

A CLOSER LOOK AT (LACK OF) OBVIATION PHENOMENA IN ROMANIAN SUBJUNCTIVE COMPLEMENTS

Maria Aurelia Cotfas*

Abstract: The paper looks at Romanian subjunctive complements selected by volitional verbs and considers the interpretation of their null subjects and why – unlike the case of other Romance languages – these can co-refer with a main clause antecedent (what has been called “lack of obviation” in the literature). What we want to show (against claims made by Roussou 2001 and Landau 2004) is that null subject *ca*-subjunctives in Romanian do not trigger obviation (disjoint subjects) and that obviation effects in such contexts can appear not because of *ca*, but in cases where the subject of the subjunctive complement is an overt 3rd person pronoun whose phi-features match those of the main clause subject. Supporting evidence for the different interpretation of null vs. overt pronouns comes from Reinhart’s (1999, 2000) variable binding vs. co-valuation (Rule I) and Ariel’s (1991, 1994) Accessibility Theory.

Keywords: subjunctive dependents, (lack of) obviation, null subjects/pronoun, overt pronoun

1. Introduction

We will start this section by pointing out the basic difference at work between Romanian on the one hand and Romance and English on the other as far as subordinates to volitional verbs are concerned: while Romanian uses the subjunctive in these contexts, the other languages use the infinitive

- (1) a. Ion_i vrea pro¹_i să plece. (Su1 = Su2)(Rom)
Ion want.PRES 3SG SĂ leave.SUBJ PRES 3SG
‘Ion wants to leave.’
- b. Ion_i vrea pro_j să plece Maria_j. (Su1 ≠ Su2)(Rom)
Ion want.PRES 3SG SĂ leave.SUBJ PRES 3SG Maria
‘Ion wants Mary to leave.’
- c. O Yannis_i theli na fai pro_i. (Su 1 = Su2)(Gr)
the Yannis want-PRES 3SG NA eat-SUBJ PRES 3SG
‘Yannis wants to eat.’

* University of Bucharest, maura.cotfas@gmail.com.

¹ Though the existence of *pro* has been recently questioned, I will use this notation for the null subjects of the embedded subjunctive clause, for more clarity.

- d. O Yannis_i theli na fai Maria_j. (Su1 ≠ Su2)(Gr)
 the Yannis want-PRES 3SG NA eat-SUBJ PRES 3SG Maria
 ‘Yannis wants Maria to eat.’ (c and d slightly adapted from Terzi 1992: 84)
- (2) a. Jean veut partir. (Su1 = Su2)(Fr)
 Jean want-PRES 3SG leave-INF
 ‘Jean wants to leave.’
- b. Jean_i veut qu’ il_{*i/j} parte. (Su1 ≠ Su2)(Fr)
 Jean_i want-PRES 3SG that he leave-SUBJ PRES 3SG
 ‘Jean wants him to leave.’
- a’. Juan quiere venir. (Su1 = Su2)(Sp)
 Juan want-PRES 3SG come-INF
 ‘Juan wants to come.’
- b’. Juan_i quiere que el_{*i/j} venga. (Su1 ≠ Su2)(Sp)
 Juan want-PRES 3SG that he come-SUBJ PRES 3SG
- c’. Juan_i quiere que pro_{*i/j} venga. (Su1 ≠ Su2)(Sp)
 Juan want-PRES 3SG that come-SUBJ PRES 3SG
 ‘Juan wants him to come.’
- a’’. Gianni vuole partire. (Su1 = Su2)(It)
 Gianni want-PRES 3SG leave-INF
 ‘Gianni wants to leave.’
- b’’. Gianni_i vuole che lui_{*i/j} parta. (Su1 ≠ Su2)(It)
 Gianni want-PRES 3SG that he leave-SUBJ PRES 3SG
- c’’. Gianni_i vuole che pro_{*i/j} parta. (Su1 ≠ Su2)(It)
 Gianni want-PRES 3SG that leave-SUBJ PRES-3SG
 ‘Gianni wants him to leave.’
- (3) a. John wants to go. (Su1 = Su2)(E)
 b. John wants him to go. (Su1 ≠ Su2)(E)

Let us classify the above examples under (1), (2), (3) in language classes, as follows: Class A: Romanian and Balkan languages; Class B: Romance languages (French, Italian, Spanish) and Class C: English. Obviously, the three classes differ in terms of the type of complement clause selected, this being either the subjunctive or the infinitive. Which of the two is chosen depends on the possibility or otherwise impossibility for the two subjects (the main clause subject and the embedded clause subject) to co-refer: languages in Class A use the subjunctive for both situations, in (1), languages in Class B use the infinitive for co-referent subjects but the subjunctive for disjoint subjects, in (2), whereas English (Class C) uses the infinitive for both situations (3). The chart below summarizes the data in (1)-(3):

(4)

	co-referent subjects	disjoint subjects
Class A (Romanian and Balkan languages)	Subjunctive	Subjunctive
Class B (Romance)	Infinitive	Subjunctive
Class C (English)	Infinitive	Infinitive

“Obviation” refers to the obligatory disjoint reference effect obtaining between the two subjects in Class B languages (whenever the subjunctive is selected), whereas “lack of obviation” describes the (more or less) opposite scenario, namely the possible (but not obligatory) co-reference of the two subjects in Class A languages with subjunctive complements.

Before moving on to the next section, let us briefly make three important observations as to the discussion at hand. First, the possible or otherwise impossible co-reference between the two subjects in the languages belonging to Classes A and B are phenomena manifest in subjunctive complement clauses selected by volitional (not obligatory control) verbs. Secondly, given that English does not use the subjunctive in these contexts, it remains outside the range of the present discussion. The final point concerns the difference in the constraints on disjoint reference: in Romance (Class B), the two subjects are *obligatorily* disjoint, whereas in Romanian and the Balkan languages (Class A) the two subjects can *either* co-refer (the default interpretation) *or* be disjoint in reference (the “marked” reading).

2. Briefly on obviation in Romance

2.1 Basic GB considerations

The working premise we are going to start from in this brief sub-section is the one according to which subjunctive tense in Romance is anaphoric and as such cannot define its own temporal specification, being dependent on the tense of the matrix clause². By this token, [+Present] or [+Future], i.e. [–Past]) volitional verbs do not allow [+Past] subjunctives in the complement clause (5), just as [+Past] volitionals do not allow for the selection of [+Present] subjunctives (6):

² See Rizzi (1989) for more details on Italian, Meirales and Raposo (1984) for Portuguese, and Picallo (1985) for Catalan.

