Agreement, case and locality in the nominal and verbal domains

Edited by

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Introduction

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1 Opening remarks

The past two decades or so have seen a considerable amount of investigation into the nature of syntactic dependencies involving the operation Agree. In particular, there has been much discussion of the relations between Agree and its morphological realisations (agreement and case), and between Agree and other syntactic dependencies (e.g., movement, binding, control). The chapters in this volume examine a diverse set of cross-linguistic phenomena involving agreement and case from a variety of theoretical perspectives, with a view to elucidating the nature of the abstract operations (in particular, Agree) that underlie them.[1] The phenomena discussed include backward control, passivisation, progressive aspectual constructions, extraction from nominals, possessives, relative clauses and the phasal status of PPs. In this introductory chapter, we provide a brief overview of recent research on Agree, and its involvement in other syntactic dependencies, in order to provide a background for the chapters that follow. We do not aim to give an exhaustive treatment of the theories of Agreement and Case

[1]The chapters in this volume derive from a workshop organised by the editors, entitled 'Local and Non-Local Dependencies in the Nominal and Verbal Domains' (Faculdade de Ciências Sociais e Humanas (FCSH), Universidade Nova de Lisboa, 13 November 2015).

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here, as there already exist more comprehensive overviews, to which we refer the reader (e.g., Bobaljik & Wurmbrand 2008; Polinsky & Preminger 2014).

2 Case and agreement: Their location, interrelation and realisation

Our starting point – because of its relative familiarity – is the treatment of case and agreement in more recent versions of Minimalism (esp. Chomsky 2000; Pesetsky & Torrego 2001; 2007). As in earlier GB and Minimalist approaches (e.g., Chomsky 1980; 1981; 1995), both Case and Agreement (which we capitalise here to distinguish them from the relevant morphological notions) are 'abstract' in the sense that, while they do bear a relation to the morphological phenomena of case and agreement, this relation is only indirect. In other words, Case and Agreement within Minimalism are concerned primarily with the distribution of DPs, rather than with morphology (cf. Bobaljik & Wurmbrand 2008). The basis of the approach is the operation Agree, which relates a head (a 'probe', such as T or *v*) bearing uninterpretable (and/or 'unvalued') phi-features to a 'goal' DP, c-commanded by the probe, that bears counterparts of one or more of those features. This results in deletion at LF of the uninterpretable/unvalued features on the probe, ensuring 'legibility' at LF. Thus, in a transitive sentence the functional heads T and *v*, both bearing uninterpretable phi-features and Case, initiate Agree with the DPs they most immediately c-command, the subject and direct object respectively:

(1) $[_{\text{TP}}$ Sue $\text{T}_{[u\varphi\ \text{Nom, EPP}]}$ $[_{v\text{P}}$ $\text{Sue}_{[u\varphi,\ \text{Nom}]}$ $v_{[u\varphi,\ \text{Acc}]}$ $[_{\text{VP}}$ likes $\text{cake}_{[u\varphi,\ \text{Acc}]}]]]$

The assumption here is that the checking of Case features, which are uninterpretable and hence must be deleted, is dependent on the Agree relation established by the phi-feature sets of the functional head and the DP (cf. the discussions of 'Person Case Constraint' effects in Anagnostopoulou 2003; Rezac 2008). That is, under this view case is simply a reflex of phi-feature-checking that appears on nominal constituents. As it is presented in (1), Chomsky's proposal only directly covers nominative and accusative (reflexes of phi-feature checking on T and *v* respectively). As for oblique cases such as dative, it has recently been argued that these are checked by a functional head such as Appl (e.g., Cuervo 2003; Pylkkänen 2008). More specifically, one possibility is that datives/obliques are simply the reflex of phi-feature agreement between Appl and a DP (see Marchis Moreno & Franco 2017).

An important difference between the model in (1) and previous GB and Minimalist models is that movement to the specifier of TP, previously held to be crucial for feature-checking (Chomsky 1995), is now triggered by a distinct feature (an EPP-feature) on the probe. Thus, Agree need not entail the movement of the goal to the probe's specifier, but merely makes this movement available in principle via the EPP-feature that it licenses (cf. Pesetsky & Torrego 2001, who treat EPP as a 'subfeature' of an uninterpretable feature). The Agree relation is thus intended to account for the distribution of DPs in two senses: a DP must at some point be local enough to an appropriate probe in order for Agree to be established and the relevant uninterpretable features to be checked, and Agree additionally allows for movement of the DP to the probe's specifier if an EPP-feature is present.

