^0 languages satisfy the EPP via V-raising, as their verbal agreement morphology includes the requisite nominal feature (cf. Taraldsen 1978). Moreover, we demonstrate that the further differences that exist between Celtic/Arabic on the one hand and Romance/Greek on the other are related to the parametric availability of Spec,TP for subjects (cf. Jonas and Bobaljik 1993, Bobaljik and Jonas 1996). In Celtic and Arabic, Spec,TP for subjects is licensed, resulting in VSO orders with VP external subjects. In Greek and Romance, Spec,TP is not licensed, resulting in 'subject inverted' orders with VP internal subjects. In other words, we show that within the class of move/merge X^0 languages, a further partition emerges which is due to the same parameter dividing Germanic languages into two major classes. We demonstrate that combining the proposed EPP/AGR parameter with the Spec,TP parameter gives four language-types with distinct properties.

1. INTRODUCTION

SV(O)/*Expletive*-VS(O) alternations in Germanic (cf. (1)–(2)) have been extensively discussed in the generative literature.

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(1)a.   There arrived a man.   *English*

   b.   A man arrived.

(2)a.   Það lasu einhverjir stúdentar bókina.   *Icelandic*
        there read some   students the book
        Some students read the book.

   b.   Einhverjir stúdentar lasu bókina.
        some   students read the book

Comparable alternations exist in Romance and Greek, except that there is no overt expletive (cf. (3)):

(3)a.   Juan leyo el libro.   *Spanish*
        Juan read the book.

   b.   leyo Juan el libro.

   c.   O Petros pandreftike tin Ilektra.   *Greek*
        Peter   married   Ilektra
        Peter married Ilektra.

   d.   pandreftike o Petros tin Ilektra.
        married   Peter   Ilektra
        Peter married Ilektra

Similar patterns are found in some varieties of Arabic (see Fassi-Fehri 1993, Ouhalla 1988, among others) with the difference that verbs carry weak agreement with postverbal subjects, while having strong/fully specified agreement when the subject is preverbal:[1]

(4)a.   ntaqada iisaa muusaa.
        criticized Iisa Muusa

   b.   al-ʔawlaad-u jaaʔ-uu
        the children came.3mpl

Finally, Celtic languages are uniformly VSO with 3rd person singular/ default agreement in all types of clauses (see McCloskey 1996b). SVO

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[1] Note that similar differences in verbal agreement are found in the Italian dialects Trentino and Fiorentino (cf. Brandi and Cordin 1989).

orders clearly involve topicalization, as indicated by the presence of the special marker *a* (cf. (5b)):

(5)a.　Deir sé gur　　chuir sé síos　é.　　　*Irish*
　　　　says　he COMP put　　he down it
　　　　He says he put it down.

　b.　Mair a　　　　　fwrodd ef.　　　*Welsh*
　　　　Mair REL.PART hit　　　him
　　　　Mair hit him.

It is uncontroversial that SV/*Expletive* VS orders in English have a subject or an expletive in Spec,IP. For other Germanic languages, there are two main proposals in the literature; according to one proposal, the subject and the expletive are in Spec,CP (see den Besten 1977, Holmberg 1986, Platzack 1986, and more recently Vikner 1995, Haeberli 1997, among others); another view holds that the subject and the expletive are in Spec,IP (cf. Travis 1984, Zwart 1997, among others). The second analysis has the advantage that it treats this alternation across Germanic as a phenomenon uniformly related to the EPP, a proposal which we adopt.[2]

Within this latter approach, Jonas and Bobaljik (1993) and Bobaljik and Jonas (1996) (henceforth, J&B 1993 and B&J, respectively) convincingly demonstrate that a number of further properties distinguishing English/Mainland Scandinavian from Icelandic/Dutch/German (e.g., (i) the existence of Transitive Expletive Constructions (TECs) and object shift and (ii) the VP external or internal position of subjects in expletive constructions) relate to a single parameter, namely the availability of Spec,TP for subjects.

There has never been an attempt to put forward a unified analysis for the SVO/VSO alternations without an overt expletive, as exemplified in (3)–(5). There are several reasons for that. First of all, given the diversity of the language groups involved (Romance, Arabic, Celtic, Greek), it is natural that linguists belonging to different traditions have concentrated on different options. Another problem is that SVO orders do not seem to be identical in all these languages. For instance, it is clear that preverbal subjects have A'-properties in Celtic, while this is more controversial

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[2] Note, however, that if one adopts the view that C and I form matching categories (cf. Haider 1988, Müller and Sternefeld 1993, among others), then the two proposals are very similar to each other. What is crucial for our purposes here is that there are two specifier positions external to the VP that could host the subject (see below in text), and that only the higher one is related to the EPP.

for Arabic (cf. Ouhalla 1994, Fassi-Fehri 1993) and other Null Subject Languages (NSLs) (cf. Rizzi 1982, Koopman and Sportiche 1991, and related literature for arguments that the preverbal subject has an A status, Zubizarreta 1992, Solà 1992, Barbosa 1994, Ordoñez and Treviño 1995, among others for arguments that it has an A' status; see Cardinaletti 1995 for an overview of this debate). Finally, while there is a considerable amount of consensus that all instances of VSO orders arise when the verb raises to a position higher than the subject, there is no consensus concerning: (i) the exact position of the verb, (ii) the exact position of the postverbal subject, and (iii) the presence or absence of a covert expletive (cf. McCloskey 1996a).[3]

It is our aim to present a uniform account for the crosslinguistic distribution of SVO/VSO in languages without overt expletives. We base ourselves on the observation that in these languages subjects can always be dropped. We argue that it is precisely this property that distinguishes them from languages with overt expletives. Specifically, we propose that the languages under discussion satisfy the EPP via verb raising because they have verbal agreement morphology with the categorial status of a pronominal element. From this it follows that: (i) preverbal subjects are not in an A-position and (ii) VSO orders never involve a covert expletive. For both claims we provide independent evidence in section 4.

Moreover, we demonstrate that the further differences that exist among the various types of VSO languages are related to the parametric availability of Spec,TP, extending B&J's proposal for Germanic to Null Subject/VSO languages. Specifically, we propose that in a manner similar to Germanic, VSO orders involve VP-internal subjects in some languages (Romance/Greek) and VP external subjects in others (Arabic/Celtic). Finally, we put forward a typology based on the two parameters, the EPP/AGR parameter and the Spec,TP parameter.

The paper is organized as follows. In section 2, we present the subject placement facts in the languages under investigation. In section 3, we outline the aspects of the framework of Chomsky (1995) that are relevant to our analysis. In section 4, we argue that VSO languages lack

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[3] Most researchers working on Romance (cf. Koopman and Sportiche 1991, Zubizarreta 1992, Contreras 1991, Solà 1992) and Greek have argued that VSO orders involve verb movement to Infl and never higher. Varlokosta and Hornstein (1993) claimed that there is generalized I-to-C fronting in Greek VSO orders, but this analysis is not empirically supported. Celtic VSO has been argued to involve either (a) I-to-C movement or (b) only V-movement to Infl. Arguments that subjects are VP internal and arguments to the effect that they are VP external live side by side in the literature (cf. McCloskey 1996b for a detailed discussion).

Spec,AGRSP. In section 5, we develop our proposal which leads to a typology of four language types. In section 6, we discuss some issues raised by the proposed analysis.

2. SUBJECT PLACEMENT FACTS

Let us first establish the factual and descriptive background concerning the word order patterns in the languages under discussion. We focus on NSLs, taking Greek and Spanish as representatives,[4] and we compare them to Celtic, Arabic, and Germanic.

(i) First of all, the SVO/VSO alternation is not restricted to root clauses, but it also occurs in embedded contexts (also non-CP-recursion contexts, cf. Iatridou and Kroch 1992, among others). Example (6) illustrates this point.

(6) *complex NP*
     i idisi   oti (o Petros) episkeftike (o Petros) tin Ilektra.
     the news that Peter   visited   Peter   Ilektra.

     The news that Peter visited Ilektra.

(ii) Moreover, postverbal subjects occur with all eventive predicates, transitives and intransitives alike, as shown in (7):

(7)a. efige o Petros.   *unaccusative*
       left Peter
       Peter left.

   b. epekse o Petros.   *unergative*
       played Peter
       Peter played.

   c. ektise i Maria to spiti.   *transitive*
       built Mary   house
       Mary built the house.

In English, as is well known, inverted subject constructions display an intransitivity constraint (cf. Hoekstra and Mulder 1990, Levin and Rappaport 1995, among others).

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[4] For Catalan cf. Solà (1992), for Romanian cf. Dobrovie-Sorin (1987). In our discussion, we abstract away from Italian as it presents additional complications (cf. Cardinaletti 1994, 1995).

(iii) VS orders in NSLs do not display any DR effects, unlike their counterparts in English/Icelandic/Dutch/French and so forth with an overt expletive. Compare the Greek example (8a),[5] with a strong universally quantified NP in postverbal position, to its English counterpart in (8b):

(8)a.   irthe   to kathe pedi.
        arrived the every child
        Each child arrived.

   b.   *There arrived each child.

DR effects are systematically absent in dialects of Arabic and Celtic as well (see McCloskey 1996a, Fassi-Fehri 1993, among others).

(iv) Finally, in Greek and Romance VSO orders, the subject is VP internal, like English and unlike Icelandic TECs (cf. Jonas and Bobaljik 1993) and Arabic/Celtic VSO orders (cf. McCloskey 1996a, Carnie 1995, Benmamoun 1996, among others). Evidence for this comes from a combination of adverbial and participial placement facts in periphrastic constructions (cf. Alexiadou 1997a). As shown in (9a), the order of constituents in Greek is: *auxiliary, aspectual adverb, participle, light manner adverb* and *subject*. In Alexiadou (1997a), the relative order between the light manner adverb, which marks the left edge of the VP (at least; cf. note 12), and the participle is taken as evidence showing that the participle has moved outside the VP domain. There it is argued that the participle reaches Asp.[6] The subject in (9a) follows both the light manner adverb and the participle. From this we can conclude that the subject stays in its VP internal position (cf. Ordoñez and Treviño 1995 for Spanish). Example (9b), where the subject intervenes between the auxiliary and the participle, is ungrammatical. Note that there is no strict adjacency requirement be-

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tween the participle and the auxiliary since aspectual adverbs like *idhi* 'already' may intervene:

(9)a.   an chi idhi   diavasi$_j$ [$_{VP}$ kala[$_{VP}$ o Petros t$_j$ to mathima]].
      if has already read   well   Peter   the lesson
      If Peter has already read the lesson well.

    b.   *an chi idhi o Petros$_i$ diavasi$_j$ [$_{VP}$ kala[$_{VP}$ t$_i$ t$_j$ to mathima]].

Example (10) (from J&B 1993) shows that in Icelandic, the participle follows the adverb which is taken to mark the left edge of the VP. The participle does not move in Icelandic (cf. Holmberg 1986, among others). Yet, the subject precedes both the adverb and the participle, which means that it is VP external.

(10)   það hefur sennilega einhver [$_{VP}$ alveg [$_{VP}$ lokið
        there has   probably someone   completely finished
        verketninu]].
        the assignment

A similar argument has also been made for Irish (cf. (11) from Carnie 1995, p. 118):

(11)   Tá mé tar éis an teach a^L thógáil.
      be I   after   the house   build
      I have just built the house.

More generally, VS sequences in VSO orders may be interrupted by adverbials in Greek/Spanish, unlike Arabic/Celtic. (12) shows that adverbs cannot intervene between the verb and the postverbal subject in Irish (from McCloskey 1996a, p. 269), while this is possible in Greek (cf. (13); for Spanish cf. Zubizarreta 1992):[7]

(12)   deireann (*i gcónaí) siad (i gcónaí) o paidir roimh am luí.
      say   always   they always   a prayer before time lie
      They always say a prayer before bed-time.

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[7] Generally, aspectual adverbs and light manner adverbs precede subjects in Greek, as the opposition in (ib) vs. (ia) shows:

(i)a.   an diavaze sinithos kala o Petros to mathima.
      if read   usually well Peter   the lesson
      if Peter usually read the lesson well.

(13)   an pandreftike ktes   i Maria ton Petro.
       if   married   yesterday Mary   Peter
       if yesterday Mary married Peter.

The above facts can be accommodated under the phrase structure in (14). The participle moves to Asp^0, the aspectual adverb occupies Spec,AspP, the auxiliary is inserted in T^0 and subsequently, it moves to $AGRS^0$. The subject remains in its VP internal position in Greek/Spanish and English, while it moves to a higher position in Arabic/Celtic and Icelandic:

(14)

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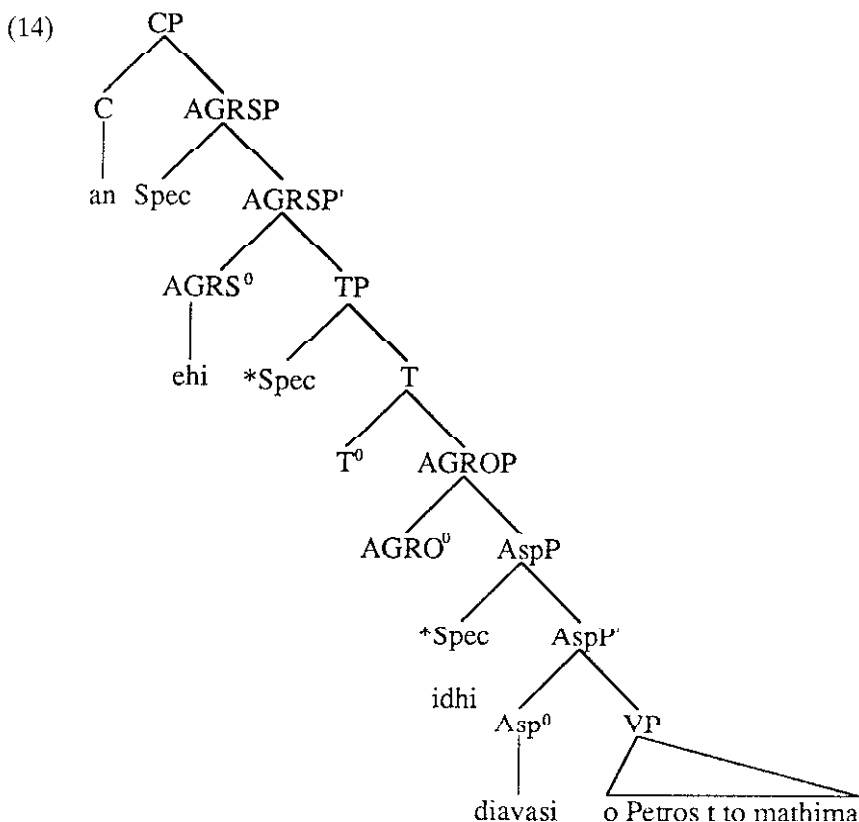
b.   *an diavaze o Petros sinithos kala to mathima.
        if read   Peter   usually well the lesson

In Icelandic TECs, on the other hand, subjects precede aspectual and manner adverbs (cf. Jonas 1996, p. 170).