- (5) a. Gianni vuole che io lavori /*lavorassi con voi. (It)
 Gianni want-PRES 3SG that I work-SUBJ PRES/*SUBJ PRES with you
 ‘Gianni wants me to work/to have worked with you.’
 b. Juan quiere que yo trabaje /*trabajara contigo. (Sp)
 Juan want-PRES3SG that I work-SUBJ PRES/*SUBJ PAST with you
 ‘Gianni wants me to work/to have worked with you.’
 (examples from Terzi 1992: 78)
 c. *Jean veut que j’aie travaillé avec lui. (Fr)
 Jean want-PRES 3SG that I have SUBJ PRES work-PAST PART with him
 ‘Jean wants me to have worked with him.’
- (6) Gianni voleva che io lavorassi /*lavori con voi. (It)
 Gianni want-IMPERF 3SG that I work-SUBJ PAST/*SUBJ PRES with you
 ‘Gianni wanted me to have worked/to work with you.’ (Terzi 1992: 77)

According to Rizzi (1989), there is a strong connection between the time restrictions of the subordinate and the obligatory disjoint reference of the two subjects. He therefore proposed a re-definition of the concept of “governing category”: as anaphoric tense, the subjunctive cannot govern the subject position of the subordinate, so the governing category domain is extended to the main clause, the minimal projection containing a subject and a proper governor for the embedded subject (i.e. main clause INFL)³. His proposal of domain extension for subjunctive dependents parallels domain extension in the case of infinitival complements, but its novelty resides in the claim that not only non-finite, but also finite tenses can be anaphoric.

Assuming domain extension, the embedded subject (null or overt) of subjunctive clauses in Romance has to be disjoint in reference from the main clause subject on account of condition B of Binding Theory (pronouns need to be free in their domain):

- (7) a. Jean_i veut qu’ il*_{i/j} mange le pizza. (Fr)
 Jean want-PRES 3SG that he eat-SUBJ PRES 3SG the pizza
 ‘Jean wants him to eat the pizza.’
 b. Juan_i quiere que pro*_{i/j}/el*_{i/j} venga mañana. (Sp)
 Juan want-PRES 3SG that he come-SUBJ PRES 3SG tomorrow
 ‘Juan wants him/(her) to come tomorrow.’
 c. Gianni_i vuole che pro*_{i/j}/lui*_{i/j} parta. (It)
 Gianni want-PRES 3SG that he leave-SUBJ PRES 3SG
 ‘Gianni wants him/(her) to leave.’

³ For similar claims of “domain extension”, see also Kempchinsky (1987) for the Spanish data.

2.2 Minimalist approaches to binding (and obviation)

Gallego (2007) suggests a reformulation of binding within a probe-goal approach, doing away with the necessity for the binder to c-command the bindee (in root clauses): Condition A is abided by via an operation of Multiple Agree whereby the matrix Tense (T_S) probes (and agrees with) both binder and bindee:

- (8)
$$[_{CP} C [_{TP} T_S [_{v^*P} EA \ v^* [_{VP} V \ IA]]]] \text{ Multiple Agree } (T_S, EA, IA)$$

(Gallego 2007: 198)

A similar claim is that there is a relation between case and binding (within the probe-goal frame): if α & β are formally different (i.e. bear different case), α & β are also semantically different, i.e. obviative/disjoint in reference (condition B):

- (9) John _{i (Nom)} called him _{*i/j (Acc)} (Gallego 2007:199)

For condition A to obtain, anaphors (like the reflexive *se*, for example) are phi-defective and cannot be distinguished from their antecedents in terms of case (i.e. the system takes them to be one and the same)

- (10) German_i *se*_i afeitó (a si_i mismo_i)
 German *se* shave-PAST 3SG (to self same)
 ‘German shaved himself.’ (Gallego 2007:199)

Put in a nutshell, α binds β if they are both goals of the same probe (T_S). This would make sure that condition A is met. Otherwise, i.e. when the subject and object have different probes, T_S for binder (the subject), T_O/v^* for bindee (the object)), α & β are obviative (condition B).

Obviously, the above illustrate co-reference restrictions on subjects and objects in simple sentences, whereas our focus is on complex sentences involving subjunctive dependents. According to the author, the same reasoning applies in contexts involving embedding of subjunctive subordinates in Spanish. Gallego (2007: 209) dubs this “long-distance obviation”, a mechanism accounted for by the assumption that the [T] feature⁴ of the two DPs is valued by different matrix T heads: T_S (T_{Subject}) for the main clause subject DP and T_0 (T_{object})⁵ for the embedded subject (null or overt):

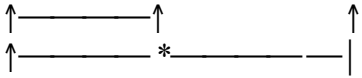
⁴ Case can be viewed as an uninterpretable aspect/tense ([T]) feature on D heads (see Pesetsky and Torrego 2001).

⁵ Gallego (2007) adopts a similar “clausal backbone” as that assumed in Pesetsky and Torrego (2004), where T_S is responsible for Nominative case assignment, whereas T_0 , “sandwiched” between v^*P and VP assigns Accusative case to the internal argument (the DO DP):

(i)
$$[_{CP} C [_{TP} T_{\text{Subject}} [_{v^*P} EA \ v^* [_{TP} T_{\text{object}} [_{VP} V \ IA]]]]]$$
 (Gallego 2007: 79)

- (11) a. *German_i quiere que pro_i llame.
 German want-PRES 3SG that pro call-SUBJ PRES 3SG
 ‘German wants him to call.’ (Gallego 2007: 209)
- b. Juan_i desea [_{CP} C que el_{*i/k} admire a Charlie Mingus]
 Juan wish-PRES 3SG that he admire-SUBJ PRES 3SG to Charlie Mingus
 ‘Juan wants that he admire Charlie Mingus’ (Gallego 2007: 209-210)

This basically amounts to saying that subjunctive subordinates resemble ECM constructions – proportions kept, naturally (i.e. not claiming that subjects within subjunctive complements bear Accusative case, for example). Interestingly enough, Rivero (1987) had advanced a similar claim in an older (GB) study, where she introduces the notion of *Balkan transparency*, arguing that the subjects, which she takes to occupy a pre-verbal position) of subjunctive complements in these languages, i.e. the NP₁ in (12), can fall under Exceptional Case Marking on account of the “transparency” of both CP and IP (to be understood as MP):

- (12) V₁ [_{CP} C [_{IP} NP₁ [_{I'} I [_{VP} V₂ NP₂]]]] where V₁ = matrix verb

 NP₁ = embedded subject
 V₂ = embedded verb
 NP₂ = object

In short, because C° and I° agree morphologically, CP and IP are co-indexed, IP is not a blocking category and CP therefore does not inherit any “barrierhood” from the IP (since they are co-indexed). As such, NP₁, though governed by lower INFL, is accessible to elements outside of the embedded clause (i.e. V₁), which assigns it case, as it happens with ECM constructions (while the theta-role is assigned to the clause sister of V₁).

