

## Notes on ECM, Control and Raising

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### 1. Introduction

In Alexiadou & Anagnostopoulou (1995, 1996, to appear), we have proposed a uniform account for the crosslinguistic distribution of SVO/VSO alternation in languages without overt expletives (e.g. Greek/Romance/Celtic). Basing 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 overt expletive VS(0) languages (e.g. Icelandic/English). Specifically, we propose that languages like Greek and Spanish satisfy the Extended Projection Principle feature of  $I^{\circ}$  (cf. Chomsky 1995) via verb raising because they have verbal agreement morphology with the categorial status of a pronominal element. In our approach the strong D feature is located in AgrS and languages with 'rich' agreement morphology check the strong EPP (D-) feature via verb-movement to AgrS $^{\circ}$ . Thus, EPP-checking is parametrized: move/merge XP vs. move/merge X $^{\circ}$ . The first option is selected in languages like Icelandic and English, while the latter is relevant for Greek type languages. From this it follows that in the latter case a) preverbal subjects are not in an A-position and b) VSO orders never involve a covert expletive. Both claims are independently established and the reader is referred to our previous work for a detailed presentation of the arguments and for the specifics of our analysis.

In this squib, we would like to address a number of non-trivial questions that our analysis raises for Exceptional Case Marking (ECM), Control and Raising structures. In particular, a) if EPP-checking is linked to the richness of AGR then what happens in infinitivals where there is no AGR? There are two options: either the infinitival has a system parasitic on the inflected paradigm or the infinitival paradigm works differently. This is an empirical question. b) ECM structures have been used as a strong argument against *Greed* because the XP raises overtly to its EPP position which is not identifiable with its Case position. If our previous analysis is correct, then ECM structures in Greek, Spanish and in Celtic cannot exist.

However, there are structures that have been claimed to instantiate ECM. We have to show that the ECM analysis is not correct. c) If argument licensing reduces to  $X^{\circ}$  movement in Greek, Spanish we expect that dependencies between subject XP positions should also be reduced to dependencies between heads. There are two such cases, Control structures and Raising structures. The question is whether it is possible to redefine such dependencies without making use of empty categories.

Here, we will mainly concentrate on the Greek structures where the embedded verb is fully inflected in which case there is definitely V-raising. Let us note, however, that while one examines infinitives, it is not sufficient to look at an infinitival in order to decide whether there is a PRO or not in the representation (English vs. Italian), but one has to consider whether there is obligatory V-movement as opposed to XP movement related to EPP-checking in the language.

## 2. ECM

As known (cf. Lasnik 1993, Chomsky 1995) ECM structures as in (1) are pure instantiations of overt EPP driven movement to a non-case position. The subject further raises to the checking domain of AgrO of the matrix clause covertly:<sup>1</sup>

(1) I believe [Eric to be intelligent]

If our previous analysis is on the right track, then ECM structures cannot exist in  $V^{\circ}$ -raising EPP checking languages. Indeed this seems to be correct. Uncontroversial ECM constructions corresponding to the English example above are ungrammatical in Romance and Greek (cf. Burzio 1986):<sup>2</sup>

<sup>1</sup> Note though that Lasnik (1995) argues that this movement takes place in the overt component.

<sup>2</sup> ECM constructions of this type do not exist in XP checking like French or German either. In French however the wh version of an ECM construction is allowed. Italian also has this construction (cf. Kayne 1981, Rizzi 1982):

- i. le garçon que je croyais être intelligent  
the boy that I believed to-be intelligent
- ii. il ragazzo che ritenevo essere intelligente  
the boy that I believed to-be intelligent

- (2) a. \*Roberto ritiene [Mario esser partito]  
 Roberto believes Mario be left  
 'Roberto believes Mario to have left'
- b. \*pistevo ton Petro na ine eksipnos  
 believe the Peter-ACC SUBJ is intelligent  
 'I believe Peter to be intelligent'

There are other constructions that could be analysed as ECM, namely constructions involving perception and causative verbs (cf. Burzio 1986 for Italian):

- (3) a. ida ton Petro na milai me tin Ilektra  
 saw-1S the-Peter-ACC SUBJ talk-3S with Ilektra  
 'I saw Peter talking with Ilektra'
- b. evala ton Petro na katharisi to domatio tu  
 put the Peter-ACC SUBJ clean-3S the room his  
 'I made Peter clean his room'

However, there are alternative analyses for these constructions which are compatible with our previous approach. For example, Iatridou (1993) treats cases like (3a) as instances of object control. If this is correct, then they will be analysed as the control structure discussed below. In fact Burzio argues against an ECM analysis for (3a-b) and his arguments also hold for Greek (cf. Burzio 1986: 287-290). We will briefly present them here.