The properties of VS(O) orders across languages are summarized in Table 1:[8]

Table 1.[8]

	Overt Expletive	DR effects	VP internal subjects	Intransitivity
Icelandic	+	+	−	−
English	+	+	+	+
Greek	−	−	+	−
Celtic	−	−	−	−

In what follows, we argue that the above languages split into two major types, those that project a specifier of AGRSP and those that do not. This parameter relates to EPP checking and is independent of the Spec,TP parameter. In section 5, we show that the combination of the two parameters provides an account for the properties exemplified in Table 1.

3. EPP

We develop our ideas within the framework of Chomsky (1995), which we believe offers the means to reduce the absence of Spec,AGRSP to the Null Subject parameter. We first outline the major points of this research module which are necessary for our purposes.

In Chomsky (1995), the EPP is reformulated as involving categorial D feature checking in I^0. This checking operation can take place in two ways: either (i) by Merging an XP (here the only option being an expletive) or (ii) by Moving an XP (i.e., the subject). Under this reasoning, SVO and Expletive-VS(O) in English/Icelandic are both related to the EPP. Thus, in the aforementioned examples, (1a) and (2a) instantiate the Merge XP option, while (1b) and (2b) instantiate the Move XP option.

In this system, it is claimed that SVO orders are derived from a numeration without an expletive. Expletive constructions are derived from a numeration with an expletive. In the latter case, Expletive Merge is less costly than Subject Move. The two derivations, the one with the expletive and the one without, cannot be compared since in evaluating derivations for economy, only alternatives with the same numeration are considered.

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[8] VP-internal subjects are possible with intransitives and marginally possible in Expletive-VOS orders in Icelandic. However, this does not affect the line of the argumentation in the text (cf. Alexiadou and Anagnostopoulou 1997a, b for discussion). In this table, a negative/positive value for one property sometimes implies a negative/positive value for another property, as we shall see later on. However, the [− − + +] combination could exist. In note 48 below, we suggest that Italian instantiates this combination, which in our analysis implies that Agreement does not check Case-features in Italian.

As Chomsky (1995) proposes, the reference set, which determines whether a derivation is optimal or not, is determined by the numeration (but see Fox 1994, Reinhart 1994, Müller 1997, among others, for different views). Under this reasoning, if a language is shown to lack Move/Merge XP, then this language qualifies as a *no/weak EPP* language.

The question that immediately arises is whether the analysis proposed for English and Icelandic word order patterns can be extended to capture the alternation presented in (3)–(5). In principle, there are two analyses within the Minimalist Program which can account for the above presented facts:[9]

(i) One possibility would be to assume that VS(O) orders involve a *pro*$_{expl}$ in Spec,IP (cf. Rizzi 1982). This would make Greek and Spanish qualify as strong EPP languages. This proposal implies that SVO orders involve EPP driven movement (Case and Agreement being checked as free riders). The crucial assumption behind this analysis is that VS(O) and SV(O) orders cannot be compared as they involve different numerations. The prediction this analysis makes is that Greek and English/Icelandic preverbal subjects will behave alike. As will be shown extensively in the next section, they have different properties, thus providing direct evidence against this option.

(ii) An alternative would be to suggest that VS(O) orders do not involve an expletive *pro*. This would make Greek and Spanish qualify as no/weak EPP languages (Case and Agreement being checked covertly). This analysis implies that in SV(O) orders the subject is in an A'-position. The crucial assumption here is that SV(O) order as Movement to Spec,IP will always be ruled out as a Procrastinate violation, since now VS(O)/SV(O) have the same numeration.[10] Under this alternative analysis, Greek and

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[9] Another 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, and in Branigan (1992). However, the possibility of developing a more restrictive theory should be preferred.

[10] A reviewer raises the question why subject movement to the A'-position in a no/weak EPP language is not ruled out as a Procrastinate violation. If SVO orders were analyzed as involving subject fronting to an A'-position, then they would be triggered by the presence of a strong feature in a C-type functional projection. If this were the case, then the presence of a strong feature in C would always trigger overt movement, and subsequently violate Procrastinate. In this case, however, the two derivations, i.e., the SVO one and the VSO one, could not be compared as they would involve different numerations. Though this could be possible, our proposal is that SVO orders involve Clitic Left Dislocation (CLLD), which Cinque (1990), Iatridou (1991), Demidarche (1991), and Anagnostopoulou (1994) take to be a base-generated dependency licensed by predication. Under a CLLD analysis, the IP contains a pronominal element which functions as a predicate variable (cf. Williams 1980 and others). For the exact status of this pronominal element, cf. the discussion in section 6.3.

English/Icelandic preverbal subjects are expected to behave differently. We argue that (b) is on the right track but, crucially, we propose that EPP *is* strong. In what follows, we first present evidence that in SVO orders the subject is Clitic Left Dislocated and then we argue that VSO orders lack an expletive.

4. Evidence for the Lack of [Spec,AGRSP]

The aim of this section is to demonstrate that Spec,AGRSP as an A-position is not projected in NSLs. As pointed out, in order to do this, we need to show two things: first that preverbal subjects have A'-properties, and second that inverted orders do not involve an expletive *pro*. If we can show that these properties hold for NSLs, then it follows that these do not apply Move/Merge XP in order to check the EPP-feature. Assuming Chomsky's (1995) framework, and specifically some version of Bare Phrase Structure, specifier positions are only projected when a strong nominal feature forces merging or movement of an XP to the functional category carrying this feature; thus, it follows that if a language lacks Move/Merge XP to check the EPP, then in this language Spec,AGRSP is not projected.

4.1. *SVO = Clitic Left Dislocation*[11]

In this section, we present distributional, interpretational, and binding evidence that preverbal subjects in NSLs involve Clitic Left Dislocation (CLLD) of the subject, as has also been argued by Barbosa (1994) for Romance.

(i) *Distributional evidence.* Consider first the distribution of preverbal subjects. In Greek, for which it has been argued that V raises overtly to I° (cf. Rivero 1994, Philippaki-Warburton 1989, Tsimpli 1990, Drachman 1991, among others), there is evidence that SVO orders involve no Spec-head relation between the subject and the finite verb. In (15a) a number of adverbs may intervene between the preverbal subject and the verb.

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[11] For variants of this idea see also Philippaki-Warburton (1985), Tsimpli (1990), Drachman and Klidi (1992), Horrocks (1994), Anagnostopoulou (1994), Alexiadou (1997a, b), among others.

(15b) shows that adverbs cannot intervene between the subject and the verb in French (another V-raising language):[12]

(15)a.   O Petros xtes   meta apo poles prospathies
         Peter   yesterday after from many efforts
         sinandise ti Maria.
         met   Mary
         After many efforts, Peter met Mary yesterday.

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[12] In (15) we give a French example because in French the verb raises, unlike in English. We could construct a minimal pair with English only if we chose an example with an auxiliary which is supposed to raise overtly. However, there are complications. For example, in English (i) is grammatical, contrary to French:

(i)   Eric probably has met Mary.

There are three ways to account for the grammaticality of (i). (a) *Probably* could be a parenthetical in which case the adverb is not really part of the main tree. (b) The auxiliary does not raise as high as usually assumed (cf. Kayne 1989). (c) The subject is topicalized (cf. Belletti 1990). We are inclined to adopt either (a) or (b) because it is quite unlikely that subjects in English undergo 'short-distance' topicalization (cf. the discussion in Lasnik and Saito 1992, p. 110). A reviewer points out that if (a) is adopted for English, nothing could prevent us from analyzing the sequences in (15) as cases in which the subject is in Spec, AGRSP in Greek, and the intervening adverbs are parenthetical. However, Greek permits these sequences with all possible adverbs and it is not the case that all adverbs can be parentheticals. As Williams (1994) points out, only non-restrictive modifiers of the *probably*-type can constitute parenthetical structures. Another reviewer suggests that if (b) is adopted, then the question arises whether Greek could be analysed the same way, i.e., with partial V-raising. However, there is evidence, based on scope, that the adverb in (15a) is itself in a dislocated position, thus higher than AGRSP (see Alexiadou 1997a for details). Moreover, the reviewer notes that similar sequences can be found in embedded clauses in Mainland Scandinavian dialects. In these cases, however, the verb remains in VP-internal position, thus it is not surprising to find adverbs separating the subject from the verb (given that these occupy positions between AGRSP and VP; cf. Alexiadou 1994, 1997a, Cinque 1995, 1997). Furthermore, it can be shown that Greek is a V-raising language by the position of the verb relative to adverbs that occupy specifier positions of projections immediately dominating VP, such as aspectual adverbs in Spec,AspP and 'light' manner adverbs in Spec,VoiceP (cf. Alexiadou 1997a).

(ii)a.   O Petros kthes   meta apo polles prospathies elise   sosta   tin askisi.
         Peter   yesterday after many   efforts   solved correctly the problem

    a'. *O Petros kthes meta apo polles prospathies sosta elise tin askisi.

    b.   O Petros perisi   meta apo polles prospathies sinandise djo fores ti Maria.
         Peter   last year after many   efforts   met   twice   Mary

    b'. *O Petros perisi meta apo polles prospathies djo fores sinandise ti Maria.

We thank Jean-Yves Pollock, Marcel den Dikken, and two anonymous reviewers for discussion concerning this point.

    b. *Jean probablement/hier a recontré Marie

The relative position of preverbal subjects, adverbs, and verbs is straight-forward evidence that the verb and the subject are not within the same maximal projection, if it is assumed that adverbs may not adjoin to the X-bar level (cf. Chomsky 1986, Kayne 1994, Alexiadou 1994, 1997a, Cinque 1995, 1997, among others).[13] Note that other non-focused fronted constituents (objects, PPs) pattern with subjects with respect to this. They can all be separated from the verb by series of adverbs.

(16)a.   ti Maria kthes   meta apo polles prospathies ti
        Mary   yesterday after from many efforts   cl-acc
        sinandise o Petros.
        met   Peter

    b.   sto parko   kthes   meta apo polles prospathies sinandise
        in the park yesterday after many   efforts   met
        o Petros ti Maria.
        Peter   Mary

A related observation is that subjects in Greek can precede comple-mentizers/*if*-clauses (cf. 17a), while this is impossible in English (cf. 17b):

(17)a.   Epidi   o Petros an erthi i Maria tha   figi.
        because Peter   if comes Mary   FUT leave
        Because if Mary comes, Peter will leave.

    b. *because Eric if Mary comes will leave

This is another piece of evidence that SVO orders do not involve a Spec-head relation between the subject and the finite verb.

    Turning to Spanish, we see that the subject *competes* with adverbs for the preverbal position. This is illustrated in (18b) (cf. Zubizarreta 1992):

(18)a.   Temprano salia Julia de casa.
        early   left Julia the house

    b. *Temprano Julia salia de casa

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[13] As pointed out by an anonymous reviewer, this assumption has been disputed (cf. Johnson 1991, Chomsky 1995, among others). However, we believe that the restrictive theory of adverb placement adopted in the text enables us to capture the presented cross-linguistic differences, which would remain unaccounted for if one were to adopt *free*-adjunction.

To account for the contrast in (18), Zubizarreta (1992) proposes that the preverbal position in Spanish is an A'-position which can be occupied by a single element. This is not the case in Greek, which is like Italian (cf. Cinque 1990, pp. 57–58) in allowing for multiple clitic left dislocations of XPs:

(19)   I Maria ton Petro kthes   meta apo poles prospathies ton
       Mary   Peter-acc yesterday after   many efforts   cl-acc
       sinandise sto   parko
       met   in the park

Thus, on the basis of the relative positions of preverbal subjects and adverbs in Greek and Spanish, we can establish for both languages that preverbal subjects are in an A'-position, even though the particular form of the argument is different for each language.

(ii) *Interpretational Effects.* A second type of evidence for the CLLDed nature of the preverbal subject comes from interpretational effects involving QPs and Indefinites (cf. Philippaki-Warburton 1985 for Greek, Solà 1992 for Catalan, and Barbosa 1994 for Romance). As will be shown in detail, quantificational elements and indefinites in a preverbal subject position have unambiguous scope, a property also characterizing CLLDed objects.

Normally, the scope properties that a quantifier has on the basis of its pre-movement position are preserved when it is moved to an A-position (see van Riemsdijk and Williams 1981, Cinque 1982, Haik 1984, May 1985), though new properties may arise as a consequence of its surface position (cf. Chomsky 1980). The Greek preverbal subject position does not behave as an A-position with respect to this. The scopal properties of quantificational subjects in Greek are not preserved when these occur in a preverbal position. In (20a) the indefinite *some student* in a preverbal position has necessarily wide scope over the universally quantified NP in object position, while in the postverbal position (20b) the subject can have narrow or wide scope.[14]

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[14] There is a complication, namely that in the VSO order the preferred reading is one in which the subject takes scope over the object. To force the reverse reading, the VOS order is used, as has also been observed by Ordoñez (1994) for Spanish. However, in VOS and VSO orders both scope readings are, in principle, possible. They only differ in the preferred scope readings.

(20) a.   Kapios fititis   stihiothetise kathe arthro.
         some   student filed   every article

    b.   stihiothetise kapios fititis kathe arthro.

If preverbal subjects in Greek were raised to an A-position, they would preserve their narrow scope interpretation. In English, on the other hand, preverbal subjects are ambiguous. This is expected if they undergo A-movement, for the reasons mentioned above. Note that the subject in (20a) behaves like the CLLDed object in (21).