One recent debate about Agree has concerned the directionality of the operation; that is, whether Agree must always be 'downward', as in the above presentation (e.g., Chomsky 2000; 2001; Preminger 2013), or whether it may or must operate upwards (e.g., Zeijlstra 2012; Ackema & Neeleman 2018). A further debate has concerned the extent to which Agree is involved in mediating other grammatical dependencies. For example, Reuland (2001), Hicks (2009) and Rooryck & Vanden Wyngaerd (2011) argue that Agree plays a central role in anaphoric relations (though see Safir 2014 for a dissenting view). Landau (2000) argues that the control relation is mediated by Agree relations between the controller, PRO and one or more functional heads in the clause. This approach can be contrasted with the movement-based approach to control (Hornstein 1999; Hornstein & Polinsky 2010). One piece of evidence favouring an Agree-based approach is the existence of partial and finite control, which had proven problematic for previous approaches (Landau 2013: 65ff.).

Under the approaches outlined above, Case and Agreement are both 'narrow-syntactic' phenomena that may or may not have an effect at the PF interface, resulting in morphological case and agreement respectively. This view can usefully be contrasted with an approach that was first proposed by Marantz (1991) and has since had considerable influence (e.g., Harley 1995; Schütze 1997; McFadden 2004; Bobaljik 2008; Baker & Vinokurova 2010; Titov 2012). Marantz argues that generalisations about C/case, such as Burzio's generalisation (Burzio 1986) and certain restrictions on ergative case assignment in languages such as Georgian and Hindi, are about morphological case (m-case), not about Abstract Case. Furthermore, he argues on the basis of Icelandic 'quirky case' (cf. Zaenen et al. 1985) that there is no relation between the positional licensing of DPs and the morphological case that they bear. His overall message is that DP-licensing is

not about case, and hence that Abstract Case should be eliminated from the theory of syntax. Instead, DP-licensing should be handled entirely by the mapping between thematic roles and argument positions, supplemented by the Extended Projection Principle.

Under Marantz's model, m-case, as well as agreement morphemes, are assigned at a level of 'Morphological Structure' (MS) intervening between S-Structure and PF. Thus, in this model both case and agreement are 'post-syntactic' phenomena that do not enter into the licensing of DP/NPs. M-cases are assigned according to a case hierarchy (cf. Yip et al. 1987); at the top of the hierarchy are the 'lexically governed' cases (e.g., 'quirky' and inherent cases), followed by the dependent cases (accusative, ergative), followed by the unmarked cases (nominative or absolutive in clauses; genitive in DP/NP). Finally, there is a 'default' case (e.g., accusative in English) that applies when no other case realisation is possible. Indeed, Marantz emphasises that the provision of a default form when no other form is available is characteristic of morphology; a sentence will never be ungrammatical because no features are assigned to a case affix. Case "merely interprets syntactic structures and does not filter them" (Marantz 1991: 24). Marantz suggests that a similar hierarchy applies in the determination of agreement, but he allows for a relatively flexible relation between case and agreement in order to account for certain case-agreement 'mismatches' that are found in split ergative systems.

Bobaljik (2008) takes up the question of how agreement is determined in the context of Marantz's proposal. His main idea is in a sense the opposite of Chomsky's (2000; 2001), namely that agreement is parasitic on case (cf. Bittner & Hale 1996). Thus, if Marantz's argument that m-case is post-syntactic is correct, then agreement must also be post-syntactic. More specifically, Bobaljik argues that the finite verb (or other head) agrees with the highest 'accessible' NP in its 'domain', where 'accessibility' is defined in terms of the case hierarchy proposed by Marantz (see also McFadden 2004). In the spirit of Moravcsik (1974) (who stated the hierarchy in terms of grammatical functions rather than cases), the unmarked cases (nominative or absolutive in clauses; genitive in DP/NP) are said to be maximally accessible, with the dependent cases (accusative, ergative) being less accessible, and the 'lexically governed' (e.g., 'quirky' and inherent cases) being the least accessible. Among other things, this hierarchy accounts for the fact that, in nominative-accusative languages, if a verb agrees with any DP, it at least agrees with subjects (e.g., Moravcsik 1974; Gilligan 1987), while in ergative-absolutive languages, if a verb agrees with any DP, it at least agrees with absolutive DPs (e.g., Croft 1990). Further evidence comes from mismatches between

case and grammatical function in Icelandic, where it is case, not grammatical function, that turns out to determine the agreement controller (Sigurðsson 1993). Finally, long-distance agreement in languages such as Tsez (Polinsky & Potsdam 2001) suggests that there is no need for a particular grammatical relation with the agreement target beyond locality (i.e., only 'accessibility' and 'domain' are relevant).