First of all, unlike tensed/infinitival pair like *I believe that Eric delivered the speech/I believe Eric to have delivered the speech* which are closely synonymous, pairs like (4) below are not synonymous:

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In Greek such constructions are ungrammatical.

- iii. \*to agori pu pisteva na ine eksipno  
 that boy that believed-1S SUBJ is intelligent

- (4) a. *Ida oti o Petros telioni ti diatrivi tu*  
 saw-3S that Peter-NOM finishes the dissertation his  
 'I saw that Peter is finishing his dissertation'
- b. *ida ton Petro na telioni ti diatrivi tu*  
 saw-1S the Peter-ACC SUBJ finishes the dissertation his  
 'I saw Peter finishing his dissertation'

In (4b) the phrase corresponding to *Petros* is the object of direct perception while this is not true of sentences like (4a). A related point has to do with the non-synonymy of active and passive forms. While S complements maintain rough synonymous under passivization as with *I believe Eric to have delivered the speech vs. I believe the speech to have been delivered by Eric* the cases under discussion are not synonymous and this is evident by the ungrammaticality of *ida* in (5b) below:

- (5) a. *ida/akusa to Petro na ekfoni to logo*  
 saw-1S/head-1S the-Peter-ACC SUBJ deliver-3S the speech  
 'I saw/heard Peter delivering the speech'
- b. \**ida/akusa to logo na ekfonite apo ton Petro*  
 saw-1S/heard-1S the speech SUBJ be delivered by Peter  
 'I saw/heard the speech being delivered by Peter'

Another standard test for distinguishing *\_NP S* from *\_S* complements involves relative scope of quantifiers. By this test the structures in question also qualify as non-ECM:

- (6) a. They expected one customs official to check all passing cars
- (i) They expected that there would be one customs official who would check all passing cars
- (ii) They expected that, for each passing car, there would be some customs official or other who would check it

- b. ida enan teloniako na elenhi ola ta aftokinita  
 saw-1S one customs official SUBJ control all the cars  
 'I saw a customs official controlling all the cars'
- (i) I saw one customs official who checked all passing cars
- (ii) \*I saw that for each passing car there was one customs official who  
 would check it

Under the assumption that quantifier scope is clause-bounded the difference between (6a) and (6b) follows if (6b) has the two quantifiers in different clauses.<sup>3</sup>

A further argument against the ECM analysis comes from Clitic Left Dislocation (CLLD). CLLD of clauses in Greek involves a clitic which is third person, singular, neutral:

- (7) a. oti irthe o Petros den to perimena  
 that came Peter-NOM NEG cl-ACC expected-1S  
 'That Peter came. I didn't expect it'
- b. na erthi o Petros den to vlepo  
 SUBJ come-3S Peter-NOM NEG cl-ACC see-1S  
 lit. 'I do not see it that Peter will come'

If perception verbs would take an S complement then we would expect the same clitic to appear in CLLD. However, this is not what we find:

- (8) a. ton logo na ekfonite den ton akusa  
 the speech SUBJ be delivered NEG him heard 1S  
 'The speech being delivered I did not hear it'
- b. \*ton logo na e kfonite den to akusa  
 the speech SUBJ be delivered NEG it heard-1S

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<sup>3</sup> Burzio (1986) presents two more arguments against an ECM analysis for Italian which are not applicable to Greek.

- c. ton Petro na tiganizi psaria den ton ida  
 the Peter-ACC SUBJ fry fish NEG him saw-1S  
 'Peter frying fish. I did not see him'
- d. \*ton Petro na tiganizi psaria de to ida  
 the-Peter SUBJ fry fish NEG it saw

These examples are grammatical with a resumptive clitic which agrees in features with the NP.<sup>4</sup>

From these facts, we conclude that an ECM analysis for the structures presented above cannot be maintained.

### 3. Control

Iatridou (1993), Terzi (1992), Varlokosta (1994) and Tsoulas (1994) have argued that the following structures involve a controlled PRO despite the fact that the embedded verb is fully inflected for Agreement:

- (9) a. O Petros kseri na kolibai  
 the Peter-NOM knows SUBJ swim-3S  
 'Peter knows how to swim'
- b. o Petros irthe na milisi  
 the-Peter-NOM came SUBJ talk-3S  
 'Peter came to talk'

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<sup>4</sup> In fact this is also an argument against the object control analysis of these constructions because under such an analysis we would not expect the NP to front together with the clause as if they were forming a constituent. These facts can be best accommodated under Burzio's analysis according to which such constructions are the counterpart of a construction which is also typical of perception predicates illustrated below:

- i. ho visto Giovanni che parlava con Maria  
 I have seen Giovanni that spoke with Maria
- ii. vlepō to Petro pu milai me tin Ilektra  
 I see Peter-ACC that talks with the Ilektra-ACC