(21)   kapjo pedi to   eksetase kathe kathigitis.
       some child cl-ACC examined every professor

The fact that the preverbal subject position is unambiguous (i.e., it only permits wide scope readings), while the postverbal position is characterized by scope ambiguity (of the type characterizing the preverbal position in English) is further confirmed by the observation that in cases in which wide scope leads to a nonsensical interpretation of the sentence, the narrow scope interpretation of the subject being the only meaningful one, the presence of a preverbal subject leads to an unacceptable (nonsensical) output, while postverbal subjects are fine:

(22) a. #Enas oreos   andras pandreftike kathe sinadelfo
       A   handsome man   married   every colleague

     mu   persi.
     mine last year

     A handsome man married every colleague of mine last year.

    b.   Persi   pandreftike enas oreos   andras kathe
       last year married   a   handsome guy   every

     sinadelfo mu.
     colleague mine

In (22a), the only possible meaning is one on which one and the same handsome man married every colleague of mine, which is nonsensical in a strictly monogamous society. The problem does not arise in (22b) where it is possible to interpret *enas oreos andras* as having narrow scope with

respect to the object yielding the meaning 'for every female colleague of mine, there was a (possibly) different handsome man that married her'.[15]

Longobardi (1987) has observed that reconstruction of the scope of a quantifier is blocked by strong as well as weak islands. In Rizzi's (1990) and Cinque's (1990) locality system strong and weak islands both block *government chains* (chains involving traces not carrying a referential index), while weak islands do not affect *binding chains* (chains involving pronominal variables and variables carrying a referential index), which are only interrupted by strong islands. As pointed out by Cinque (1990, pp. 12–13), the fact that scope reconstruction is sensitive to both strong and weak islands means that it is not a property of binding chains, unlike connectivity effects for Binding Principles A, B, and C. A prototypical instance of a binding chain is CLLD (cf. Cinque 1990, chs. 1 and 2). And indeed, CLLD does not permit scope reconstruction, while it displays connectivity for binding.

A related point can be made on the basis of the interpretation of indefinites in the preverbal position. Indefinite preverbal subjects in Greek have a strong (partitive/specific) interpretation in (23a), while the most natural interpretation for postverbal subjects is a weak, existential one (cf. (23b)). This is not the case in English, where preverbal indefinite subject NPs are ambiguous.

(23) a.   Ena pedhi diavase to 'Paramithi horis   Onoma'.

   a   child   read   the 'Fairy-tale without a title'

   A certain child/one of the children read 'Fairytale without a Title'.

   b.   diavase ena pedhi to 'Paramithi horis Onoma'.

The observation that the existential interpretation of preverbal subjects in Greek is impossible is consistent with their analysis in terms of CLLD. If

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existential interpretations arise by existential closure applying to VPs (cf. Kratzer 1988, Diesing 1992), and if CLLD is analyzed in terms of a base-generated preverbal subject connected to a pronominal element in the VP internal position, then we can account for the lack of ambiguity by appealing to the lack of Raising. Extending May's (1985) and Diesing's (1992) observations for the reconstruction options in Control predicates as opposed to Raising predicates, we assume that CLLD subjects, like subjects of Control predicates, cannot undergo scope reconstruction.[16] As expected, CLLDed objects cannot have an existential interpretation either (cf. (24)).

(24)   ?Enan anthropo ton   heretise i Maria.
        one   person   cl-ACC greeted Mary
        Mary greeted one of the people.

Note further that if our analysis of preverbal subjects is correct, one would expect that indefinite preverbal subjects obligatorily take wide scope over a modal and negation in NSLs as opposed to English, as it is unlikely that such elements could participate in a covert movement operation that would give them a scope wider than their surface position.[17] That this holds for the Romance NSLs has been extensively shown in Barbosa (1994). As illustrated below, the prediction is also borne out for Greek. (25a) has only the *deontic* reading, while in (25b) the *epistemic* reading is possible. Similarly, in (25c) the subject takes wide scope over negation, while in (25d) both readings, i.e., 'many not' and 'not many', are possible:

(25)a.   Ena pedhi prepi na   parousiasi tin ergasia mexri to telos
          a   child must Subj present   the essay   until the end
          tis vdomadas.
          of the week

    b.   prepi na parousiasi ena pedhi tin ergasia mexri to telos tis
          vdomadas.

    c.   Poli   andres dhen erotettikan ti Maria.
          Many men   not   fell-in love Mary

    d.   den eroteftikan poli andres ti Maria.

A potential objection to the proposal that in SVO orders the subject is CLLDed comes from the observation that indefinites and QPs appear in this position. Assuming that CLLD involves topichood and under the standard assumption that indefinites and QPs are not tolerated as topics (but see Reinhart 1982, Vallduvi 1992), we would not expect them to appear in preverbal position. However, note that CLLD of QPs and indefinite objects is possible. This is shown in the Greek examples (20)– (24). The same holds for Italian object CLLD. Cinque (1986, 1990, p. 15) observes that in Italian, bare CLLDed QPs may or may not license a clitic IP internally, while with non-bare QPs the clitic is required (the same point has been made by Dobrovie-Sorin 1993 for Romanian):

(26) a.   qualcuno (lo) troverano.
          someone him they find

     b.   qualche errore, Carlo *(lo) ha fatto.
          some   error   Carlo it   has made

When the clitic is optional its presence correlates with a difference in interpretation. When the bare QP is specific the clitic is required; when the bare QP is non-specific the clitic is impossible. According to Cinque, bare quantifiers used non-referentially behave like intrinsic operators which can identify a variable at S-structure, while bare quantifiers used referentially and non-bare QPs cannot, so that a resumptive clitic is required. As has been pointed out by Anagnostopoulou (1994, 1997), in Greek it is impossible to have a CLLDed QP without a clitic regardless of bareness, and the (bare, non-bare) QPs are always interpreted as specific. Following Cinque's reasoning, an alternative explanation for the observation that the preverbal subject position in Greek is always specific would be that CLLDed elements head binding chains which are only possible under referentiality defined in Cinque (1990).

A related argument pointing in the same direction comes from Relative Clause Extraposition. As observed in Cinque (1982; and see Barbosa 1994, Kayne 1994 for a more recent discussion), relative clauses marginally undergo extraposition in NSLs, as opposed to English (cf. (27) vs. (28)). As is well known, Extraposition is blocked when the 'head' of the relative clause is a definite NP (cf. (27b)):

(27) a.   A man came that wanted to talk to you.

     b.   *The man came that wanted to talk to you.

(28)   ??Enas andras irthe pu ithele na   su   milisi.
    a   man   came that wanted Subj you-acc talk-3sg

These facts can be accounted for in terms of the *Specificity Constraint* of
Fiengo and Higginbotham (1991). Preverbal indefinites in NSLs are, as
we saw, specific, and extraposition is expected to be degraded.[18]

Summarizing the discussion so far, the Greek preverbal subject position
can be occupied by QPs and indefinites, which do not show scope ambi-
guities. Moreover, preverbal indefinites do not have an existential, weak
interpretation – they can only be partitive, specific.[19]

(iii) *Binding*. So far we have presented distributional and interpreta-
tional evidence in favor of a CLLD analysis for preverbal subjects in
NSLs. There is also binding evidence for that. This comes from a re-
interpretation of the facts known in the literature as Montalbetti's facts,
which are given in (29)–(30). Montalbetti (1984) observed that overt
personal pronouns in NSLs cannot be construed as bound variables, as
shown in the Catalan example (29). However, Solà (1992) and Barbosa
(1994) point out that bound variable construals with overt pronouns are
possible when the pronouns appear in postverbal position as in (30):

(29)   *Tots els estudiants$_i$ es pensen que ells$_i$ aprovaran.
    all   the students   think   that they pass

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[18] Marcel den Dikken (personal communication) points out that there is a problem with the
view that the deviance of (27) reduces to the Specificity constraint. RC Extraposition from
VP-internal subjects which are not necessarily [+Specific] is also excluded when the subject
is a thematic subject.

(i)   *panderftike ena pedi ti Maria   pu den to   ikseres.
       married   a   child Mary acc that NEG cl ACC knew 2sg

(ii)   irthe ena pedi ktes   pu ithele na   su milisi
       came a child yesterday that wanted SUBJ you talk

The contrast in (i) vs. (ii) shows that RC Extraposition is subject to head government
(Chomsky 1986). Thus, an alternative explanation for the ungrammaticality of (28) would
be that the islandhood with respect to RC Extraposition is due to the A'-status of the
preverbal subject in the languages in question.

A *NLLT* reviewer points out that (28) is not ungrammatical for many native speakers of
Greek while they maintain the contrast in (i)–(ii). We agree that this contrast is sharper
than the constrast in (28). This could be taken to indicate that the right explanation for the
facts in (28) is in terms of the Specificity constraint which does not always lead to strong
ungrammaticality. On the other hand, the facts in (i)–(ii) require a structural explanation
in terms of proper government.

[19] Interestingly enough, similar properties characterize the higher subject in *Multiple Subject
Constructions* in Japanese and Hebrew, as has been pointed out by Doron and Heycock
(1996). Scope reconstruction affects are also not possible with the higher subject or Broad
Subject, as these authors label it.

All the students think that they pass.

(30)   tots els jugadors$_i$ estan convencus que guanyaran ells$_i$.
        all   the players   are   persuaded that win   they

All the players are persuaded that they are the ones who win.

Solà (1992) and Barbosa (1994) account for these facts on the basis of the assumption that only postverbal subjects occupy an A-position, thus being able to be construed as bound variables.[20,21]

The facts presented above lead to the conclusion that the preverbal

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[20] The same point cannot be reproduced for Greek, since Greek lacks personal pronouns, and it makes use of demonstratives instead, which have different binding possibilities.

[21] There is another argument in favor of the CLLDed nature of the preverbal subject which comes from its interference with wh-movement in triggered inversion constructions (cf. Torrego 1984, Canac-Marquis 1991, Drachman and Klidi 1992, Horrocks 1994, Anagnostopoulou 1994):

(i)a.   Pjon   (*o Petros) ide (o Petros)?
         whom   Peter   saw Peter
         Who did Peter see?

   b.   Pote (o laos)   apofasise (o laos)   na   andidrasi?
         when (the-people) decided   (the-people-NOM) SUBJ react
         When did the people decide to react?

   c.   Pjon apo tus filus   tu (o Petros) agapai (o Petros) perisotero?
         whom from the friends his (Peter)   loves (Peter)   more
         Which one of his friends does Peter like most?

(ii)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   amesos?
         who from the students the excercise-ACC cl-ACC solved-3sg immediately?
         Which one of the students solved the exercise immediately?

As (i) and (ii) show subjects/CLLDed objects are not allowed to intervene 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 CLLDed.

subject position is an A′-position and that preverbal subjects behave like CLLDed elements.[22] Let us now turn to VSO orders.

4.2. *VSO* ≠ *pro$_{expl}$ VSO*

It is standardly assumed that inverted constructions in NSLs involve an expletive *pro* (cf. Rizzi 1982). This analysis is adopted by Chomsky (1995). However, it is not clear whether there is independent evidence for *Expletive Merge* in such constructions. It is difficult to decide what the correct analysis for such strings would be since we do not see the expletive. In this section we argue against the presence of an expletive *pro* in VSO orders.

In Chomsky's (1995, p. 294) system an element is included in the numeration if it has an effect on the (PF/LF) output. Clearly an expletive *pro* does not have an effect on the PF output. The question is whether it has an effect on the LF output. An argument for the presence of an expletive *pro* in VSO orders would be the presence of DR effects. As

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[22] The arguments presented in the text are valid for other NSLs as well. However, Italian presents further complications. Cardinaletti (1994), in her discussion of preverbal subjects in Italian, argues that these are not CLLDed. However, one could make a point for preverbal subjects in Italian as well. Specifically, Barbosa (1994, 1997) and Pollock (1996) point out that the clitics *en/ne* in French and Italian, respectively, function similarly when it comes to object extraction. However, while *en* cliticization is possible from a preverbal position, *ne* is not (iib). Most importantly, they show that *en* cliticization is not possible when the DP is in a topic position as in (id). They argue that (iib) is parallel to (id):

(i)a.   le premier chapitre de ce livre est intéressant.
       the first   chapter of this book is interesting

  b.   le premier chapitre en est intéressant.

  c.   le premier chapitre de ce livre, il est intéressant.

  d.   *le premier chapitre, il en est intéressant.

(ii)a.   il primo capitolo di questo libro e interessante.

  b.   *il primo capitolo ne est interessante.

On the other hand, as Jean-Yves Pollock (personal communication) points out, Italian speakers do not get the relative scope readings with QPs presented in the text for Greek. Presumably, the differences that exist between Italian and Greek are due to the different properties of left dislocation in the two languages (cf. Cinque 1990 and the discussion above), namely that quantified objects under a non-specific reading can be fronted in Italian, but not in Greek. The issue awaits further research. See Alexiadou (1997b) and Anagnostopoulou (1997) for some discussion on the differences between Greek and Italian preverbal subjects.

known (cf. (31)), DR effects invariably show up with *there* type and *il* type expletives:

(31) a. There arrived a man/*the man/*every man.   *English*

     b. Il est arrivé un homme/*l'homme.   *French*

     c. Er   heeft iemand/ *Jan een huis   gebouwd.   *Dutch*
        there has   someone Jan a   house built

It has been observed that DR effects in unaccusative constructions are systematically absent in NSLs (cf. Jaeggli 1982, Rizzi 1980, Burzio 1981, Chomsky 1981, Safir 1985, among others, and see (32) contra Belletti 1988). In (32), we see that in Greek the postverbal subject can be an indefinite, a proper name, or a strong universally quantified NP:

(32)   eftase   ena pedi/ o Jorgos/kathe filos   mu.
        arrived a   child/George/ every friend mine

        A child/George/every friend of mine arrived.

Moreover, in transitive constructions DR effects are systematically absent in Greek (cf. (33a)), while they are present in Icelandic (cf. (33b)):

(33) a. diavase ena pedi/ kathe pedi to vivlio.
        read   a   child/every child book
        A/every child read the book.

     b. það   lasu einhverjir stúdentar bókina.
        there read some   students   the book
        Some students read the book.

Similar observations hold for Arabic and Celtic.

We take the non-universality of DR effects in unaccusative, unergative, and transitive constructions as evidence that DR effects are *syntactically triggered* in these contexts. For existential contexts, we maintain that DR effects are *semantically* triggered as these contexts assert existence (cf. Keenan 1987 among others). Hence, existential sentences with DR effects exist in all languages, but they are restricted to existential contexts, i.e., *be* and *have* contexts (cf. Keenan 1987, pp. 288, 306). In other words, we do not subscribe to proposals (cf. Hoekstra and Mulder 1990, Moro 1997, among others), according to which DR effects in unaccusative, unergative, and transitive constructions should be treated on a par with DR effects in existential *there* contexts. Instead, we adopt for non-existential construc-

tions Chomsky's (1995) analysis of DR effects. According to Chomsky (1995, pp. 342, 364; and see also Frampton 1995), the expletive in Spec, AGRSP has only the categorial feature [D]. Like D, the expletive takes an NP complement-associate. Assuming that D is the locus of specificity, the fact that in expletive constructions the associate, whether in Spec,TP or lower in the clause, is a nonspecific NP follows. Under this reasoning, we can appeal to the lack of DR effects in NSLs as an argument that there is no expletive in VS(O) orders.