Other 'post-syntactic' treatments of case and agreement can be found in Embick & Noyer (2006) and Marchis Moreno (2015; 2018). These authors argue that case and agreement nodes/features are added after syntax in accordance with language-specific requirements, and are never essential to semantic interpretation. One advantage of this type of approach is that it could explain certain mismatches at the syntax-morphology interface that arise with certain word categories that are in complementary distribution, such as denominal relational adjectives and prepositional genitives in Romance. Semantically and syntactically, these are nouns, but morphologically they instantiate different word categories with different case assignment requirements (Marchis Moreno 2018). In the spirit of Embick & Noyer (2006), Marchis Moreno (2015; 2018) argues that the Case features of the underlying nouns in the structure of thematic relational adjectives are relevant only at PF, and that their countability (or lack thereof) in the syntax conditions the choice of Vocabulary Items expressing Case. That is, their underspecification for number triggers deficient Case features on thematic relational adjectives that are valued only at PF, determining the introduction of an Agreement node (AGR) that turns the noun into an adjective through suffixation, instead of introducing the Genitive Case feature, spelled out as the preposition *de* in Romance languages.

An interesting contrast is provided by the work of Preminger (2014), who argues against the 'post-syntactic' view of agreement and case, but agrees with Bobaljik that phi-agreement is sensitive to morphological case. Preminger notes that Marantz's argument for a post-syntactic treatment of case is based on the purported absence of grammatical processes that refer to case. Preminger argues, however, that the distinction between 'quirky-subject' and 'non-quirky-subject' languages with respect to raising and agreement over experiencers exemplifies such a process. More specifically, he argues that movement to subject position is 'case-discriminating' in languages such as English and French, and hence that case must be part of syntax proper. Nevertheless, Preminger makes crucial use of Marantz's case hierarchy, which he attempts to derive from independently established principles of syntactic structure-building.

A quite different approach to case and agreement is found in the work of

Manzini & Franco (2016), Franco & Manzini (2017) and Manzini et al. (this volume). These authors question the idea of an 'accessibility hierarchy' of cases, arguing that such a hierarchy has no special advantage over a pure stipulation of the facts, such as the VIVA (Visibility of Inherent Case to Verbal Agreement) parameter of Anand & Nevins (2006). Furthermore, they argue that it is both unnecessary and unprofitable to define Agree in terms of (un)interpretable and (un)valued features (cf. Brody 1997). Finally, they argue that certain types of case are unsuited to treatment in terms of uninterpretable features, as they actually have inherent semantic content. For example, they propose that 'oblique' cases should be analysed in terms of what they call an 'elementary relator' with a 'part/whole' semantic content. The general approach proposed in these works is adopted in Reeve (2018), which argues that extraction from DP/NP cross-linguistically is dependent on the Agree operation, where Agree relates sets of interpretable features as in the above works. However, Agree is only possible where the language independently shows overt evidence of agreement. This accounts for the observation that languages with left-branch extraction tend to be languages with overt agreement in DP/NP (cf. Ross 1967: 237–238; Horn 1983: 188). (See Mensching's chapter for an alternative analysis of extraction from DP/NP.)

A final prominent issue in research on case and agreement is the analysis of syncretism – the phenomenon whereby two morphosyntactically distinct categories may receive identical morphophonological realisations. Case syncretism has been analysed in terms of implicational hierarchies of the type discussed above with respect to Marantz's (1991) proposal. Blake (2001) proposes the implicational hierarchy in (2), such that cases on the right are progressively less likely to occur. Caha (2009) modifies Blake's hierarchy (not taking ergative into account) as in (3), conceived of as an f-sequence in the Nanosyntactic framework. His main reason for adopting this particular hierarchy is that it can account for possible syncretisms between cases, given a constraint blocking non-accidental syncretism between non-adjacent categories (cf. the *ABA constraint of Bobaljik 2012).