While the two studies sketched above obviously operate within different theoretical frames, it is interesting to see that in spite of these roughly similar conclusions can be reached.

3. Lack of obviation in Romanian

3.1 GB considerations

The question we shall try to provide an answer to in this third section can be formulated as follows: Why is it that in Romanian (and in the Balkan languages) the subjects of subjunctive complements (selected by volitional verbs) can co-refer with the main clause subject antecedent?

In an attempt to answer the above question, Farkas (1985) compares Romanian to other Romance languages, noticing that while the latter (Class B) have at their disposal two productive constructions (the Infinitive *and* the Subjunctive) which they use for different purposes, i.e. the infinitive to signal co-reference; the subjunctive for (obligatory) disjoint reference), as in example (2) above, Romanian and the Balkan languages (Class A) have *only one* productive construction that they can use, i.e. the subjunctive, in (1) above and (13) below).

The fact that in Romanian and the languages of the Balkans the two subjects can co-refer is accounted for by the very lack – or scarcity – of an alternative (infinitival) construction: since Romanian has significantly reduced its use of Infinitives, it will make use of the same construction – the subjunctive – to signal both co-reference and/or disjoint reference:

- (13) a. Ion_i vrea să plece pro_{i/j} în vacanță
 Ion want-PRES 3SG SĂ leave-SUBJ PRES in holiday
 ‘Ion wants to leave on holiday.’

3.1.1 The complement clause as governing category in Romanian

Still within a comparative frame, Farkas (1985) shows that while Romance subjunctive tense is anaphoric and these languages lack modal particles, using instead the same complementizer for both indicative and subjunctive clauses, obviation (i.e. obligatory disjoint reference) is accounted for by domain extension (to the main clause), as we have seen above.

Romanian on the other hand disposes not only of a specific modal marker (*să*), but also of a specific [SUBJ] complementizer, *ca* (vs. *că* of [IND]). When present, *ca* functions as a barrier for domain extension, establishing the complement as governing category; when absent, the opacity of the complement clause is maintained by *să*, which “takes over” the barrierhood of *ca*, behaving itself as a C-like element⁶. As such, the null embedded subject is interpreted as a pronoun (principle B), free in its governing domain and able to be either co-referent with or disjoint from the main clause antecedent. Empirical evidence does show that volitional verbs in Romanian do not impose similar restrictions on the complement clause (subjunctive) tense as their counterparts in Romance, as in (5) and (6) above⁷:

⁶ See also Dobrovie Sorin (1994) for the ambiguity of *să* (treated both as a C and a T element); for similar assumptions see Hill (2003) and Alboiu (2007). The latter takes *să* to fill a (low) C head in the absence of *ca*.

⁷ This seems to show that Romanian subjunctives have a higher degree of independence as compared to their Romance counterparts.

- (14) a. Aş vrea /Vreau să plec.
have.COND 1SG want/want-PRES 1SG SĂ leave-SUBJ PRES 1SG
'I'd like to leave.'
- b. Aş vrea /Îmi doresc să fi plecat.
have.COND 1SG WANT/REFL 1SG wish-PRES 1SG SĂ be leave-SUBJ PAST
PART
'I wish I had left.'
- c. Vroiam /Am vrut să plec.
want-IMPERF 1SG/have-1SG want PAST PART SĂ leave-SUBJ PRES 1SG
'I wanted / I was longing to leave.'
- d. Vroiam /Aş fi vrut să fi plecat
want-IMPERF 1SG/have.COND-1SG be want.PAST PART SĂ be leave-
SUBJ PAST
mai devreme.
more early
'I wished I had left earlier.'

The chart in (15) captures the differences between Romanian and Romance with respect to the restrictions imposed by the selecting predicate:

(15)

Romance		Romanian	
Main clause	Embedded clause	Main clause	Embedded clause
Present	Present	Present	Present
*Present	Past	Present	Perfect
*Past	Present	Past	Present
Past	Past	Past	Perfect

3.1.2 Domain extension: The main clause as governing category in Romanian

Contrary to the suggestions made in Farkas (1985), Dobrovie Sorin (1994) proposes domain extension for Romanian subjunctives selected by volitional verbs. At first sight, this might seem puzzling, considering that the very same proposal was advanced for Romance languages and that – as we have just seen – Romanian does not belong with these as far as subject reference is concerned.

By this token, one first issue to be settled is how domain extension can be accounted for in Romanian. The author's answer draws on the strict adjacency between the modal marker *să* and the verb. More precisely, only clitic-like elements can break their adjacency, but never the subject:

- (16) *să nu îl mai *Ion vadă*
să NEG CL 3SG M ACC more John see-SUBJ PRES 3SG
 ‘(Ion) not to see him anymore’

Dobrovie Sorin’s idea is that *să* (*neg cl*) *V-Tense-AGR* form a complex verbal category of the X^o type by a mechanism which she dubs “functional coindexation/incorporation”⁸. In Romanian therefore *să* + *verb_{Subj}* form a C/I/VP constituent, unlike the case of French or English for example, whose subjunctive complement clauses are CP projections because their specific complementizers (*que/that*) cannot undergo Incorporation into the main clause verb.

A second question now comes to mind: Why is it that the C/I/VP constituent does not block domain extension? By way of Co-indexation, *să* and Agr belong to the same complex constituent X^o and as such the subjunctive marker *să* cannot govern any of the other elements within the constituent and neither can it govern Agr, which identifies the null embedded subject. Since subjects need a proper governing domain, the null subjects of Romanian embedded subjunctives will seek the next proper governor in the main clause (verb), thereby accounting for the necessity of domain extension.