Of course, it could be claimed that the lack of DR effects is related to the overt vs. covert nature of the expletive. However, the null hypothesis is that there should be no difference between overt and covert expletives and, if there was one, this should be a PF-related difference. Moreover, there are languages that show DR effects with covert expletives (Expletive-drop in Germanic; cf. (34) from Sigurðsson 1989, p. 286).

(34)a. *Um nóttina   hafði [e] sokkið báturinn.
        in   the night had   sunk   the boat

   b. Um nóttina   höfðu [e] sokkið nokkrir bátar.
       in   the night had-pl   sunk   several boats

Furthermore, there are languages that do not show DR effects with overt expletives (Arabic; cf. (35) from Huybregts 1996):

(35)   inna-hu fatah-a   l- 'awlaad-u l-   baab-a.
        that-cl   Perf.open-3sg.m the boys   the door

Finally, Greek and Spanish have constructions where we have reason to assume that they are null expletive constructions, as shown in (36a). These are impersonal existential *have* constructions: the verb shows 3rd person singular/default Agreement, DR effects are present, and the other argument has morphological accusative case:

(36)a. ehi anthropus/*kathe anthropo edo.
        has people/   every person   here

   b. irthe kathe anthropos edo.
       came every person   here

If an expletive were present in (36a–b), then we would have to assume that Greek and Spanish have two covert expletives with completely different properties, one yielding DR effects and the other not (unlike French *il*

est arrive un homme 'there has arrived a man' vs. *il y a des enfants* 'there are children here').[23]

That inverted orders do not involve an expletive has also been argued by McCloskey (1996a) for Irish, since Irish VSO orders lack DR effects. Fassi-Fehri (1993, pp. 38–42) argues for Arabic that the expletive analysis for VSO is inadequate.

Before concluding, we would like to address a construction which has been considered as providing the most important argument in favor of the postulation of an expletive *pro* corresponding to English *there*.[24] This argument has been developed in Burzio (1981, 1986) and Chomsky (1981). The observation is that in Raising constructions in Italian, the matrix verb must agree with an unaccusative argument in a complement clause:

(37)   pro$_i$ sembrano [t$_i$ [$_{VP}$ intervenire [$_{NP}$ molti t$_j$]]].
        seem-3pl   to intervene   *many*

The main point here is that this pattern is entirely expected under the hypothesis that there is an expletive *pro* originating in the lower clause and undergoing raising to the subject position of the matrix clause. Specifically, in the system of Chomsky (1981, pp. 266–267), there are two problems with this sentence, if no expletive *pro* is present. First, the agreement between the matrix verb and the embedded postverbal NP is problematic. If there is no expletive *pro*, we have to assume that the verb agrees directly with the postverbal NP. However, in such cases the NP in question can be arbitrarily far away from the inflected verb given an arbitrarily long sequence of raising verbs. Direct verb agreement would thus, implausibly, imply that the verb agreement rule is not subject to any locality conditions. If, on the other hand, an expletive *pro* is present, then there is a chain between the expletive and the postverbal argument. The apparent unboundedness with raising verbs then has an obvious explanation. It is due to the fact that the non-argument subject undergoes raising. Second, the postverbal NP is not able to receive Case within the embedded clause, since there is no AGR in the infinitival. In (37) above, *pro* t$_i$, and NP form a chain, a fact that makes it possible for it to be assigned Case, which in turn is inherited by the postverbal NP.

In the present system, the presence or absence of a *there*-type expletive is not crucial for Case and Agreement, only for the EPP, which is dissociated from both. Whether or not an expletive is present has consequences

only for the EPP checking since there is an option, in fact an obligation, for the subject to raise covertly to a position where it is able to check its own Case features, the Case features of T, and the [−interpretable] phi features of the verb. Given that this position can only be the higher Infl, and under the assumption that the pattern of subject-verb agreement reflects the presence or absence of covert raising (cf. Chomsky 1995, p. 274), there will be no other option than the agreement pattern illustrated in (37). Thus, the fact that Italian and English pattern alike is expected regardless of whether or not there is an expletive.

To summarize, so far we have argued that (i) SVO involves LD and (ii) that VSO orders lack an expletive. That SVO involves LD does not necessarily imply that VSO lacks an expletive, since one can always assume that in SVO a null resumptive *pro* is present in [Spec,AGRSP]. However, that VSO orders lack an expletive necessarily implies that SVO orders involve CLLD within Chomsky's (1995) system. Lacking an expletive, the language qualifies as a no-EPP language and for this reason, SVO cannot be analysed as EPP-driven movement.[25]

4.3. VSO Orders Are Not TECs

There is a final theoretical issue that we need to address more explicitly before proceeding to our proposal. Jonas and Bobaljik (1993) argue that the following descriptive generalization holds. "Subjects inverted orders with transitive predicates can only exist in languages which license Spec,TP as an intermediate landing site for the subject. Languages with an active Spec,TP are the only ones to permit object shift." Thus, Icelandic licenses Spec,TP, permits TECs, and has object shift, while English does not license Spec,TP, does not have object shift, and shows an intransitivity constraint on inverted orders.

Everything else being equal, we would expect VSO languages either (i) to license Spec,TP permitting TEC-VSO orders and object shift or (ii) not to license Spec,TP, showing an intransitivity constraint on inverted orders. However, while Celtic and Arabic show evidence for VP external subjects (see section 2) and object shift (cf. Bobaljik and Carnie 1992), Greek and Spanish are like English with respect to the position of subjects in participial constructions (cf. (9)) and the impossibility of object shift/scrambling

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[25] A reviewer raises the question whether a language can lack an expletive, thus lacking merge XP, but still have move XP, thus not qualifying as a no/weak EPP-language. This language can in principle exist. It would lack expletives, and if it had VSO orders, these would be clear cases of V-to-I-to-C movement.

of the Germanic type (cf. Alexiadou 1994, 1997a and b). Hence, in Greek and Spanish Spec,TP as a subject position is not licensed, and thus there is only one external specifier position for subjects (if any). Yet VSO orders exist.

From this we conclude that Greek and Spanish VSO orders are not TECs and, moreover, that subject-licensing in Greek/Spanish is subject to different conditions than in English/Icelandic/Celtic/Arabic.

5. THE PROPOSAL

From our discussion so far, we are led to propose either of the following two things: NSLs are either (i) no/weak EPP languages or (ii) strong EPP languages where the EPP feature is not checked by Move/Merge XP but by a different mode, namely V-movement. Here we explore option (ii) because under option (i), the correlation between the Null Subject Parameter and the post-verbal subject position cannot be expressed. Hence, our approach does not depart from Rizzi (1982) in the sense that *pro-drop* and *free inversion* are viewed as manifestations of the same core parameter. If one were to conclude, on the basis of the presence of VSO orders, that VSO languages are no/weak EPP languages, then the fact that they also happen to be pro-drop languages would be accidental. Our proposal makes the strong claim that VSO languages are also pro-drop languages, because only pro-drop languages have the option to check the EPP feature through the verbal agreement morpheme. In other words, we do not expect to find a VSO language which does not have the option of dropping subjects. Under the no-EPP alternative, we can see no way of connecting the two properties.

5.1. *GB Meets the Minimalist Program*

Capitalizing on a central intuition in the GB literature about NSLs, namely that they have (pro)nominal agreement (cf. Taraldsen 1978, Rizzi 1982, Chomsky 1981, Safir 1985, among others), we propose that verbal agreement morphology in these languages includes a nominal element ([+D, +interpretable phi-features, potentially +Case]; cf. also Alexiadou and Anagnostopoulou 1997c). This means that the verbal agreement affixes in, for instance, the Greek paradigm (38b) have exactly the same status as the pronouns in the English paradigm in (38a):[26]

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[26] See also Philippaki-Warburton (1987, 1989) who has proposed that subjects in Greek are included in the morphology of the verb.

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

By hypothesis, EPP-checking is D-feature checking in a non-substantive category by a [nominal] lexical category. Assuming that verbal agreement has the categorial status of a pronoun in pro-drop languages, V-raising checks the EPP-feature the same way XP-raising does in non-pro-drop languages. Since agreement morphology is the part of the verbal morphology which has pronominal character, it is natural to assume that AGR is the non-substantive category in question. As we shall see in section 5.3, Celtic and Arabic strongly support the view of AGRSP as the locus of EPP-checking.

Note that the function verbal agreement affixes perform in Greek is performed by verbal agreement plus subject clitics in Trentino/Fiorentino (cf. Brandi and Cordin 1989). As is well known, subject clitics in these Italian dialects are obligatory, even though the verbal morphology is quite similar to that of Italian. Subjects in Trentino and Fiorentino freely occur in postverbal position and there are no DR effects (cf. (39d)):

(39)a. *(tu) parli.   *Fiorentino*

    b. Mario e parla.
        Mario speaks.

    c. *Mario parla.

    d. gli e venuto la   Maria.
        is come   the Maria

Hence, these dialects qualify as NSLs in all relevant respects. In our discussion so far, we have not considered the X^0 Merge option for EPP-checking. Potentially, clitics in Trentino and Fiorentino instantiate this option. More generally, it could be that, depending on one's view on clitic placement, the main difference between clitics and agreement affixes is that the former are merged directly on a functional node, while the latter occur on the lexical verb.[27]

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[27] Note that in the Trentino/Fiorentino case, V-raising is not directly triggered by EPP checking but rather because the clitic needs a host, i.e., it could be interpreted as a way to overcome the Stray Affix Filter. An anonymous reviewer points out that in antisymmetry proposals (cf. Kayne 1994, Terzi 1997) clitics cannot adjoin to V. However, the verb-movement in the Trentino/Fiorentino case is triggered by pure morphology and is perhaps done at PF, i.e., after the application of the Linear Correspondence Axiom. Our view of clitics occurring on the lexical verb, as in Greek, is very close to Borer's (1984) analysis of

This treatment of Trentino/Fiorentino subject clitics does not carry over to French subject clitics. French subjects are fully parallel to English subjects, i.e., DR effects are present (cf. (40d)) and French qualifies as an XP-EPP language:

(40) a.   Il   mange.
          He eats.

     b.   Jean, il mange.
          John, he eats.

     c.   Jean mange.
          John eats.

     d. *Il   est arrivé Jean.
          expl is   arrived John

This asymmetry between Trentino/Fiorentino and French can be treated in terms of the assumption that there two types of clitics (cf. Holmberg 1986, Cardinaletti and Starke 1995, among others): those having XP properties (i.e., the French type) and those having X^0 properties (i.e., the Fiorentino/Trentino type). Only Fiorentino and Trentino clitics have the same effects as agreement affixes.

Our proposal has two implications: (i) EPP is universally strong: it is a formal property of sentences that relates to the PF interface. What is parametrized is the mode of EPP checking: Move/Merge XP vs. Move/Merge X^0.[28] Thus, we are led to adopt a more restrictive view on strength for these cases. (ii) The need to check the strong D feature of

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them as being overt manifestations of (Case)-features. Thanks to Marcel den Dikken, Caterina Donati, and one anonymous reviewer for discussing this point with us.

[28] Hoekstra (1994) offers a structural configuration in which checking of AGR features via head movement is possible. In his system there is no distinction between adjuncts and specifiers. The verb 'adjoins' to AGR^0 and this creates a spec-head configuration.

Ouhalla (1994) has reached a similar conclusion to the one presented here in terms of his identification theory. 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 identify the features of AGRSP. NSLs do not have to insert an expletive because the features of AGRS are identified in terms of agreement morphology.

AGRSP (EPP) triggers V-raising in NSLs.[29] If the view that EPP is universally strong is on the right track, then it is not an accident that EPP relates to AGR. As argued extensively in Chomsky (1995), there is no reason for AGR to exist, unless it is strong, given that AGR is not relevant for the LF interface unlike all other functional categories.[30]

The checking of EPP by movement of a head rather than a noun phrase is independently argued for in Svenonius (1996) for verb-particle constructions and in Pollock (1996) for Italian inverted constructions. In Pollock's proposal, however, the trigger for V-movement is the need to check the [−interpretable] Case feature of the nominal agreement of the verb. Thus, EPP checking is parasitic on Case checking.

Under our proposal, the following question arises.[31] Given that the EPP-feature can be in principle checked by the verb and also by the subject NP, why is it that the first option is taken? We would like to propose that the reason is Economy. Overt verb-movement can be conceived of as 'less costly' in the following sense. Since verb movement to AGRS^0 gives a head-adjunction structure, which is not strictly to the root, it does not extend the phrase marker. Thus, it should be preferred for reasons of Economy of Projection.[32] Since the checking relation is established in a head-head configuration, the projection of a specifier, which

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[29] Anders Holmberg has pointed out to us that, between the person and number features associated with agreement, person might be the crucial one for the purposes of the EPP. Specifically, he has drawn our attention to Falk's (1993) observation that there is an interesting little quirk in the evolution concerning the loss of V-to-I movement and the emergence of expletives in Swedish. In particular, there was a period when there was number agreement but no person agreement on the verb, and when the verb still moved to I except when the subject was a personal pronoun. We believe that evidence in favor of this proposal comes from partial vs. full agreement in Arabic. In Arabic, SVO and pro-drop constructions show full agreement for person and number, while VSO orders are characterized by default agreement for person and defective agreement for number. Under our proposal, VSO orders in Arabic involve V-raising to AGRS for EPP-reasons and Subject movement to T for Case reasons. In pro-drop constructions, on the other hand, verbal agreement checks both Case and the EPP. Since V-agreement does not check Case in VSO orders, it is expected, under this suggestion, that the verb will only have person features, which are the only ones related to the EPP.

[30] An anonymous *NLLT* reviewer suggests that our claim can be interpreted as implying that phonetically null DPs cannot license the EPP feature. The reviewer raises the question of why phonetic content should be relevant for the licensing of the EPP feature. Note that this could be made to follow under the proposal that EPP relates to the PF interface: PF can recognize only elements with phonetic content and therefore it is natural to suggest that null elements cannot check the EPP-feature. For some semantic arguments that the EPP is related to the PF-interface see Sauerland (1997). At this stage, however, this proposal is too strong, because it requires a reanalysis of expletive-drop phenomena in Germanic languages which is beyond the scope of the present paper.