(2) (Blake 2001: 156)
NOMINATIVE > ACCUSATIVE / ERGATIVE > GENITIVE > DATIVE > LOCATIVE > ABLATIVE/INSTRUMENTAL > OTHER

(3) (Caha 2009: 32)
NOM > ACC > LOC1 > GEN/PART > LOC2 > DAT > LOC3 > INS/COM

A related approach is that of Calabrese (2008), who adopts the tenets of Distributed Morphology (Halle & Marantz 1993, Embick & Noyer 2006, among oth-

ers). Calabrese is specifically interested in absolute syncretism – i.e., in the fact that certain cases or case oppositions are missing altogether in some languages. He assumes that functional categories are represented by abstract feature clusters in syntax, which are only realised by actual exponents at the PF interface. His key proposal is that there is a markedness hierarchy of cases, not unlike the descriptive hierarchies in (2)–(3). Following Blake (2001), lower cases in the hierarchy are more likely to be blocked. If they are, the corresponding feature cluster cannot surface at PF, but must be readjusted by the morphological component (including the key rule of Impoverishment) yielding surface syncretism.

In a series of recent works, Manzini & Savoia (2011), Manzini & Franco (2016) and Franco & Manzini (2017) reject these approaches, arguing that they leave the traditional cases, and the traditional notion of case itself, unanalysed. The latter series of works instead analyses (oblique) case as the inflectional realisation of elementary predicative content ('includes'/'is included by') on a noun. Correspondingly, there is no externally imposed hierarchy ordering the relevant primitives, but rather a conceptual network determined by the primitive predicates we use and the relations they entertain with each other. These authors argue that neither Calabrese's markedness hierarchies nor Caha's nanosyntactic functional hierarchies are necessary, because syncretism depends essentially on natural class (Müller 2007). Seen from this perspective, case hierarchies essentially reduce to a binary split between direct case (reduced to the agreement system; Chomsky 2001) and oblique case, reducing to part-whole operators. Other so-called cases are analysable into a case core (typically oblique) and some additional structure, yielding something similar to the internally articulated PPs of Svenonius (2006).

Syncretism has also been shown to have effects on other aspects of the grammar. For example, it has been reported to have the property of repairing violations of syntactic constraints; for example, with agreement (Schütze 2003; Bhatt & Walkow 2013) or case-matching (Citko 2005; van Craenenbroeck 2012; Hein & Murphy 2016). On the face of it, this property of syncretism appears to pose a challenge to post-syntactic views of morphology such as DM. Citko (2005) and Asarina (2011) attempt to maintain a DM view by appealing to underspecification. However, Hein & Murphy (2016) argue on the basis of Polish data that underspecification approaches cannot account for the repair effect of syncretism on violations of the case-matching requirement in Across-the-Board (ATB) constructions, and that the problem for DM remains.

3 Issues arising in this volume

We will now outline a few issues in the syntax of case and agreement that have become prominent in the literature and are discussed in one or more contributions to the present volume. Our aim here is to identify a number of common issues and perspectives among the chapters, which on the face of it are quite diverse in their content.

The first such issue is the question of what the relation is between A/agreement and C/case. As we have seen, in Chomsky's probe-goal system Case-checking/valuation is dependent on the application of Agree, while in approaches such as Bobaljik (2008) and Preminger (2014), agreement depends on the output of C/case-assignment. In other approaches, such as Baker (2015) and Manzini & Franco (2016), C/case and A/agreement are essentially independent. A number of contributions to this volume could be said to argue in favour of a tight relation between case and agreement. Marchis Moreno's chapter argues that backward object control in Brazilian Portuguese occurs only in the presence of an inflected infinitive, and that this inflection diagnoses the percolation of default nominative case onto embedded T, which must then be assigned to an overt DP in SpecTP. Such an analysis is only feasible if C/case and agreement go hand in hand. Giurgea's chapter argues that the 'person constraint' on *se*-passives in Romanian can be accounted for if a person feature intervenes to block case-assignment by V to its internal argument. Again, this presupposes that person features are of the 'same type' as Case features, in the sense that one can block an operation targeting the other.