Under this account therefore, the null subject of Romanian subjunctives has two options. It can function as: (i) contextual anaphor, i.e. its anaphoric interpretation is context-bound, not intrinsic, unlike the PRO subjects of French and English infinitives, which are intrinsically marked [+anaphoric]; (ii) pronoun, free to co-refer with or be disjoint in reference from the main clause subject.

As far as the subjunctive complementizer *ca* is concerned, it is claimed to have similar effects as *que* in French: dislocated constituents always surface between *ca* and the *să*+ verb complex, preventing its Incorporation within the verbal complex. As such, *ca* functions as a barrier for domain extension:

- (17) a. *Vreau [ca pe Ion să-l trateze*
 want-PRES 1SG that PE Ion SĂ CL 3SG M ACC treat-SUBJ PRES 3SG
doctorul Ionescu].
 doctor-the Ionescu
 ‘I want dr Ionescu to treat Ion.’ (Dobrovie-Sorin 1994: 86)

3.2 A minimalist perspective on the lack of obviation in Romanian

A recent minimalist perspective on the issue at hand can be found in Alboiu (2007), even though the author actually addresses problems pertaining to control rather than obviation. First of all, let us lay out two key considerations to bear in mind when discussing Alboiu’s (2007) theory.

⁸ Adjacent functional categories can be co-indexed.

First off, the subject is always generated *in-situ* in Romanian (Spec vP, i.e. within the subordinate), as in (18a). If it surfaces pre-verbally, it is not for syntactic reasons (EPP), but for semantic-pragmatic ones (topicalization, de-rhematization, focus, etc.)

- (18) a. Încearcă/vrea [să-l ajute *Mihai* pe
try/ want-PRES 3SG SĂ CL 3SG M ACC help-SUBJ PRES 3SG Mihai PE
Victor]⁹
Victor
'Mihai is trying/wants to help Victor.'
- b. *Mihai* încearcă /vrea [să-l ajute
Mihai tr/ want-PRES 3SG SĂ CL 3SG M ACC help-SUBJ PRES 3SG
pe Victor].
PE Victor
'Mihai is trying/wants to help Victor.'

Second, subjunctives selected by control verbs in Romanian (the so-called *să*-subjunctives) are obligatory control constructions, C_{Low} projections, therefore non-phasal. Conversely, subjunctives selected by volitional verbs (*ca*-subjunctives) are non-obligatory control constructions, C_{High} phasal projections.

Importantly however, in the absence of *ca* subjunctives selected by volitionals are ambiguous between an OC and an NOC reading, i.e. they can be both phasal and non-phasal¹⁰:

- (19) a. Vrea [C_{Low} să cânte Mihai la violoncel]
b. Vrea_{e1} [C_{Low} să cânte_{e2} Mihai_{e1,e2} la violoncel] (OC)
want-PRES 3SG SĂ play-SUBJ PRES Mihai at cello
'Mihai wants to play the cello.'
- (20) a. pro_{i/j} vrea [C_{High} să cânte Mihai_i la violoncel]
b. El/ea_j vrea [C_{High} Să cânte Mihai_i la violoncel] (NOC)
e_{i/j}/he/she want-PRES 3SG SĂ play-SUBJ SĂ Mihai_i at cello
'He/She wants Mihai to play the cello.' (adapted from Alboiu 2007: 197)

In (19), the OC reading necessarily involves theta-chain formation, for which the C_{Low} non-phasal status of the subjunctive clause is vital (otherwise the

⁹ When the subject is embedded the structure is ambiguous between a reading whereby the embedded DP targets the matrix subject position and one in which the null matrix subject is different from the embedded DP.

¹⁰ In order for a complement clause to be phasal, both theta roles (analyzed as features on the verb, in the spirit of Hornstein (1999 and 2001) and the subject's case feature need to be checked (i.e. valued) within the complement domain (which, as phase, should be a CP projection).

embedded subject DP could not probe the theta role on the matrix verb, which also assigns it Nominative case). In (20), the subordinate subject cannot be co-indexed with either *pro* or *el* in the matrix because – given the phasal domain of the subjunctive – it cannot target elements from the matrix.

For the purposes of the present discussion, lack of obviation in Romanian can be accounted for by the ambiguous status of *ca*-less subjunctives, which can be both non-phasal (C_{Low}), triggering co-reference, or phasal (C_{High}), imposing disjoint reference. In the presence of *ca*, the OC reading is ruled out (21) and the subordinate is unambiguously C_{High} :

- (21) $pro_{k/*j}$ vrea [C_{High} *ca* mâine să cânte Mihai_j
 $pro_{k/*j}$ want-PRES 3SG that tomorrow SĂ play-SUBJ PRES 3SG Mihai_j
 la violoncel].
 at cello
 ‘He/she wants Mihai to play the cello.’
 *Mihai wants to play the cello tomorrow. (Alboiu 2007: 198)

What (21) seems to show is that Romanian *ca*-subjunctives induce obviation effects, just like Romance subjunctives, with the difference that in Romanian the subject needs to be generated (and remain) *in situ* (i.e. within the subordinate clause) for obviation to obtain, whereas in Romance it appears to the left, in the main clause (for EPP reasons).

4. A closer look at obviation in Romanian subjunctives.

We shall organize this fourth section of the paper around three main questions. First of all, do *să*-subjunctives trigger obviation effects (i.e. obligatorily disjoint subjects) in Romanian? According to the claims made so far, *să*-subjunctives never trigger obligatory disjoint reference between the two subjects: the DP and the null subject can co-refer (the default/preferred reading), regardless of whether the DP subject remains *in situ* (22b) or appears leftmost in the main clause (22a):

- (22) a. Mihai_i vrea să cânte pro_i la violoncel.
 Mihai want-PRES 3SG SĂ play-SUBJ PRES 3SG at cello
 b. pro_i vrea să cânte (Mihai_i) la violoncel (Mihai_i)
 pro want-PRES 3SG SĂ play-SUBJ PRES 3SG (Mihai) at cello (Mihai)
 ‘Mihai wants to play the cello.’ (default reading)

Interestingly, the examples under (22) equally allow for a disjoint reference interpretation (23):

- (23) a. Mihai_i vrea să cânte pro_j la violoncel.
 Mihai want-PRES 3SG SĂ play-SUBJ PRES 3SG at cello
 ‘Mihai wants him/her/them to play the cello.’
 b. pro_i vrea să cânte (Mihai_j) la violoncel (Mihai_j)
 pro want-PRES 3SG SĂ play-SUBJ PRES 3SG (Mihai) at cello (Mihai)
 ‘He/she wants Mihai to play the cello.’