[31] We thank Riny Huybregts for raising this question.

[32] Here we use the term differently from Speas (1994).

extends the phrase marker, is not necessary.[33] The choice arises only in languages with pronominal agreement.

To conclude this section, some remarks on the nature of the EPP-feature are in order. As is well known, in Icelandic the expletive *það* alternates with fronting of adverbs, particles, participles or infinitives (stylistic fronting) in sentences with low subjects. Holmberg (1997) has argued that the incompatibility between stylistic fronting and high subjects as well as the alternation with *það* is best understood if stylistic fronting actually moves material into a position where it satisfies the EPP-feature (crucially a Spec-position). If this is correct it suggests that checking of the EPP feature does not require a specific category or a special set of formal features (e.g., those associated with pronouns or AGR). This might be a problem for our analysis because stylistic fronting also applies to infinitives and participles, suggesting that verbs may check the EPP feature. When this is combined with the present proposal, it could follow that the verb adjoined to $AGRS^0$ should satisfy the EPP feature regardless of the properties of its agreement affix, that is, any language raising the V overtly should be able to be VSO contrary to fact.

There seems to be crosslinguistic evidence that the EPP is not satisfied only by subjects. A particularly clear case is locative inversion which occurs in many languages, English being one of them, and it even triggers agreement in some Bantu languages (see Bresnan and Kanerva 1989). This suggests that the EPP feature can be checked by more categories than proposed in Chomsky (1995) and assumed here. This is the line adopted in Collins (1997, pp. 27–29). This, however, does not mean that *anything* can check the EPP feature, at least not in languages that do not have stylistic fronting of the type described here. Hence, a much more careful study of EPP phenomena across languages is required before knowing exactly which are the candidates for EPP checking. One possibility would be to suggest that stylistic fronting in Icelandic requires movement of a predicate to the EPP position, which crucially undergoes XP movement as Holmberg (op. cit.) has argued. If this is correct, then stylistic fronting involves predicate XP raising, in a sense the reverse of

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[33] This notion of Economy does not occur in Chomsky (1995) whose main Economy principle is Procrastinate. Procrastinate favors *covert* movement over *overt* movement, because the former is less costly as it involves pied piping less material than the latter. In our case the choice is between moving an XP or a head *overtly*, where both the head and the XP have the option of checking the EPP feature. Our proposal is that head movement is preferred for the reason suggested in the main text. In a Move XP language like English, the subject must move for EPP checking, because the checking relation cannot be established in a head-head configuration as a result of the fact that the verb lacks the relevant features. Hence, no issue of Economy arises.

what is understood to be the classical Extended Projection Principle. The crosslinguistically more common cases of locative inversion could also be accommodated under this approach, if locative inversion is actually a subcase of predicate inversion, as has been argued especially by den Dikken (1995), and others. Interestingly, there are cases of predicate raising in Celtic languages, which have been analyzed as instances of X^0 movement in Carnie (1995). The X^0-movement analysis is supported by independent evidence presented in de Graff (1997). Note now that if we adopt Holmberg's analysis of stylistic fronting as being uniformly XP movement in Icelandic and Carnie's analysis of predicate raising as being uniformly X^0 movement in Celtic (under Carnie's derived notions of 'X^0- vs. XP-ness' building on Chomsky's Bare Phrase Structure), then the facts fit under our proposal. The parameter we propose offers the option to Move/Merge XP or to Move/Merge X^0 to check the EPP, and, in principle, it could hold independently of the nature of the feature involved.[34]

5.2. *Pro-drop and Verbal Morphology*

In the previous section, we proposed a strong correlation between the availability of pro-drop and the availability of VSO which we analysed in terms of EPP-checking via V-raising. We suggested that this correlation is due to the fact that pro-drop languages have $[+D]$ verbal agreement. In this section, we spell out our proposal.

Following and modifying Rohrbacher (1994)[35] and Speas (1994, 1995), we distinguish verbal agreement into two types: strong and weak. Strong agreement means that each agreement affix has its own individual listing in the lexicon, thus being available to the computational component. Weak agreement means that inflectional elements do not have independent lexical entries and they are inserted into syntactic derivations already attached to their host.

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[34] However, that would lead us to partially reconsider the deep property being responsible for the proposed parametrization, it could not simply be the $[+D]$ feature. Furthermore, note that if this line of thinking is on the right track, then the V to AGRS^0 raising that we propose is a case of subject raising, while the cases discussed here are instances of predicate raising; presumably the two cannot be fully collapsed. Thanks to an anonymous *NLLT* reviewer for raising these issues.

[35] Rohrbacher uses the distinction between weak and strong affixes to derive the difference between V-to-I raising and non-V-to-I raising languages within Germanic. See also Platzack and Holmberg (1989), Roberts (1993), and Vikner (1995) for similar ideas. Rohrbacher further collapses the possibility of pro-drop with V-to I. We crucially differ from Rohrbacher in not considering Germanic V-to-I languages as having strong agreement because then we would expect them to qualify as VSO/*pro-drop*. For criticism of Rohrbacher's proposal see Speas (1995).

Since strong agreement affixes have separate lexical entries they are independent, clitic-like pronominal elements, thus having a categorial feature [ı D].[36] This means that the verbal root and the [ı D] affix are both in the numeration, independently from one another. In principle, there are two options for the [+D] affix. (i) If it is merged with the verbal root at an early stage, i.e., in the internal domain, the verb will project and the complex element in turn will be merged with some larger structure.[37] (ii) Alternatively, the [+D] affix can be merged directly on an AGR head and when the verb moves to AGR, AGR projects (cf. Chomsky 1995, pp. 245, 256f.). Potentially, the difference between the two options can give us the difference between agreement affixes and clitics (cf. the differences between Trentino/Fiorentino and Greek discussed in the previous section). In languages with weak agreement, agreement affixes are not independent and therefore they cannot be characterized as having an independent categorial feature. Note that one can view phi features as semantic features associated with particular morphemes, either pronouns/NPs or affixes. In strong agreement languages, affixes, being pronominal, have the semantic features which, in languages with weak agreement, are associated with pronouns. This means that strong agreement is [+interpretable], while weak agreement is [−interpretable]. Hence, the former does not need to be checked.

The exact morphological property correlating with the availability of *pro-drop* has never been identified. There is a long-standing intuition that there is a relationship between *rich* agreement morphology and the licensing of null arguments (cf. Taraldsen 1978, Rizzi 1986), which, however, has a number of counterexamples discussed in Jaeggli and Safir (1989) and Speas (1995). For instance, there are languages like German which have relatively rich agreement but do not allow null subjects and languages like Chinese and Japanese which lack person and number agreement but allow null subjects.[38]

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[36] In a pre-minimalistic framework, Contreras (1991) has proposed that AGR can be parametrically [±lexical]. When it is [+lexical], as in Spanish, it does not project a specifier. Needless to say, this proposal is very close to ours.

[37] We would like to thank an anonymous *NLLT* reviewer for suggestions concerning this option.

[38] Note that Jaeggli and Safir's (1989) Morphological Uniformity Condition, according to which null subjects occur in the context of either very rich or no agreement at all, has clear counterexamples as well (though it can account for the presence of null subjects in Japanese and Spanish). For example, Swedish seems to have a uniform paradigm, but does not allow for null subjects.

Speas (1993) modifies Jaeggli and Safir's condition by suggesting that a language has strong agreement if it has an overt affix for every person and number. However, even this generalisation cannot account for languages displaying an identical behavior, though differing

Our proposal holds that there is no absolute correlate between richness of morphology and the availability of strong agreement in the sense of pro-drop (see also Speas 1995).[39] We simply have to stipulate that in certain languages, agreement affixes have independent entries, thus qualifying as [+D]. To decide whether or not verbal agreement is [+D], all we have to do is look at the syntactic evidence that we have presented throughout this paper: that is, availability of pro-drop, availability of VSO orders, lack of DR effects. The richness of morphology is just an additional piece of evidence pointing to the same conclusion. This is relevant for languages displaying two agreement paradigms, one fully specified for person and number and one completely unspecified, as is the case in synthetic and analytic agreement patterns found in Celtic languages. The fully specified forms (synthetic) cannot co-occur with NPs and the completely unspecified (analytic) ones have to co-occur with NPs. Yet, both synthetic and analytic forms qualify as [+D] under our analysis. For synthetic forms, the reason is that they license pro-drop. For analytic forms, the reason is that they display VSO orders without DR effects which is an instance of EPP-checking via V-raising.[40]

This type of approach makes the prediction that infinitivals in uniform move/merge X″ languages, that is pro-drop/VSO languages, will be [+D], while in languages checking the EPP via Merge/Move XP they will not be [+D]. As a result, infinitivals will not behave differently with respect to V-raising in these languages. According to Pollock (1996), this is exactly

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with respect to person and number uniformity. For example, German paradigms are uniform and Yiddish paradigms are not, but both do not permit null subjects and they both allow for null pleonastics in certain contexts (cf. Rohrbacher 1994 and Speas 1995 for discussion).

[39] As pointed out to us by Alec Marantz (personal communication), any theory that proposes that the pro-drop parameter is a result of pronominal agreement, expects that there be a correlation between pro-drop and richness of morphology, since independent pronominal elements also tend to express overtly phi feature specifications, thus being rich morphologically. However, this correlation does not translate into an absolute property visible in the phonetic form, and for this reason there will always be counterexamples to any attempt to formulate a more specific proposal.

[40] This raises the question of what happens with partial pro-drop languages such as Hebrew and Finnish. It is not clear that the reasoning concerning Celtic languages can be extended to Hebrew which presents the additional complication that it has both verb raising and lowering (cf. Borer 1995). The Finnish facts discussed in Holmberg and Nikanne (1997) seem to be problematic for our proposal. However, Finnish is partially pro-drop and thus the syntactic evidence found in the language is non-uniform; hence, we can draw no straightforward conclusion about Finnish at this point. The issue awaits further research.

As is obvious, we do not assume that German is *semi* pro-drop, in other words that expletive drop falls under the pro-drop parameter, because, for us, verbal agreement in German is [−D]. This puts us in agreement with Speas (1995) and in disagreement with Rohrbacher (1994).

what happens in Italian and Old French infinitival constructions, as opposed to English. In Italian and Old French, long verb-movement of the infinitival is possible (cf. (41) below from Pollock 1996), as only in these languages infinitivals are marked [+D], being thus able to check the EPP feature in their clause.

(41)   car   elle commence à ne le chercher pas.
         because she begins   to not it look for not

5.3. *A Typology*

Our proposal leads to the conclusion that there are two parameters reg-
ulating word order variation in the IP domain: (i) the EPP/AGR para-
meter (XP vs. X^0) and (ii) the Spec, TP parameter (cf., J&B 1993, Carnie
1995). These parameters lead to a typology based on the four possible
combinations which are illustrated in the table below:

TABLE 2

	EPP (XP)	Spec,TP	
a.	+	−	English
b.	+	+	Icelandic
c.	−	−	Greek
d.	−	+	Celtic languages (Irish, **Welsh**); ARABIC

There are four possible language types, all of which are instantiated. The
properties of the languages in question have been described in section 2
and have been summarized in Table 1. Language type (a), i.e., English,
has (i) Expletive Constructions with intransitivity and VP-internal sub-
jects, (ii) DR effects, (iii) EPP-related SVO, (iv) non pro-drop, and (v)
no object shift. Language type (b), i.e., Icelandic, has (i) TECs with VP
external subjects, (ii) DR effects, (iii) EPP-related SVO, (iv) non pro-
drop, and (v) object shift. Language type (c), i.e., Greek, has (i) VS(O)
with VP internal subjects, (ii) no DR effects, (iii) non EPP-related SVO,
(iv) pro-drop, and (v) no object shift. Language type (d), i.e., Celtic
languages and dialects of Arabic, has (i) VSO with VP external subjects,
(ii) no DR effects, (iii) non EPP-related SVO, (iv) pro-drop, and (v)
object shift.

   If we are correct in suggesting that (d) is Celtic/Arabic, then we can
explain why in Celtic languages SVO orders are never attested, even
though the subject raises to Spec,TP, as in Icelandic TECs. The subject
never has to move beyond Spec,TP to check the EPP feature. Indeed, as

mentioned, Celtic SVO orders are necessarily Topicalization structures.[41] Under our approach, Celtic languages have a mixed system. They have X^0 movement to $AGRS^0$ for EPP and also XP (subject) movement due the Spec,TP parameter. As has been argued in Bobaljik and Carnie (1992), Irish has object shift which relates to the Spec,TP parameter.

Under a layered specifier approach, according to which double EPP languages necessarily have two specifiers both relating to a strong N feature in T^0, it is not clear why Irish and Icelandic behave alike with respect to VP external subjects and object shift, but not with respect to Multiple Subjects (MS). Under our approach, the EPP and the Spec,TP parameter are independent from one another. The AGR parameter is related to the mode of D feature checking and has to do with the EPP. The Spec,TP parameter is related to the strength of the N feature located in T which has to do with Case. In Irish, the EPP parameter dictates that V-raising checks the EPP features. Hence, there is no expletive Merge, i.e., no MS constructions, and there are no DR effects, unlike Icelandic and like Greek. The Spec,TP parameter, on the other hand, requires that the specifier of T be projected and therefore the subject raises to T, like Icelandic and unlike Greek.

6. FURTHER ISSUES

In this section, we address some issues arising from our discussion, and we suggest some answers to them.

6.1. *V-raising in Non-*Pro-Drop *Languages*

The first issue is the trigger for V-raising in non-pro-drop languages like Icelandic and French. This is a potential problem for our proposal which maintains that the trigger for V-raising is the EPP. The question is, do

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[41] A potential problem for this proposal arises with non-finite constructions in Celtic languages which have SOV orders where no V-movement is attested. However, there seems to be strong evidence that these are nominal constructions (cf. Rouveret 1994), thus considerations concerning the EPP do not apply.

Another potential question, raised by an anonymous reviewer, is whether the [−D] affix in Celtic languages could also be [+N], in the sense of checking the Case-related features on T. This issue arises only for languages which have TP distinct from AGRSP. We would like to suggest that in Irish, when the verb appears with the default agreement, it does not check case (it checks the EPP only), thus the subject can overtly occur. On the other hand, when the verbal head appears fully specified for phi-features, then it checks Case (and the EPP), thus the presence of an overt DP is not licensed (see also note 29). The reason why the option of checking both features by V-movement arises only in the absence of a full DP relates to the clitic doubling parameter discussed in detail in section 6.2.

we expect V-movement to also occur in languages checking EPP via Merge/Move XP? And when such a movement occurs, what is the trigger for it?