- c.    o Petros fovithike   na    milisi  
       the-Peter was scared SUBJ talk-3S  
       'Peter was scared to talk'

The sentences in (9) involve the particle *na* which has been analysed as a subjunctive mood marker (cf. Philippaki-Warburton & Veloudis 1984, Philippaki-Warburton 1990, Rivero 1994) or a subjunctive complementizer (Tsoulas 1994, Aggouraki 1993). *Na* clauses do not always involve Control. Specifically, in many cases a) the embedded subject need not be interpreted coreferentially with the matrix subject and b) lexical NPs can be licensed in the embedded subject position:

- (10) a.    o Petros        elpizi na    figi    i Maria  
           the-Peter-NOM hopes SUBJ go-3S Mary-NOM  
           'Peter hopes that Mary goes'
- b.    o Petros   perimeni na    erthun  
       the-Peter expects SUBJ come-3PL  
       'Peter expects that they come'

However, in the cases in (11) coreference is obligatory and no NP is licensed in the embedded clause:<sup>5,6</sup>

- (11) a.    \*o Petros        kseri   na    kolimbao  
           the-Peter-NOM knows SUBJ swim-1S
- b.    \*o Petros        kseri   na    kolimbai i Maria  
           the-Peter-NOM knows SUBJ swim    Mary-NOM

<sup>5</sup> The examples in ( ) instantiate the most restrictive possible set of control verbs in Greek which is extensively argued for in Varlokosta & Hornstein (1993) and Varlokosta (1994). Iatridou (1993) has argued that there are more control predicates in Greek.

<sup>6</sup> Terzi (1992) offers one more comparative argument in favor of PRO instead of pro in subjunctive clauses. This argument is based on the observation that subjunctive clauses in Romance which have pro have obviation which is absent in Greek.

Given our proposal we cannot analyse control structures as in (11) in terms of PRO because this would imply that in these cases we have EPP-checking via XP raising. Instead we will offer an analysis for control in terms of anaphoric Agreement along the lines of Borer (1989), Ouhalla (1994) and Manzini & Roussou (1996). In particular, Borer proposes that Agreement being an N-type element it is either anaphoric or non-anaphoric. When it is anaphoric, it lacks inherent reference and it is referentially dependent on an antecedent to fix its reference.<sup>7</sup> This is exactly our treatment of control in Greek. Specifically, we propose that the embedded Agr qualifies as anaphoric thus entering into a binding relationship with the matrix Agr. Agr is nominal hence it has the binding properties of any other nominal category. The dependency is a head dependency and not a dependency between XPs. To derive the anaphoric properties of Agr we will follow Reinhart & Reuland's (R&R, 1993) analysis of monomorphemic medium distance anaphors like Dutch *zich* within Reflexivity. We propose that Agreement qualifies as anaphoric whenever it is defective for Case by virtue of the condition in (12):

(12) An NP is -R iff it carries a full specification for phi-features and structural Case.

According to this condition an NP which is defective for phi-features and/or Case qualifies as -R, a property which stands for referential (in)dependence. Given (12), we can assume that in control structures Agreement is defective for Case thus qualifying as -R in R&R's system. Being -R it will enter into a dependency with a higher +N, +R head, the AgrS or AgrO of the matrix clause.

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<sup>7</sup> Borer proposes an analysis of control structures in terms of *pro*. She proposes that whatever reference is assigned to anaphoric Agr it will be transferred to *pro*, since *pro* is the I-subject of the infinitival INFL subject to the condition in (i) (Borer 1989: 70) under a representation as in (ii):

- (i) Coindex NP with INFL in the accessible domain of INFL
- (ii) Eric<sub>i</sub> tried [<sub>IP</sub> INFL<sub>i</sub> [<sub>IP</sub> *pro*<sub>i</sub> [<sub>INFL</sub> e] to leave]]

We are not following her analysis on that.



#### 4. Raising

The crucial difference between Raising predicates and control predicates is that the former have one theta-position and one case position while the latter have two theta-positions and one Case position. It has been argued that these contexts involve raising of the subject from the lower clause to the matrix so that it can receive Case.

- (13) a. ta pedia fenonde na dulevun  
 the children seem-3PL SUBJ work-3PL
- b. ta pedia arhisan na t rehun<sup>8</sup>  
 the children started SUBJ run-3PL
- c. fenonde na dulevun ta pedia

As shown in (13) the subject NP can precede the matrix verb (13a) or follow the embedded verb (13b), but the two verbs must agree in both cases. In the examples in (13) we could assume that the matrix Agreement checks the EPP and the Case feature of the matrix INFL via overt V-raising while the embedded Agreement checks the EPP feature of the lower INFL. The case of the subject in the lower clause is checked by the Agr in the matrix clause after the lower Agr moves to the higher Agr at LF as in (14). This restructuring is possible, as the lower clause carries a [-Tense] specification (cf. also Alexiadou to appear).