An observation is in order at this point: though similar on interpretive grounds, (22a) sounds to me stronger than (22b) as far as the co-reference reading is concerned. That is, co-reference is more readily obtained with the DP subject appearing leftmost. By the same token, (22b) sounds stronger than (22a) as far as the disjoint reference is concerned, a fact supported by the set of examples in (24), where we have introduced another main clause compounded with the former and containing another DP subject.

- (24) a. Matei_i tocmai a venit în vizită și Mihai_j vrea să
 Matei just has arrived-PAST PART in visit and Mihai want-PRES 3SG SĂ
 cânte pro_{i/j} la violoncel.
 sing-SUBJ PRES 3SG at cello
 ‘Matei_i has just arrived on a visit and Mihai_j wants pro_j to play the
 cello/ Matei_i has just arrived on a visit and Mihai_j wants him_i to play
 the cello.’
 b. Matei_i tocmai a venit în vizită și pro_{i/*j} vrea să
 Matei just has arrived-PAST PART in visit and want-PRES 3SG SĂ
 cânte (Mihai_j) la violoncel (Mihai_j)
 sing-SUBJ PRES 3SG (Mihai) at cello (Mihai)
 ‘Matei_i has just arrived and (he_i) wants Mihai_j to play the cello.’

In (24b), displaying a DP subject *in situ* within a *să*-subjunctive, the disjoint reference interpretation obtains. It appears therefore that when it surfaces in the leftmost position (matrix SpecTP) (22a, 24a), the DP subject seems more liable to be interpreted as co-referent with the embedded null subject than if it remains *in situ* (embedded Spec vP), as in (22b) and (24b), in which case a disjoint reference interpretation is more readily available between the embedded DP subject and the main clause null subject.

In what follows, we want to show that the contention is roughly the same in the case of *ca*-subjunctives in Romanian. This brings us to the second question, namely: If *ca* is taken as barrier for domain extension (or as a phasal element, in minimalist terms), do *ca*-subjunctives in Romanian prevent co-reference, i.e. do *ca*-subjunctives trigger obviation effects?

Example (21) from Alboiu (2007) shows that Romanian *ca*-subjunctives do trigger obviation effects (*obligatory* disjoint reference) *when the subject remains in situ*. By way of consequence, the embedded DP subject must be interpreted as disjoint in reference from the main clause null subject¹¹. However, obviation no longer obtains with *ca*-subjunctives (i.e. the subjects *can* be co-referent and indeed are so in the default reading) when the DP subject surfaces leftmost, in the main clause SpecTP, contrary to some claims in the literature (Roussou 2001, Landau 2004) maintaining that the presence of *ca* imposes disjoint subjects¹², as in (25) and (26) below:

- (25) a. Ion vrea *ca* să mănânce.
 Ion want-PRES 3SG that SĂ eat-SUBJ PRES 3SG/PL
 (Roussou 2001: 92, example (35b), with the interpretation in (25b))
 b. Ion_i vrea *ca* x_{*i/j} să mănânce.
 Ion_i want-PRES 3SG that x_{*i/j} SĂ eat-SUBJ PRES 3SG/PL
 ‘Ion wants **him/her/them** to eat.’
 (26) Ion₁ vrea *ca* e_{2/*1} să mănânce. (Landau 2004: 857)
 Ion₁ want-PRES 3SG that e_{2/*1} SĂ eat-SUBJ PRES 3SG/PL
 ‘Ion wants **him/her/them** to eat.’

There are two problems with the above examples: first, they allow the adjacency of the complementizer *ca* and the modal marker *să*, contrary to standard language requirements¹³. Second, even allowing *ca* to precede *să*, it does not impose obligatory disjoint reference between the main clause subject and the embedded null subject. Actually, their interpretation is similar to the examples (22a) and (23a) above, i.e. the two subjects can either co-refer (the default reading) or be disjoint in reference:

- (27) a. Ion_i vrea (?*ca*) să mănânce pro_{i/j}.
 Ion want-PRES 3SG that SĂ eat-SUBJ PRES 3SG/PL
 ‘Ion wants to eat.’ / ‘Ion wants him/her/them to eat.’

What (27) shows is that null-subject *ca*-subjunctives do not trigger obligatory disjoint reference effects (i.e. obviation), since there is no interpretational difference between (28a) below, a *să*-subjunctive and (28b), a *ca*-subjunctive (they allow both the co-reference and disjoint reference readings):

¹¹ In a sort of “reverse” obviation from that in Romance, where the DP subject appears in the main clause and cannot be co-indexed with the null subject in the subordinate.

¹² In contexts where the lexical DP subject appears in the main clause, which the two cited authors take to be the classical scenario for Romanian (*contra* Alboiu 2007).

¹³ Many authors claim that *ca să* is allowed in colloquial Romanian.

- (28) a. Ion vrea **să** plece devreme mâine.
 Ion want-PRES 3SG **SĂ** leave-SUBJ PRES **3SG/PL** early tomorrow
 ‘Ion wants to leave early tomorrow.’/ ‘John wants him/her/them to’
- b. Ion vrea **ca** mâine să plece devreme.
 Ion want-PRES 3SG that tomorrow **SĂ** leave-SUBJ PRES **3SG/PL** early
 ‘Ion wants to leave early tomorrow.’/ ‘Ion wants him/her/them to leave early tomorrow’

The puzzle we are now faced with is to explain the difference between examples like the one in (21), from Alboiu 2007), and (28b) above, repeated below for convenience:

- (21) $pro_{i/k}$ vrea **ca** mâine să plece (**Ion_i**) devreme (**Ion_i**).
 $pro_{i/k}$ want-PRES 3SG that tomorrow **SĂ** leave-SUBJ PRES 3SG (**Ion_i**) early (**Ion_i**)
 ‘S/he wants Ion to leave early tomorrow.’
- (28) b. **Ion_i** vrea **ca** mâine să plece $pro_{i/k}$
 Ion_i want-PRES 3SG that tomorrow **SĂ** leave-SUBJ PRES **3SG/PL**
 devreme
 early
 ‘Ion wants to leave early tomorrow.’/ ‘Ion wants him/her/them to leave early tomorrow.’