We have proposed that pro-drop languages like Greek and Spanish are necessarily V-raising languages. If there were a counterexample to this correlation, it would falsify our proposal. Speas (1995) studies a number of pro-drop languages and concludes that there are no counterexamples she is aware of. However, there are V-raising languages which are non-pro-drop, non-VSO. One such case is French.[42,43] This means that the

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[42] The same holds for Icelandic and Yiddish. However, these languages are also V2 languages and it might be the case that V2 is a completely different phenomenon. For this reason, we confine ourselves to French. See the last paragraphs of section 5.1.

[43] Note that French is problematic for another reason: it permits transitive inverted orders. In Alexiadou and Anagnostopoulou (1997b), we deal extensively with these cases. As is well known, in French Stylistic Inversion (cf. Kayne and Pollock 1978, Deprez 1990, Watanabe 1996, and references therein), the subject of transitive predicates remains VP internal:

(i)   Je me demande quelles pommes achètent les consommateurs.

         I   wonder   which apples buy   consumers

However, the presence of an accusative object VP-internally renders these sentences ungrammatical:

(ii)   *Je me demande quand achèteront les consommateurs **les pommes.**

         I   wonder   when will-buy   the consumers   the apples

The sentences become grammatical again if the object is moved out of the VP by either wh-movement (ii) or cliticization (iiia) or it is present as a PP (iiib) (cf. Watanabe 1996, Collins and Branigan 1997):

(iii)a. Tes cours, à quelle occasion **les**   ont   manqués   un grand

         your course at which occasion them-have been absent from a   great

         nombre d'étudiants?

         number of students

     b. ?Quand écrira   ton frère   à sa petite amie?

         when   will write you brother to his little friend

In Alexiadou and Anagnostopoulou (1997b) we argue that the above facts are subject to the following generalization: subject-inversion where the subject is VP-internal is not possible when there is an object inside the VP unless this object is a PP. We propose that this reduces to a constraint against covert movement of both subject and object and we formulate this constraint in terms of Chomsky's (1995) theory of Attract.

The fact that the subject may remain VP-internal when a wh-element is fronted in C suggests that there are interactions between the EPP-requirement of C and the EPP-requirement of I. Presumably in languages like French it is sufficient to check the EPP-feature of C under certain conditions. There are several ways to implement this. One possibility is to employ a mechanism of selection as in Watanabe (1996). Another option is to suggest that in stylistic inversion there is I-to-C movement (cf. Rizzi and Roberts 1989, Rizzi 1991), and when the wh-element moves to C it checks both the EPP feature of C and that of I. See also Haider (1988) and Müller and Sternefeld (1993) for other alternatives (cf. note 2).

relation between pro-drop and V-raising is not a biconditional. A language that is pro-drop must be V-raising, but a language that is V-raising is not necessarily pro-drop. Note that nothing we have said so far excludes the possibility that the strong V-features of INFL attract the verb. We propose that this is what happens in French. To constrain the system, we suggest, furthermore, that V-raising in non-EPP related cases is triggered by strong V-features in T, while V-raising in EPP-related cases is triggered by strong D-features in AGR. Under this view, AGR has only D features while T has both V and N features, the latter being necessary for Case-checking. When T with strong V features is merged, these features must be checked before T is embedded under AGR. Hence, the verb in French raises to T before AGR is merged. Now we need an extra trigger for the complex $[_T$ V-T$]$ to move to AGR. We propose that this trigger is the N (Case) feature of T, which is strong. Since French does not license Spec,TP for subjects, this N feature cannot be checked by move XP to T. Hence, the checking domain of T must be extended by raising the V-T complex to AGR where an NP is moved/merged, checking the D feature of AGR and the N feature of T simultaneously.

This particular analysis of V-raising in French has a desirable consequence. The assumption that the N(Case) feature of T is strong, triggering further movement to AGR, provides an immediate explanation for the fact that the expletive *il* in French must check Case and not only the EPP feature (as is argued in detail in Chomsky 1995, p. 274): the N features of T must be eliminated before Spell-out and *il* is the only element that can do that.[44] Note that we cannot appeal to the pronominal character of *il* (as opposed to the locative character of *there*) in order to account for the fact that *il* agrees with the verb and checks Case. The German expletive *es* is also pronominal, yet it does not agree with the verb and it does not check Case. In the case of German, this is so because of the Spec,TP parameter which always forces a derivation in which the subject moves overtly to T to check Case.

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[44] An obvious problem raised by Chomsky's analysis for French expletive constructions concerns the Case feature of the associate NP which cannot be checked. The only account which is compatible with this analysis is Belletti's (1988) partitive case which can be viewed as an instance of a [−interpretable] Case and, thus, does not need to be checked (cf. Lasnik's 1993 analysis for expletive constructions in general). Another alternative would be to assume that the NP has default Case which also need not be checked.

6.2. *Agreement Patterns*

As already pointed out, some of the languages which we have analysed in terms of the X^0 movement parameter present an additional complication for the claim that VSO orders lack an expletive. They display two patterns of agreement depending on the presence or absence of a subject and on the preverbal/postverbal position of the subject. Among the Romance languages, Trentino and Fiorentino show full referential agreement in pro-drop structures and when the subject is preverbal (42a), while they show 3rd person singular/default agreement when the subject is postverbal as in (42b) (cf. Barbosa 1994 for a recent discussion, among others).

(42) a.   Mario e parla.   *Fiorentino*
           Mario speaks

     b.   gli e venuto la   Maria.
          is   come   the Maria

Arabic has a similar pattern. In Standard Arabic (cf. Fassi Fehri 1993, Ouhalla 1988), agreement is fully specified when the subject is preverbal or in pro drop structures, while it is less specified in VSO orders. Finally, Celtic languages (cf. Rouveret 1990, Roberts and Shlonsky 1994, McCloskey 1996a&b, Taraldsen 1992, among others) show 3rd person singular (default)/no agreement in VSO orders, while showing full referential agreement in pro-drop structures. When the subject is topicalized the verb shows the analytic agreement pattern.

In a *pro* VSO analysis we can account for the differences between these languages and languages like Greek by appealing to two types of covert expletives: the *there* type which agrees with the associate and the *il* type which does not.[45] In our analysis, which dispenses with the presence of expletive *pro*, there is no reason to assume that there is a distinction between the agreement pattern of pro-drop sentences and the agreement pattern of VSO orders of the Greek-type. For Fiorentino, Welsh, etc., we must acknowledge the existence of two verbal paradigms, one with

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[45] There have been alternative analyses not capitalizing on an expletive *pro* for some of the agreement patterns presented here. For example, Chomsky (1993) has viewed poor vs. rich agreement in Arabic as a morphological reflex of optional feature strength and a standard analysis for Celtic synthetic agreement invokes pronoun incorporation (cf. Hale 1989 among others). In the literature, there have been attempts to unify some of these patterns but not all of them (cf. Fassi Fehri 1993, Ouhalla 1994, Roberts and Shlonsky 1994, Huybregts 1996, among others). However, a uniform analysis for all these patterns is highly desirable as the variations within each language group are basically the same and they reflect the cross-linguistic patterns of clitic-doubling phenomena (cf. below).

referential agreement and one with non-referential/default agreement. The question that arises is why *V[+referential]SO is ungrammatical in the latter case. Our answer to this question is that the presence of [+referential] phi-features on V implies the presence of Case. Thus, if an overt subject were present, its Case could not be checked, since the Case feature of I^0 would have been erased by the verbal agreement. On the other hand, default agreement does not have Case and, thus, it does not check the Case feature of I^0.[46] As for agreement with preverbal subjects, in Trentino-/Fiorentino/Arabic the subject is a base-generated topic (CLLDed, cf. Cinque 1990) and therefore, verbal agreement has the properties of pro-drop, while in Celtic, the subject is a moved topic and, therefore, verbal agreement is of the VSO type. This accounts for the distribution of agreement in languages with two paradigms.

However, a new question arises now. It concerns languages like Greek/ Spanish which have only one pattern, namely fully specified/referential agreement, regardless of whether a full NP is present or not. If this agreement is [+Case]) then it is not clear how the [−interpretable] Case feature of the subject NP is checked. We would like to suggest that this question reduces to the crosslinguistic distribution of clitic doubling, a construction which poses a formally identical problem, namely that there are two lexical Case features which must be checked against one functional feature. We propose that the relation between [+D] agreement and subject NPs is parallel to the relation between clitics and object NPs in clitic doubling languages.[47] In these cases, there are two logical possibilities: either (i) there is an extra mechanism licensing the case of the NP, thus deriving Kayne's generalization effects in languages where these occur or (ii) the AGR/clitic and the NP share Case features, which means that the Case of the AGR/clitic and NP is non-distinct.

Exploring further option (ii) doubling configurations can be interpreted as follows: the AGR/clitic-NP pair establishes the 'non-trivial' chain which is necessary for Case-checking of the NP. Specifically, the [+D] agreement and the clitic share Case features with the NP, and when the clitic checks its [−interpretable] Case feature against the Case feature in INFL, the

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[46] Perhaps referential agreement means [+interpretable phi features on V], while default agreement is [−interpretable]. Assuming that [+interpretable] phi features need Case to be visible while [−interpretable] do not need to have Case we can derive the same result. However, even though we can collapse the referential/default distinction with the [±interpretable] distinction, we cannot fully collapse the [±interpretable] distinction to the [±Case] distinction, because there are [−interpretable] elements which are [+Case], for example the expletive *il*.

[47] Sportiche (1992) argues in a different context that subject agreement phenomena and object clitic phenomena are subject to the same structural analysis.

[−interpretable] Case feature of the NP is also checked, because these two Case features are non-distinct. Formally, the chain between the clitic and the NP is the equivalent of an LF chain between the FF(NP) and the NP in languages like English. The fact that overt chains of this type are subject to several morphological and structural conditions is presumably related to the way the PF interface interprets such 'non-uniform' chains.

Evidence for the parallelism we are attempting to establish between the distribution of clitic-doubling and the distribution of [+D] subject agreement crosslinguistically comes from the observation that the patterns of subject agreement in the languages under discussion are parallel to the patterns of clitic doubling. More specifically, there are three patterns of subject agreement and three similar patterns of clitic-doubling: (i) Full agreement may co-occur with NPs, pronouns, and it co-occurs in pro-drop stuctures (Greek and Spanish). (ii) Full agreement co occurs with pronouns, and it occurs in pro-drop structures but it cannot co-occur with full NPs (Welsh and Moroccan Arabic, cf. Benmamoun 1996, among others). (iii) Full agreement occurs in pro-drop structures, but it may not co-occur with pronouns or NPs (Irish and Standard Arabic). Exactly the same patterns characterize object clitic structures. Here again we find three language types: (i) full clitic doubling (CL-D) languages where clitics may co-occur with NPs, pronouns, or stand on their own (Romanian, Greek, Porteño Spanish); residual CL-D languages where clitics must co-occur with pronouns, but they cannot co-occur with full NPs (Catalan, Peninsular Spanish); and (iii) non CL-D languages where there is strict complementarity between clitics and NPs/pronouns (Italian).[48]

Under the analysis proposed here, the fact that we find similar patterns

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[48] In Alexiadou and Anagnostopoulou (1997a, b) the assumption that agreement morphology has Case and, thus, FF(SUBJ) do not raise at LF, provides an explanation for the fact that there is no intransitivity constraint in Greek/Spanish, even though the Spec,TP parameter is not operative. Specifically, it is argued on the basis of Icelandic, English, Celtic, and Romance that in transitive constructions it is impossible to leave both arguments *in situ* because there is a constraint against leaving multiple arguments VP-internally. This constraint is attributed to a ban on covert feature raising of both subject and object (see note 43). Greek and Spanish present a problem for this constraint, as they permit VSO orders with both arguments VP-internal. Under the assumption, however, that in these languages there is no feature raising, the problem is only apparent.

Recall that when we were discussing Table 1 we noted that in principle there could be a language with VP internal subjects and an intransitivity constraint on subject inverted orders. We suggested that Italian might be such a language since it does not allow VSO, only VOS. In Alexiadou and Anagnostopoulou (1997a, b) we derive the obligatoriness of VOS orders in Italian from the observation that in this language strength on T is never selected, thus the subject remains VP internal. Overt object raising is forced, as covert feature raising of both arguments is banned.

in the domain of subjects and objects is not accidental. It reduces to the
conditions under which such doubling of features is possible.[49]

6.3. *Referential pro*

This paper argues against expletive *pro* in NSLs. Nothing has been said
so far about referential *pro* and nothing in the present analysis depends
on it. Nevertheless, note that we differ from most previous approaches to
the null subject property in that we propose that the AGR affix actually
replaces the subject DP in its EPP-licensing capacity. This opens the
possibility of furthermore proposing that the AGR affix counts as a theta-
bearing argument in NSLs, replacing null referential *pro*. Conceptually,
this might be a desirable step, since, as has been pointed out especially
by Manzini and Roussou (1997), within the framework of Chomsky (1995)
the status of referential *pro* is problematic. In the minimalist framework,
the theory of empty categories as we know it from GB has been largely
abandoned. Specifically, traces of movement are viewed as copies of
moved elements, and for PRO we need to appeal to null Case (cf. Chom-
sky and Lasnik 1993, Martin 1993, Terzi 1997, among others) whose status
is not entirely clear and for which there is no independent evidence (but
see Terzi 1997). A more important problem is that there is no way to
define empty categories, since the adequacy of binding features such as
[±pronominal] [±anaphoric] has been disputed even for overt categories
(cf. in particular Koster and Reuland 1991, Reinhart and Reuland 1993).

However, it is one thing to recognize the need to eliminate *pro*, and
another to actually eliminate it. Eliminating *pro* has a radical consequence,
namely that we would have to re-do theta theory (cf. Borer 1994, Ouhalla

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[49] A reviewer raises two problems for the proposal that subject agreement and object clitics
should be treated on a par. First, there is no absolute correlation between the existence of
subject verb agreement and clitic doubling of objects in a language. Second, there are
phenomena which are sensitive to the presence of a clitic but not to the presence of subject
agreement such as Focus. Subject agreement is always obligatory, while clitic-doubling is
optional and in certain constructions, such as Focus, impossible.