- (14) Agr1<sup>o</sup>
- Agr2<sup>o</sup> Agr1<sup>o</sup>

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<sup>8</sup> In the Greek literature most researchers (Iatridou 1993, Varlokosta 1994 a.o.) have analysed aspectual predicates as control predicates because there are no some selection restrictions on the embedded predicate. However, certain anaphora facts show that aspectual predicates should be analysed as raising predicates.

- i. a. arhise na vrehi  
 b. \*ta pedia arhisan na fenonde na dulevun
- ii. a. o eaftos mu arhizi na me provlivatizi  
 b. o eaftos mu arhizi na mu aresi

Under such an approach, the fact that the two Agrs agree is due to *chain formation*. A restructuring analysis for Raising constructions in Romance has also been proposed in Torrego (1989), Sola (1992) among others.

## 5. Conclusion

In this squib we analysed ECM, Control and Raising structures which cause a problem for our approach to EPP-checking in Greek type languages. We showed that all these structures are amenable to alternate analyses which are compatible with our main claim that in the language type under discussion V-raising is sufficient to check the EPP feature of Infl.

## References

- Agouraki, Y. (1991) 'A Modern Greek Complementizer and its significance for Universal Grammar'. *UCL Working Papers in Linguistics* 3, 1-24.
- Alexiadou, A. (to appear) 'On the Properties of some Greek word order patterns'. In A. Alexiadou, G.C. Horrocks, and M. Stavrou (eds.) *Studies in Greek Syntax*. Kluwer Academic Publishers.
- Alexiadou, A. & E. Anagnostopoulou (1995) 'SVO and EPP in Null Subject Languages and Germanic'. *FASPI* 4, 1-21.
- Alexiadou, A. & E. Anagnostopoulou (1996) 'Symmetries, Asymmetries and the Role of Agreement'. *GLOW Newsletter* 36: 12-13.
- Alexiadou, A. & E. Anagnostopoulou (to appear) 'Parametrizing AGR: Word Order, Verb Movement and EPP checking'. To appear in *Natural Language and Linguistic Theory*.
- Borer, H. (1989) 'Anaphoric AG.' in Jaeggli, O. & K. Safir (eds.) *The Null Subject Parameter*. Studies in Natural Language and Linguistic Theory. Dordrecht, Kluwer 69-91.
- Burzio, L. (1986) *Issues in Italian Syntax*. Dordrecht: Kluwer.
- Chomsky, N. (1995) *The Minimalist Program*. MIT Press.
- Iatridou, S. (1993) 'On Nominative Case Assignment and a few related things'. MIT Working Papers in Linguistics 19, 175-198.
- Lasnik, H. (1993) 'Case and Expletives revisited'. Ms University of Connecticut.
- Lasnik, H. (1995) 'On Certain Structural Aspects of Anaphora'. Ms. University of Connecticut.
- Manzini, M.R. & A. Roussou (1996) 'On Empty Categories'. Paper presented at the Workshop on Syntactic Categories Bangor.
- Ouhalla, J. (1994) 'The Syntactic Representation of Arguments'. Ms Max Planck Berlin.
- Philippaki, I. (1990) 'Subjects in English and in Greek' *Proceedings of the 3d Symposium on the description and/or Comparison of English and Greek*. Aristotle University of Thessaloniki: 12-32.

- Philippaki, I. & J. Veloudis (1984) The Subjunctive in Complement Clauses. *Studies in Greek Linguistics* **5**.
- Reinhart, T & E. Reuland (1993) 'Reflexivity' *Linguistic Inquiry* **24**, 657-720.
- Rivero, M. (1994) 'The Structure of the Clause and V-movement in the Languages of the Balkans'. *Natural Language and Linguistic Theory* **12**: 63-120.
- Sola, J. (1992) *Agreement and Subjects*. Ph.D. Universitat Autònoma de Barcelona.
- Terzi, A. (1992) *PRO in Finite Clauses: a Study of the Inflectional Heads of the Balkan Languages*, Ph.D. Diss. CUNY.
- Torrego, E. (1989) 'Experiencers and Raising Verbs in Spanish'. Ms. University of Massachusetts Boston.
- Tsoulas, G. (1993) Remarks on the structure and the interpretation of na-clauses. *Studies in Greek Linguistics* **14**.
- Varlokosta, S. (1994) *Issues on Modern Greek Sentential Complementation*, Ph.D. Diss. University of Maryland.
- Varlokosta, S & N. Hornstein (1993) A Bound Pronoun in Modern Greek. *Natural Language and Linguistic Theory* **11**, 175-195.