In other words, the question is why *ca* prevents co-reference in the former (i.e. induces obviation effects), but allows it in the latter. A possible answer obviously lies in the position of the lexical subject (the binder/the probe) in the two sentences above: within the *ca*-subjunctive in (21)/(28a), i.e. *in situ* or displaced leftmost in (28b). Consequently, only *ca*-subjunctives which host lexical subjects whose phi-features match those of the matrix verb¹⁴ induce obviation (28a); null subject *ca*-subjunctives allow for both the co-reference and the disjoint reference reading (28b).

On formal grounds, it remains to be seen how *ca* is devoid of barrierhood (or can become non-phasal) when the lexical subject moves from its position *in situ* to the matrix SpecTP. One explanation we could venture here could be that – within a copy-theory of movement – reconstruction effects obtain only with a

¹⁴ Cases where the matrix predicate has different phi-specifications than those of the embedded verb (and subject) (or vice-versa) are clear-cut and obvious cases of disjoint reference:

- (i) vreau /vrem/vrei/vreți/vor **ca** mâine să plece devreme Ion.
 want-1SG/1PL /2SG/2PL /3PL that tomorrow **SĂ** leave-SUBJ PRES **3SG** early Ion
 ‘I/we/you/they want Ion to leave early tomorrow.’
- (ii) Ion vrea **ca** mâine să plec /plecăm/pleci/plecați/plece.
 Ion want-PRES **3SG** **ca** tomorrow **SĂ** leave-SUBJ PRES **1SG/1PL** /2SG /2PL /3PL
 ‘Ion wants me/us/you/you/them to leave tomorrow.’

c-commanding antecedent (i.e. only when the higher copy is pronounced). Along these lines, Alboiu (2007: 205) mentions that “Romanian exploits syntactic structure to encode sentence pragmatics. Specifically, *independent of formal feature checking, phrases may dislocate for novel interpretive effects*”. The author thus proposes the presence of an OCC (occurrence) feature, responsible for the pronunciation of the higher copy. For the purposes of our discussion, this feature could be responsible for devoiding the complementizer *ca* of its barrierhood/phasal status. Moreover, since *ca*-subjunctives have in principle two Nominative case positions (unlike controlled subjunctives), in order for the co-reference reading to obtain the DP subject moves leftmost to make sure it surfaces closest to the matrix verb. Conversely, in the absence of the OCC feature, the DP subject remains (or is pronounced) *in situ* and *ca* retains its phasal properties.

The examples listed below under (29) and (30) summarize what we have said so far. (29) gives the variants with the DP subject in the main clause, (30) the variants with the subject in the subjunctive complement. In all the examples, the lexical DP matches the phi-features of the null subject it is supposed to bind or probe for (or, in other words, it matches the phi-features of the verb with an empty subject):

- (29) a. Ion_i vrea **să** plece pro_{i/j} mâine.
 Ion want-PRES **3SG** SĂ leave-SUBJ PRES **3SG/PL** tomorrow
 ‘Ion wants to leave//wants him/her/them to leave tomorrow.’
 b. Ion_i vrea **ca** mâine să plece pro_{i/j}.
 Ion want-PRES **3SG** that tomorrow SĂ leave-SUBJ PRES **3SG/PL**
 ‘Ion wants to leave//wants him/her/them to leave tomorrow.’
- (30) a. pro_{i/j} vrea **să** plece (Ion_i) mâine (Ion_i)
 pro want-PRES **3SG** SĂ leave-SUBJ PRES **3SG** (Ion_i) tomorrow (Ion_i)
 ‘S/he wants Ion to leave.’ or
 ‘Ion wants to leave.’
 b. pro_{i/*j} vrea **ca** mâine (Ion_j) să plece (Ion_j)
 pro want-PRES **3SG** that tomorrow (Ion_j) SĂ leave-SUBJ PRES **3SG** (Ion_i)
 ‘S/he wants Ion to leave.’ ⇒ Su₁ ≠ Su₂ ⇒ **obviation effects**

The conclusion to be drawn based on the data in (29) is that *să*-subjunctives never trigger obligatory disjoint reference effects, either when the DP subject is pronounced in the main clause, or when it remains *in situ*, though the position of the subject does have different interpretive effects, as already discussed above. As for *ca*-subjunctives, they trigger obligatory disjoint reference between the two subjects only when the subject DP remains *in situ*; otherwise, lack of obviation obtains, i.e. the possibility for the two subjects to either co-refer (the default reading) or be disjoint in reference.

Taking things one step further, it would be interesting to see what would happen if instead of the null subject an overt pronominal subject appeared in the contexts above, one whose phi-features match those of the lexical DP, namely the pronoun *el* ‘him’ in Romanian. This is the third and final question we shall tackle in this section and it stems from the fact that in Romance obviation obtains with both null and overt pronouns (with the exception of French, a non-pro drop language).

Interestingly, we shall show in what follows that if the overt pronominal *el* is used instead of the “zero” pronoun in the contexts above, obviation obtains throughout in Romanian. We will use the same examples as in (29) and (30), only with the overt *el* instead of the null pronoun. Thus, (31) below gives the variants with the DP subject in the main clause, whereas in (32) the DP appears in the complement:

- (31) a. Ion_i vrea **să** plece $\text{el}_{*i/j}$ mâine $(\text{el}_{*i/j})^{15}$.
 Ion want-PRES 3SG SĂ leave-SUBJ PRES3SG he tomorrow
 ‘John wants him to leave tomorrow.’
 b. Ion_i vrea **ca** mâine (el_j) să plece (el_j) .
 Ion want-PRES 3SG that tomorrow (he) SĂ leave-SUBJ PRES 3SG (he)
 ‘John wants him to leave tomorrow.’
- (32) a. $\text{El}_{*i/j}$ vrea **să** plece (Ion_i) mâine (Ion_i) .
 he want-PRES 3SG SĂ leave-SUBJ PRES 3SG (Ion) tomorrow (Ion)
 ‘He wants John to leave tomorrow.’
 b. $\text{El}_{*i/j}$ vrea **ca** mâine (Ion_i) să plece (Ion_i) .
 he want-PRES 3SG that tomorrow (Ion) SĂ leave-SUBJ PRES 3SG (Ion)
 ‘He wants John to leave tomorrow.’

The examples in (32) with the subject *in situ* and the pronominal in the main clause are clear cases of disjoint reference with both *să*- and *ca*-subjunctives, i.e. cases where two Nominative positions are filled: one in the main clause, the other in the subordinate.