Concerning the first point, it is true that the correlation is not absolute and this is not
what we claim. We claim that the two phenomena are subject to similar morphological
conditions. With respect to the second, we would like to tentatively suggest that the obligator-
iness of subject agreement relates to the obligatoriness of EPP-checking, thus not interfering
with phenomena such as Focus. On the other hand, direct object clitics clearly are elements
performing a semantic or discourse function, i.e., they trigger a specific/referential reading
on the object NP or, alternatively, they make the object NP discourse anaphoric (cf. Suñer
1988, Dobrovie-Sorin 1993, Adger 1993, Anagnostopoulou 1994, among many others). We
thus expect that they will be incompatible with focused objects, since Focus is a phenomenon
bringing about a non-specific/non-discourse anaphoric interpretation of the object NP.

1994, Fanselow 1996, Manzini and Roussou 1997 for attempts towards this direction). If we treat agreement as a theta-bearing argument, then we have to assume that in pro-drop languages the theta criterion is met morphologically rather than syntactically. This is quite explicitly the position of Jelinek (1984) for agreement morphemes in pronominal argument languages, such as Mohawk. Note that at least for NSLs, it is possible to use some mechanism of subject demotion, since the subject position is not a subcategorized one (cf. Jaeggli 1986, Baker, Johnson and Roberts 1989). Thus, we could assume that the subject theta-role is assigned to the pronominal affix.[50] Apart from the fact that there are many questions about how exactly to implement this idea, the immediate consequence of Jelinek's proposal is that full DPs, when they appear, have the status of some kind of adjunct or modifier (cf. also Ouhalla 1994, Fanselow 1996).[51]

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[50] This would require an additional device to guarantee that in pro-drop structures, structural case on the object is not absorbed, unlike passive constructions. Perhaps this could be done along the lines of the system of Bittner and Hale (1996) which, however, is not compatible with the Case system assumed in Chomsky (1995) and adopted here.

[51] A reviewer points out that if AGR replaces null subjects then there are cases of agreement which are problematic. One such example is conjunction of DPs in Irish discussed in McCloskey and Hale (1984). McCloskey and Hale point out that when the subject is a conjoined DP of the form 'I and Sean', the verb may agree with the first conjunct (1sg) which then is replaced by null in Irish. Similar facts are discussed for Arabic in Aoun, Benmamoun and Sportiche (1994). Aoun, Benmamoun and Sportiche propose that what we actually have in these structures is conjunction of two clauses, each with a singular subject, involving VP-ellipsis in the second clause. This proposal immediately accounts for the fact that the verb AGRees with the first conjunct and not with the second.

Another problematic case is the person agreement on the verb in Spanish *los jugadores vamos a Madrid* 'the players go-1pl to Madrid'. The reviewer suggests that if there is no empty subject we would have to propose that a 3rd person DP is doubled by a 1st person agreement, something which is generally not possible. However, the 3rd person DP is not the argument of the verb, but a modifier. Such cases of modification are dealt with in Jelinek (1984) within the framework of the morphological theta-theory she proposes.

Another potentially problematic case is posed by phenomena in languages like Atka Aleut, where number inflection on verbs not only licenses null subjects, but also null possessors within overt subjects.

(i)   hlangis awakux.
        son-Pl. works-SG
        his sons are working.

According to the reviewer, for thematic reasons it seems unlikely that the agreement affix joined with the verb by merger itself might represent the missing argument. On the classical approach to null subjects combined with Kayne's (1994) recent analysis of specifiers, one could say that the null possessor is appropriately identified by the verbal inflection since it actually would be within its checking domain. In reply to this, we would like to suggest that there is a theoretical possibility of making these facts compatible with an analysis in which agreement actually replaces arguments instead of identifying them. One could propose that

We expect then that there will be no phenomena which are sensitive to configurationality.

For some pronominal argument, non-configurational languages this might be true (but see Baker 1996). For the languages we are discussing, however, this does not seem to be correct. There are many phenomena that require reference to the notions *complement of* and *specifier of* (cf. Horrocks 1994 for Greek). One example that comes to mind is *ne*-cliticization, which is only possible with *deep* objects (cf. Burzio 1986).[52] This is a particularly telling case because the subject agreement morpheme corresponds to a *deep* object and *ne*-cliticization is sensitive to the *deep* object syntactic position. Moreover, the languages we are discussing here do not have generalized pronominal argument licensing, unlike Mohawk. An alternative would be to treat AGR in NSLs as an incorporated pronoun that leads an independent syntactic life up to the point of incorporation, as in the classical analysis of Celtic subject verb agreement (cf. Taraldsen 1992). But, again, such an analysis would also have to account for con-figurational effects in constructions where an overt DP co-occurs with an agreement affix.

For these reasons, we conclude that one cannot take a position concerning the existence or non-existence of referential *pro* before having calculated all the consequences. This is certainly an issue for further research.

REFERENCES

Adger, David: 1993, *Functional Heads and Interpretation*, unpublished Ph.D. dissertation, University of Edinburgh.

the null possessor becomes an actual argument of the verb as a result of complex predicate formation in the form of covert noun incorporation (such a mechanism is used in Reinhart and Reuland 1993 for ECM constructions, and Anagnostopoulou and Everaert 1996 for inalienable possession). After noun incorporation, the possessor would count as an argument of the verb because the argument structures of the verb and the noun would be composed. The fact that the verb agrees with the subject would then not be a problem. However, the phenomenon we are describing here actually exists in languages with overt noun incorporation and it is known as 'possessor raising'. The empirical problem posed by the standard posssessor raising phenomenon is that it takes place only when there is *overt* noun incorporation, which is not the case in the example above. Further research on the Atka-Aleut facts will show whether this theoretical possibility is worth pursuing.

[52] A number of further empirical problems would also arise under this approach. For example, Kayne's (1993) account for the *have-be* alternation could not be extended easily to null subject languages unless sentences like *sono arrivati* vs. *hanno dormito* involve A-movement of the DP out of the participial projection. Moreover, the agreement on the participle calls for such an explanation.

Alexiadou, Artemis: 1994, *Issues in the Syntax of Adverbs*, unpublished Ph.D. dissertation, University of Potsdam.

Alexiadou, Artemis: 1997a, *Adverb Placement: A Case Study in Antisymmetric Syntax*, John Benjamins, Amsterdam.

Alexiadou, Artemis: 1997b, 'On the Properties of Some Greek Word Order Patterns', to appear in A. Alexiadou, G. Horrocks, and M. Stavrou (eds.), *Studies in Greek Syntax*, Kluwer, Dordrecht

Alexiadou, Artemis and Elena Anagnostopoulou: 1997a, 'Covert Feature Movement and the Placement of Arguments', to appear in *The Minimalist Parameter: Papers Deriving from the Open Linguistics Forum "Challenges of Minimalism"*, John Benjamins, Amsterdam.

Alexiadou, Artemis and Elena Anagnostopoulou: 1997b, 'Restrictions on the Placement of Arguments', unpublished manuscript, Zentrum für Allgemeine Sprachwissenschaft and MIT.

Alexiadou, Artemis and Elena Anagnostopoulou: 1997c, 'EPP without Spec, IP', to appear in the *Proceedings of the Specifiers Conference*, March 1996, University of York, Oxford University Press Oxford.

Anagnostopoulou, Elena: 1994, *Clitic Dependencies in Modern Greek*, unpublished Ph.D dissertation, University of Salzburg.

Anagnostopoulou, Elena: 1997, 'On Experiencers', to appear in A. Alexiadou, G. Horrocks, and M. Stavrou (eds.), *Studies in Greek Syntax*, Kluwer, Dordrecht.

Anagnostopoulou, Elena and Martin Everaert: 1996, 'Asymmetries in Binding: Configurational and Thematic Effects on Anaphora', *GLOW Newsletter* **36**, 14–15.

Aoun, Joseph, Elabbas Benmamoun and Dominique Sportiche: 1994, 'Agreement, Word Order and Conjunction in Some Varieties of Arabic', *Linguistic Inquiry* **25**, 195–220.

Baker, Mark: 1996, *The Polysynthesis Parameter*, Oxford University Press, Oxford.

Baker, Mark, Kyle Johnson and Ian Roberts: 1989, 'Passive Arguments Raised', *Linguistic Inquiry* **20**, 219–251.

Barbosa, Pilar: 1994, 'A New Look at the Null Subject Parameter', paper presented at CONSOLE III, Venice.

Barbosa, Pilar: 1997, 'Subject Positions in the Null Subject Languages', *Seminarios de Linguistica* **1**, 39–63.

Belletti, Adriana: 1988, 'The Case of Unaccusatives', *Linguistic Inquiry* **19**, 1–34.

Belletti, Adriana: 1990, *Generalized Verb Movement: Aspects of Verb Syntax*, Rosenberg and Selier, Torino.

Benmamoun, Elabbas: 1996, 'Spec-Head Agreement and Overt Case in Arabic', unpublished manuscript, SOAS.

Bittner, Maria and Ken Hale: 1996, 'The Structural Determination of Case and Agreement', *Linguistic Inquiry* **27**, 1–68.

Bobaljik, Jonathan and Andrew Carnie: 1992, 'A Minimalist Approach to Some Problems of Irish Word Order', unpublished manuscript, MIT.

Bobaljik, Jonathan and Dianne Jonas: 1996, 'Subject Positions and the Role of TP', *Linguistic Inquiry* **27**, 195–236.

Borer, Hagit: 1984, *Parametric Syntax*, Foris, Dordrecht.

Borer, Hagit: 1994, 'The Projection of Arguments', unpublished manuscript, University of Massachusetts at Amherst.

Borer, Hagit: 1995, 'The Ups and Downs of Hebrew Verb Movement', *Natural Language and Linguistic Theory* **13**, 527–606.

Brandi, Luciana and Patrizia Cordin: 1989, 'Two Italian Dialects and the Null Subject Parameter', in O. Jaeggli and K. Safir (eds.), *The Null Subject Parameter*, Kluwer, Dordrecht, pp. 111–142.

Branigan, Phil: 1992, *Subjects and Complementizers*, unpublished Ph.D. dissertation, MIT.

Bresnan, Joan and Joni Kanerva: 1989, 'Locative Inversion in Chichewa: A Case Study of Factorization in Grammar', *Linguistic Inquiry* **20**, 1–50.

Burzio, Luigi: 1981, *Intransitive Verbs and Italian Auxiliaries*, unpublished Ph.D. dissertation, MIT.

Burzio, Luigi: 1986, *Italian Syntax*, Reidel, Dordrecht.

Canac-Marquis, Rejan: 1991, 'On the Obligatory Character of Inversion in Spanish', *Proceedings of WCCFL* **10**, 309–318.

Cardinaletti, Anna: 1994, 'Subject Positions', *Gen GenP* **2**, 64–78.

Cardinaletti, Anna: 1995, 'Subjects and Clause Structure', to appear in L. Haegeman (ed.), *The New Comparative Syntax*, Longman, London.

Cardinaletti, Anna and Michal Starke: 1995, 'The Typology of Structural Deficiency: On the Three Grammatical Classes', *FAS Papers in Linguistics* **1**, 1–55.

Carnie, Andrew. 1995, *Non-verbal Predication and Head-Movement*, unpublished Ph.D. dissertation, MIT.

Chomsky, Noam: 1980, 'On Binding', *Linguistic Inquiry* **11**, 1–46.

Chomsky, Noam: 1981, *Lectures on Government and Binding*, Foris, Dordrecht.

Chomsky, Noam: 1986, *Barriers*, MIT Press, Cambridge.

Chomsky, Noam: 1993, 'A Minimalist Program for Linguistic Theory', in K. Hale and S. Keyser (eds.), *The View from Building 20*, MIT Press, Cambridge, Massachusetts, pp. 1–52.

Chomsky, Noam: 1995, *The Minimalist Program*, MIT Press, Cambridge, Massachusetts.

Chomsky, Noam and Howard Lasnik: 1993, 'Principles and Parameters Theory', in J. Jacobs, A. von Stechow, W. Sternefeld and T. Vennemann (eds.), *Syntax: An International Handbook of Contemporary Research*, de Gruyter, Berlin, pp. 506–569.

Cinque, Guglielmo: 1982, 'On the Theory of Relative Clauses and Markedness', *The Linguistic Review* **1**, 247–294.

Cinque, Guglielmo: 1986, 'Bare Quantifiers, Quantified NPs and the Notion of Operator at S-structure', *Rivista di Grammatica Generativa* **11**.

Cinque, Guglielmo: 1990, *Types of A′-Dependencies*, MIT Press, Cambridge, Massachusetts.

Cinque, Guglielmo: 1995, 'Adverbs and the Universal Hierarchy of Functional Projections', *GLOW Newsletter* **34**, 14–15.

Cinque, Guglielmo: 1997, *Adverbs and the Universal Hierarchy of Functional Projections*, to appear, Oxford University Press, Oxford.

Collins, Chris: 1997, *Local Economy*, MIT Press, Cambridge, Massachusetts.

Collins, Chris and Phil Branigan: 1997, 'Quotative Inversion', *Natural Languages and Linguistic Theory* **17**, 1–41.

Conteras, Heles: 1991, 'On the Position of Subjects', in S. Rothstein (ed.), *Perspectives on Phrase Structure: Heads and Licensing*, Syntax and Semantics 25, Academic Press, San Diego, pp. 63–79.

Demirdache, Hamida: 1991, *Resumptive Chains in Restrictive Relative, Appositives and Dislocation Structures*, unpublished Ph.D. dissertation, MIT.

den Besten, Hans: 1977, 'On the Interaction of Root Transformations and Lexical Deletive Rules', published 1981 in *Groninger Arbeiten zur germanistischen Linguistik* **20**, 1–78.

den Dikken, Marcel: 1995, *Particles: On the Syntax of Verb-Particle, Triadic and Causative Constructions*, Oxford University Press, New York.

Déprez, Viviane: 1990, 'Two ways of moving the verb in French', *MIT Working Papers in Linguistics* **13**, 27–46.

Diesing, Molly: 1992, *Indefinites*, MIT Press, Cambridge, Massachusetts.

Dobrovie-Sorin, Carmen. 1987, *Syntax du Roumain*, unpublished These de Doctorat d'Etat, Universite de Paris 7.

Dobrovie-Sorin, Carmen: 1993, *The Syntax of Romanian: Comparative Studies in Romance*, Mouton de Gruyter, Berlin.

Doron, Edit and Caroline Heycock: 1996, 'Filling and Licensing Multiple Specifiers', unpublished manuscript, Hebrew University of Jerusalem and the University of Edinburgh.

Drachman, Gaberell and Sila Klidi: 1992, 'The Proper Treatment of Adverbial Questions

in Greek: The Extended Minimal Structure Hypothesis', *Studies in Greek Linguistics* **13**, 371–390.