Of interest for us is to explain the difference between (29) and (31) above. Namely, why the appearance of an overt pronominal with similar phi-features as those of the main clause subject induces obviation effects that do not appear if a zero pronoun is used.

Note that the situation in (31) is roughly similar to the one in Romance (see (2) above), where the appearance of the subjunctive with either overt or null subjects induces disjoint readings. However, unlike Romance null-subject

¹⁵ Here *el* should be pronounced with natural intonation, i.e. it should not be focused or stressed. See below for more details on stressed pronouns with matching features.

subjunctives, Romanian subjunctives with null embedded subjects no longer induce a disjoint reference reading, allowing the null subject to either co-refer (in the default reading) or be disjoint in reference from the main clause subject.

It seems therefore that in Romanian (Class A) subjunctives, null subjects can function both as anaphors and pronouns, whereas the overt pronominal subject (*el*) functions as pronoun, inducing disjoint reference. In Romance (Class B), both the null and the overt subject (*il/el/lui*) function as pronouns, triggering obviation effects.

We can therefore conclude that different interpretive effects obtain in Romanian subjunctives function of the type of subject (null vs. overt). In order to account for these different interpretive effects, let us remain within this comparative frame. What the examples below show is that (i) null subject subjunctives in Romanian (31)/(33) pattern with infinitival clauses in Romance (34), and (ii) Romanian subjunctives featuring the overt pronominal subject *el* (32)/(35) pattern with the subjunctive in Romance, either with null or overt subjects (*il/el/lui*), as in (36):

- (33) Ion_i vrea să plece pro_{i/(j)}. (null embedded subject,
Ion want-PRES 3SG SĂ leave-SUBJ PRES 3SG co-reference preferred)
'Ion wants to leave.'
- (34) a. Gianni_i vuole PRO_i partire
b. Juan_i quiere PRO_i andarse.
Jean_i veut PRO_i partir
Gianni/Juan/Jean want-PRES 3SG leave-INF
'Gianni/Juan/Jean wants to leave.'
- (35) Ion_i vrea ca el_j să plece.
Ion want-PRES 3SG that he SĂ leave-SUBJ PRES 3SG
'Ion wants him to leave.'
- (36) a. Gianni_i vuole che lui_j/pro*_{i/j} parta.
b. Juan_i quiere que el_j/pro*_{i/j} parte
c. Jean_i veut qu'il_j parte.
Gianni/Juan/Gianni want-PRES 3SG that he leave-SUBJ PRES 3SG
'Gianni/Juan/Jean wants him/her to leave.'

In what follows, we would like to propose an account for the above facts, one that builds on Farkas's (1992) suggestion that the infinitive and the subjunctive are 'rivals' in Romance, blocking each other function of the reference relation between the two subjects. What we want to suggest here is that a similar "rivalry" is at work in Romanian, this time not between two distinct moods (since Romanian rarely uses the infinitive in these contexts), but between subjunctive clauses with either null or overt pronominal subjects. More to the point, null

subject subjunctives (the more economic structure) shall be used to signal co-reference, whereas subjunctive clauses containing the overt pronominal subject *el* (with matching phi-features to those of the main clause subject) – the more complex structure – shall be used to signal disjoint reference. The next section offers evidence in support of the different interpretation of null versus overt pronouns.

5. Supporting evidence for the different interpretation of zero vs. overt pronouns

As mentioned before, this section is meant to bring supporting evidence that zero pronouns may trigger different interpretive effects from their overt counterparts.

Reinhart (1999) discusses two ways whereby pronouns can be processed: (variable) binding (pronouns/reflexives are interpreted as variables bound by an operator in logical syntax), as in (38a), or “covaluation”, i.e. the assignment of a value from the discourse storage, as in (38b,c).

- (37) a. Lucie didn't show up today.
Lili thinks *she*'s got the flu.
- (38) a. Binding: *Lili* (λx (x thinks x has got the flu))
b. Covaluation: (λx (x thinks z has got the flu)) & $z = \textit{Lucie}$
c. Covaluation: (λx (x thinks z has got the flu)) & $z = \textit{Lili}$)

Under binding, *she* is interpreted as a variable bound by the λ -operator (38a), meaning that *Lili* is part of the set of individuals who think they have got the flu. Under covaluation, the free variable z is assigned a value from the discourse storage: in the context of (37a), *she* will be identified with *Lucie*, an available discourse entity, but lack of such a context *she* can also be associated with *Lili* (38c).

Below are the conditions under which binding and covaluation obtain (Reinhart 2000):

- (39) (Variable) binding condition:
 β can be construed as a variable bound by α iff
 α c-commands β
 β is a free variable and
in the local domain of α , β is not a pronoun (condition B)
- (40) Covaluation Rule I
 α and β cannot be covalued if

α c-commands β
 α cannot bind β and
 the covaluation interpretation is indistinguishable from what would be obtained via binding.

For the purposes of our discussion, we want to claim that the null pronouns of Romanian subjunctives are interpreted via binding, while the overt pronominal subject *el* gets the co-valuation interpretation.

- (41) a. Ion_i vrea să plece [e_i] mâine
 Ion want-PRES 3SG SĂ leave-SUBJ PRES 3SG tomorrow
 ‘Ion wants to leave tomorrow’
 b. Ion_i vrea ca el_j să plece mâine.
 Ion want-PRES 3SG that he SĂ leave-SUBJ PRES 3SG tomorrow
 ‘Ion wants him to leave tomorrow.’

The null pronoun in (41a) is linked to the main clause antecedent by binding (it becomes a variable bound by the λ -operator, meaning that *Ion* is part of the set of individuals who want to leave and thus he himself wants to leave). In principle, the overt pronoun could also allow for a binding construal (under which the pronoun would be turned into a variable, lack of further context) but co-valuation is also a high possibility (probably the preferred one, since binding can be signaled by an alternative construction): *el* remains free to be assigned a value from the discourse storage:

- (42) Matei_i a venit în vizită și Ion_j vrea ca el_{i/*j} să
 Matei has come-PAST PART in visit and Ion want-PRES 3SG that he SĂ
 plece mâine.
 leave-SUBJ PRES 3SG tomorrow
 ‘Matei_i has just arrived and Ion_j wants him_{i/*j} to leave tomorrow.’

Covaluation is therefore possible because it triggers a different interpretation from that obtained via binding¹⁶.