Falk, Cecilia: 1993, *Non-Referential Subjects in the History of Swedish*, unpublished Ph.D. dissertation, University of Lund.

Fanselow, Gisbert: 1996, 'Minimal Links, phi-features, Case and theta-linking', unpublished manuscript, Universität Potsdam.

Fassi Fehri, Abdelkader: 1993, *Issues in the Structure of Arabic Clauses and Words*, Kluwer, Dordrecht.

Fiengo, Robert and James Higginbotham: 1991, 'Opacity in NP', *Linguistic Analysis* **7**, 395–421.

Fox, Danny: 1994, 'Quantifier Scope in VP Ellipsis', unpublished manuscript, MIT.

Frampton, John: 1995, 'Expletive Insertion', paper presented at the Workshop on the Role of Economy Principles in Linguistic Theory, Berlin, February 1995.

Graff, Michel de: 1997, 'Nominal Predication in Haitian and in Irish', to appear in *Proceedings of WCCFL XVI*.

Haeberli, Eric: 1997, 'Expletives and Definite Subjects', *Proceedings of Console* V, 93–108.

Haider, Hubert: 1988, 'Matching Projections', in A. Cardinaletti, G. Cinque and G. Giusti (eds.), *Constituent Structure*, Foris, Dordrecht, pp. 101–123.

Haik, Isabelle: 1984, 'Indirect Binding', *Linguistic Inquiry* **15**, 185–223.

Hale, Ken: 1989, 'Incorporation and the Irish Synthetic Verb Forms', unpublished manuscript, MIT.

Hoekstra, Eric: 1994, 'Agreement and the Nature of Specifiers', *Minimalism and Kayne's Antisymmetry Hypothesis, Groninger Arbeiten zur germanistischen Linguistik* **37**, 159–168.

Hoekstra, Teun and Rene Mulder: 1990, 'Unergatives as Copular Verbs: Locational and Existential Predication', *The Linguistic Review* **7**, 1–79.

Holmberg, Anders: 1986, *Word Order and Syntactic Features in the Scandinavian Languages and English*, unpublished Ph.D. dissertation, University of Stockholm.

Holmberg, Anders: 1997, 'Phonological Feature Movement', *GLOW Newsletter* **38**, 30–31.

Holmberg, Anders and Urpo Nikanne: 1997, 'Expletives, Subjects and Topics in Finnish', unpublished manuscript, University of Tromsø and University of Oslo.

Horrocks, Geoff: 1994, 'Subjects and Configurationality', *Journal of Linguistics* **30**, 81–109.

Huybregts, Riny: 1996, 'Minimalism, Typology and Language Universals', paper presented at TIN 1996, Utrecht.

Iatridou, Sabine: 1991, 'Clitics and Island Effects', unpublished manuscript, MIT.

Iatridou, Sabine and Anthony Kroch: 1992, 'On the Licensing of CP-recursion and Its Relevance to the Germanic Verb-second Phenomena', *Working Papers in Scandinavian Syntax* **50**, 1–24.

Jaeggli, Osvaldo: 1982, *Topics in Romance Syntax*, Foris Dordrecht.

Jaeggli, Osvaldo: 1986, 'Passive', *Linguistic Inquiry* **7**, 587–633.

Jaeggli, Osvaldo and Ken Safir (eds): 1989, *The Null Subject Parameter*, Kluwer, Dordrecht

Jelinek, Eloise: 1984, 'Empty Categories, Case and Configurationality', *Natural Language and Linguistic Theory* **2**, 39–76.

Johnson, Kyle: 1991, 'Object Positions', *Natural Language and Linguistic Theory* **9**, 577–636.

Jonas, Dianne: 1996, 'Clause Structure, Expletives and Verb-movement', in W. Abraham, S. Epstein, H. Thrainsson and J.-W. Zwart (eds.), *Minimal Ideas*, John Benjamins, Amsterdam, pp. 167–188.

Jonas, Dianne and Jonathan Bobaljik: 1993, 'Specs for Subjects', *MIT Working Papers* **18**, 59–98.

Kayne, Richard: 1989/1995, 'Agreement and Verb Movement in Three Varieties of English', in H. Haider, S. Olsen and S. Vikner (eds.), *Studies in Comparative Germanic Syntax*. Kluwer, Dordrecht, pp. 159–165.

Kayne, Richard: 1993, 'Toward a Modular Theory of Auxiliary Selection', *Studia Linguistica* **47**, 3–31.

Kayne, Richard: 1994, *The Antisymmetry of Syntax*, MIT Press, Cambridge, Massachusetts.

Kayne, Richard and Jean-Yves Pollock: 1978, 'Stylistic Inversion, Successive Cyclicity, and Move NP in French', *Linguistic Inquiry* **9**, 595–621.

Keenan, Edward: 1987, 'A Semantic Definition of Indefinite NP', in E. Reuland and A. ter Meulen (eds.), *The Representation of (In)definiteness*, MIT Press, Cambridge, Massachusetts, pp. 286–317.

Koopman, Hilda and Dominique Sportiche: 1991, 'The Position of Subjects', *Lingua* **85**, 211–258.

Koster, Jan and Eric Reuland (eds.): 1991, *Long Distance Anaphora*, Cambridge University Press, Cambridge.

Kratzer, Angelika: 1988, 'Stage and Individual Level Predicates', unpublished manuscript, University of Massachusetts at Amherst.

Lasnik, Howard: 1993, 'Case and Expletives Revisited', unpublished manuscript, University of Connecticut.

Lasnik, Howard and Mamoru Saito: 1992, *Move alpha*, MIT Press, Cambridge, Massachusetts.

Levin, Beth and Malka Rappaport: 1995, *Unaccusativity: At the Syntax-Lexical Semantics Interface*, MIT Press, Cambridge, Massachusetts.

Longobardi, Giuseppe: 1987, 'Extraction from NP and the Proper Notion of Head Government', in A. Giorgi and G. Longobardi (eds.), 1991, *The Syntax of Noun Phrases*, Cambridge University Press, Cambridge, pp. 57–112.

Manzini, Rita and Anna Roussou: 1997, 'A Minimalist Theory of A-movement and Control', unpublished manuscript, University of Florence and University of Bangor.

Martin, Roger: 1993, 'On the Distribution and the Case Features of PRO', paper presented at the LSA Winter Meeting.

May, Robert: 1985, *Logical Form*, MIT Press, Cambridge, Massachusetts.

McCloskey, James: 1996a, 'Subjects and Subject Positions in Irish', in B. Borsley and Ian Roberts (eds.), *The Syntax of Celtic Languages*, Cambridge University Press, Cambridge, pp. 241–283.

McCloskey, James: 1996b, 'On the Scope of Verb-Movement in Irish', *Natural Language and Linguistic Theory* **14**, 47–104.

McCloskey, James and Ken Hale: 1984, 'On the Syntax of Person Number Inflection in Modern Irish', *Natural Language and Linguistic Theory* **2**, 487–533.

Montalbetti, Mario: 1984, *After Binding: On the Interpretation of Pronouns*, unpublished Ph.D. dissertation, MIT.

Moro, Andrea: 1997, *The Raising of Predicates: Predicative Noun Phrases and the Theory of Clause Structure*, Cambridge University Press, Cambridge.

Müller, Gereon: 1997, 'Partial wh-movement and Optimality Theory', *The Linguistic Review* **14**, 249–306.

Müller, Gereon and Wolfgang Sternefeld: 1993, 'Improper Movement and Unambiguous Binding', *Linguistic Inquiry* **24**, 461–507.

Ordoñez, Francisco: 1994, 'Post-verbal Asymmetries in Spanish', paper presented at the Vienna GLOW Colloquium.

Ordoñez, Francisco and Evelina Trevino: 1995, 'Los sujetos y objetos preverbales en espanol', paper presented at the 5th Colloquium on Generative Grammar, Coruña, Spain.

Ouhalla, Jamal: 1988, *The Syntax of Head Movement: A Case Study of Berber*, unpublished Ph.D. dissertation, University College London.

Ouhalla, Jamal: 1994, 'The Syntactic Representation of Arguments', unpublished manuscript.

Philippaki-Warburton Irene: 1985, 'Word Order in Modern Greek', *Transactions of the Philological Society*, 113–143.

Philippaki-Warburton, Irene: 1987, 'The Theory of Empty Categories and the pro-drop Parameter in Modern Greek', *Journal of Linguistics* **23**, 289–318.

Philippaki-Warburton, Irene: 1989, 'Subjects in English and in Greek', unpublished manuscript, University of Reading.

Platzack, Christer: 1986, 'COMP, INFL, and Germanic Word Order', in L. Hellan and K. Christensen (eds.), *Topics in Scandinavian Syntax*, Reidel, Dordrecht. pp. 185–234.

Platzack, Christer and Anders Holmberg: 1989, 'The Role of AGR and Finiteness', *Working Papers in Scandinavian Syntax* **43**, 51–76.

Pollock, Jean-Yves: 1996, 'Eléments de Syntaxe du verbe dans les langues Germaniques et Romanes', unpublished manuscript, Amiens.

Reinhart, Tanya: 1982, 'Pragmatics and Linguistics: An Analysis of Sentence Topics', distributed by Indiana Linguistics Club, Bloomington, Indiana.

Reinhart, Tanya: 1994, 'Wh-in situ in the Framework of the Minimalist Program', unpublished manuscript, University of Utrecht.

Reinhart, Tanya and Eric Reuland: 1993, 'Reflexivity', *Linguistic Inquiry* **24**, 657–720.

Riemsdijk, van Henk and Edwin Williams: 1981, 'NP-Structure', *The Linguistic Review* **1**, 171–217.

Rivero, Maria-Luisa: 1988/1994, 'Verb Movement and the Structure of IP in the Languages of the Balkans', *Natural Language and Linguistic Theory* **12**, 63–120.

Rizzi, Luigi: 1980, 'Negation, wh-movement and the Null Subject Parameter', paper read at the 5th GLOW Colloquium.

Rizzi, Luigi: 1982, *Issues in Italian Syntax*, Foris, Dordrecht.

Rizzi, Luigi: 1986, 'Null Objects in Italian and the Theory of *pro*', *Linguistic Inquiry* **17**, 501–558.

Rizzi, Luigi: 1990, *Relativized Minimality*, MIT Press, Cambridge, Massachusetts.

Rizzi, Luigi: 1991, 'Residual Verb-Second and the wh-criterion', *Technical Reports in Formal and Computational Linguistics* **2**, Université de Génève.

Rizzi, Luigi and Ian Roberts: 1989, 'Complex Inversion in French', *Probus* **1**, 1–30.

Roberts, Ian: 1993, *Verbs and Diachronic Syntax*, Kluwer, Dordrecht.

Roberts, Ian and Ur Shlonsky: 1994, 'Pronominal Enclisis and VSO Languages', *GLOW Newsletter* **32**, 50–51.

Rohrbacher, Bernhard: 1994, *The Germanic Languages and the Full Paradigm: A Theory of V to I Raising*, unpublished Ph.D. dissertation, University of Massachusetts at Amherst.

Rouveret, Alain: 1990, 'X'-theory, Minimality and Barrierhood in Welsh', in R. Hendrick (ed.), *The Syntax of Modern Celtic Languages*, Academic Press, San Diego, pp. 27–80.

Rouveret, Alain: 1994, *Syntaxe du Gallois: Principes généraux et typologie*, CNRS Editions, Paris.

Safir, Ken: 1985, *Synctactic Chains*, Cambridge University Press, Cambridge.

Sauerland, Ulrich: 1997, 'Scope Freezing', to appear in the *Proceedings of NELS 28*

Sigurðsson, Halldór: 1989, *Verbal Syntax and Case in Icelandic: A Comparative GB Approach*, unpublished Ph.D. dissertation, University of Lund.

Solà, Jaume: 1992, *Agreement and Subjects*, unpublished Ph.D. dissertation, Universität Autonoma de Barcelona.

Speas, Margaret: 1994, 'Null Arguments in a Theory of Economy of Projection', *UMOP* **17**, 179–208.

Speas, Margaret: 1995, 'Economy, Agreement and the Representation of Null Arguments', unpublished manuscript, University of Massachusetts at Amherst.

Sportiche, Dominique: 1992, 'Clitic Constructions', unpublished manuscript, UCLA.

Suñer, M.: 1988, 'The Role of Agreement in Clitic Doubling Constructions', *Natural Language and Linguistic Theory* **6**, 391–434.

Svenonius, Peter: 1996, 'The Verb-Particle Alternation in the Scandinavian Languages', unpublished manuscript, University of Tromsø.

Taraldsen, Knut: 1978, 'On the NIC, Vacuous Application and the that-trace Filter', unpublished manuscript, MIT.

Taraldsen, Knut: 1992, 'Agreement as Pronoun Incorporation', paper presented at the 1992 GLOW Colloquium.

Terzi, Arhonto: 1997, 'PRO and Null Case in Finite Clauses', to appear in *The Linguistic Review* **14**(4).

Torrego, Esther: 1984, 'On Inversion in Spanish and Some of Its Effects', *Linguistic Inquiry* **15**, 103–129.

Travis, Lisa: 1984, *Parameters and Effects of Word Order Variation*, unpublished Ph.D. dissertation, MIT.

Tsimpli, Ianthi-Maria: 1990' 'The Clause Structure and Word Order of Modern Greek', *UCL Working Papers in Linguistics* **2**, 226–255.

Vallduvi, Enric: 1992, 'A Preverbal Landing Site for Quantificational Operators', *Catalan Working Papers* **2**, 319–343.

Varlokosta, Spyridoula and Norbert Hornstein: 1993, 'A Bound Pronoun in Modern Greek', *Natural Language and Linguistic Theory* **11**, 175–195.

Vikner, Sten: 1995, *Verb Movement and Expletive Subjects in the Germanic Languages*, Oxford University Press, Oxford.

Watanabe, Akira: 1996, *Case Absorption and Wh-Agreement*, Kluwer, Dordrecht.

Williams, Edwin: 1980, 'Predication', *Linguistic Inquiry* **11**, 203–238.

Williams, Edwin: 1994, *Thematic Structure in Syntax*, MIT Press, Cambridge, Massachusetts.

Zwart, C. Jan-Wouter: 1997, *Morphosyntax of Verb Movement. A Minimalist Approach to Dutch Syntax*, Kluwer, Dordrecht.

Zubizarreta, Maria-Luisa: 1992, 'Word Order in Spanish and the Nature of Nominative Case', unpublished manuscript, USC.

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