The second piece of evidence comes from Ariel’s (1991, 1994) studies on anaphora resolution within and across sentences. The author dubs anaphoric expressions “accessibility markers” and claims that these are ranked according to varying degrees of accessibility determined by the salience of the antecedents: the more salient the antecedent, the higher the degree of accessibility encoded by the

¹⁶ See also Pagurschi and Tigău (2009) for null versus overt elements in simple sentences.

anaphoric expression meant to resume it. Conversely, the more distant/less salient the antecedent, the lower the degree of accessibility of the referring expression in question. These degrees of accessibility are influenced by three main factors: informativity, rigidity (ability to refer to a unique antecedent) and attenuation (i.e. phonological size). The more informative/rigid/stressed the anaphoric element is, the lower its degree of accessibility, the less informative/rigid and more attenuated an anaphoric element is, the higher its degree of accessibility.

Accessibility markers can thus be ordered in terms of their degrees of accessibility:

- (43) zero < reflexives < agreement markers < clitic pronouns < unstressed pronouns < stressed pronouns < stressed pronouns + gesture < proximal demonstrative (+ NP) < distal demonstrative (+NP) < proximal demonstrative (+NP) + modifier < distal demonstrative (+NP) + modifier < first name < last name < short definite description < long definite description < full name < full name + modifier

According to the ordering in (43), the null pronoun is the highest accessibility marker. As such, it will identify a highly accessible antecedent, i.e. the subject *Ion* in (41 a). Since it has priority over the overt pronoun, it will be chosen (over *el*) to retrieve the subject antecedent. As for the overt pronoun *el* – more informative and unattenuated – it will look for a less salient antecedent, the remote subject of the superordinate clause, *Matei*, in (42).

One last observation is in order here, one that will perhaps need special attention and more space, since it involves the question of focus and how focalized elements can alter the interpretation of otherwise unfocused constituents. What we want to underline here is that there are cases when overt pronouns have no choice but to behave as bound variables, because null pronouns are not allowed in such environments, i.e. in (contrastive) focus positions or in the presence of certain focal particles:

- (44) a. Ion_i vrea ca EL_i să plece.
 Ion want-PRES 3SG that HE SĂ leave-SUBJ PRES 3SG
 ‘Ion_i wants him_i to be the one who leaves.’
 b. Ion_i vrea să plece numai EL_i/și EL_i.
 Ion want-PRES 3SG SĂ leave-SUBJ PRES 3SG only he / and he
 ‘Ion wants that only he/that he, too should leave.’

6. Conclusions

We have argued and shown that the null subjects of Romanian subjunctive complements are (better) resolved via binding, hence behaving as anaphors rather than pronouns and as such displaying what Ariel (1994) calls a high degree of accessibility.

On the other hand, those subjunctive clauses that feature overt *el* as subject are accounted for by co-valuation and the overt pronoun is to be co-indexed with an element farther in the discourse than the immediate (main clause subject) antecedent, given that overt pronouns are characterized by a lower degree of accessibility and hence pick up less salient antecedents.

References

- Alboiu, G. 2007. Moving forward with Romanian backward control and raising. In W. Davies and S. Dubinsky (eds.), *New Horizons in the Analysis of Control and Raising*: 187-211. New York: Springer.
- Ariel, M. 1991. The function of accessibility in a theory of grammar. *Journal of Pragmatics* 16: 443-463.
- Ariel, M. 1994. Interpreting anaphoric expressions: A cognitive versus a pragmatic approach. *Journal of Linguistics* 30: 3-42.
- Dobrovie Sorin, C. 1994. *The Syntax of Romanian. Comparative Studies in Romance*. Berlin · New York: Mouton de Gruyter.
- Farkas, D. 1985. On obviation. Ms., Yale University.
- Farkas, D. 1992. On the semantics of subjunctive complements. In P. Hirschbuhler and K. Koerner (eds.), *Papers from the 20th Linguistic Symposium on Romance Languages*, 69-105. Amsterdam: John Benjamins.
- Gallego, A. 2007. Phase Theory and Parametric Variation. PhD dissertation, Universitat Autònoma de Barcelona.
- Hill, V. 2003. Reduced CP fields and phases. *University of Bucharest Working Papers in Linguistics* V (5): 44-53.
- Hornstein, N. 1999. Movement and control. *Linguistic Inquiry* 30: 69-96.
- Hornstein, N. 2001. *Move! A Minimalist Theory of Construal*. Oxford: Blackwell Publishing.
- Kempchinsky, P. 1987. The subjunctive disjoint reference effect. In C. Neidle and R. Núñez-Cedeño (eds.), *Studies in Romance Languages*, 123-140. Dordrecht: Foris.
- Landau, I. 2004. The scale of finiteness and the calculus of control. *Natural Language and Linguistic Theory* 22: 811-877.
- Meirales, J. and Raposo, E. 1984. Subjunctives and disjoint reference in European Portuguese. Ms., University of California, Santa Barbara.
- Pagurschi, F. and Tigău, A. 2009. Sentence-level pronominal subjects in Romanian. *Bucharest Working Papers in Linguistics* XI (1): 223-232.
- Pesetsky, D. and Torrego, E. 2001. T-to-C movement: Causes and consequences. In M. Kenstowicz (ed.), *Ken Hale: A Life in Language*, 335-426. Cambridge, MA: MIT Press.
- Picallo, M. C. 1985. Opaque Domains. PhD dissertation, City University of New York.

- Reinhart, T. 1999. The processing cost of reference. Set computation: Guess patterns in acquisition. *OTS Working Papers in Linguistics* 6: 55-79.
- Reinhart, T. 2000. Strategies of anaphora resolution. In H. Bennis, M. Everaert and E. Reuland (eds.), *Interface Strategies*, 295-324. Amsterdam: North Holland
- Rivero, M. L. 1987. Barriers and the null subject parameter in Modern Greek. In J. Blevins and J. Carter (eds.), *Proceedings of the Eighteenth Annual Meeting of North Eastern Linguistic Society*: 412-425. University of Massachusetts, Amherst: GLSA.
- Rizzi, L. 1989. On the anaphor-agreement effect. Ms., University of Geneva.
- Roussou, A. 2001. Control and raising in and out of subjunctive complements. In M.-L. Rivero and A. Ralli (eds.), *Comparative Syntax of the Balkan Languages*, 74-104. Oxford: Oxford University Press.
- Terzi, A. 1992. PRO in Finite Clauses. A Study of the Inflectional Heads of the Balkan Languages. PhD dissertation, City University of New York.