Other chapters argue for or suggest that the relation between case and agreement goes in one or the other direction. Łęska's chapter focuses on the nature of 'Case attraction' in Polish relative clauses, arguing that the Agree relation occurring between a numeral quantifier and a relative pronoun may optionally result in transmission of the numeral quantifier's Case onto the relative pronoun. On the other hand, because agreement (full vs. default) on the relative clause predicate depends on whether Case transmission has taken place, Agree must be able to detect the output of Case attraction; in other words, agreement must be parasitic on C/case, as in the work of Marantz (1991) and Preminger (2014). By contrast, Mensching's chapter argues that Agree (in the Chomskyan sense) is crucially involved in licensing extraction from nominals, in that an XP must undergo Agree with D in order to be extracted from DP. In particular, he argues that the argument/adjunct asymmetry in extraction can be accounted for if arguments undergo Agree with D to value Case, while adjuncts cannot. Thus, extraction depends on Case, which depends on Agree(ment). Finally, Manzini, Franco &

Savoia argue that, while the so-called 'direct cases' (e.g., nominative, accusative) are parasitic on agreement, as in Chomsky's work, 'oblique cases' (dative, genitive, instrumental) are a different type of phenomenon. They argue that it is problematic to adopt an Agree approach to 'concord' within DP (e.g., Carstens 2001), involving one goal (N) checking multiple probes (agreeing determiners and modifiers). Instead, as noted above, they propose that oblique involves an 'elementary relator' with a 'part/whole' semantic content.

A second prominent topic in this volume concerns the extent to which the operation Agree is crucially involved in establishing other grammatical dependencies. Alexiadou & Anagnostopoulou and Marchis Moreno both argue that backward control (in Greek and Brazilian Portuguese respectively) relies on an Agree relation between a head in the control predicate's clause and a head in the clause embedded by that predicate. This relation enables the realization of either the higher copy in forward control or the lower copy in backward control. Lorusso argues that agreement in aspectual constructions coincides with the semantic operation of event identification, which is responsible for a number of syntactic and semantic properties of these constructions, as compared with similar constructions lacking agreement. Mensching argues – following the general framework of Chomsky (2000; 2001) – that Agree, and the Case-valuation that goes along with it, are crucially involved in movement dependencies, specifically extraction from nominals. Manzini, Franco & Savoia argue that Agree is also involved in the mediation of thematic dependencies. They focus on what is often called 'concord' – agreement in the nominal domain – arguing that this type of agreement is a morphological equivalent of Higginbotham's (1985) theta-binding relation. Finally, a contrastive perspective is provided by Weingart's chapter, which argues that null possessive pronominals in Portuguese should not be derived in terms of Agree (pace Hicks 2009) or Move (pace Floripi & Nunes 2009; Rodrigues 2010).

Locality conditions on Agree play an important role in several chapters in this volume. Mensching argues, in common with a number of other authors (e.g., Svenonius 2004; Bošković 2005; Heck 2009; Reeve 2018), that DP is a phase, which means that extraction from DP is blocked unless the moving item first moves to SpecDP. In particular, Mensching argues that this, in conjunction with the proposal that SpecDP is only accessible to items that agree with D, can account for the often-observed argument/adjunct asymmetry in extraction from DP. Gallego argues that PP is a phase (Abels 2003; 2012), and that this normally blocks Agree between a verb and a DP within PP. As well as accounting for the general lack of overt agreement, this can account for the ban on preposition-stranding and pseudopassives in the majority of languages, includ-

ing (most) Spanish (Law 2006). However, Gallego argues that cases of agreement between V and PP's complement in certain dialects of Spanish can be accounted for if P incorporates with the verb (cf. Hornstein & Weinberg 1981; Law 2006). Ackema & Neeleman's chapter can be seen as providing something of a contrast, in that it argues for a relatively reduced role for locality in restricting agreement possibilities. In particular, they argue against Preminger's (2014) claim that the phenomenon of 'omnivorous agreement' is regulated by relativised minimality conditions on Agree. Instead, they argue that it is necessary for both syntactic and morphological accounts of agreement to postulate cross-linguistic distinctions in feature hierarchies; thus, the syntactic account has no special advantage here. Similarly, Weingart's chapter argues that null possessive pronouns in Portuguese are not restricted by locality conditions, as part of her overall argument that they should not be derived in terms of Agree or Move.

Another prominent topic in this volume is the specific nature of the features related by Agree. One issue already touched on here is the question of whether phi-features are uninterpretable features, as in most of the contributions here, or interpretable features, as Manzini, Franco & Savoia argue. They also argue against the idea, developed in particular in Chomsky (2000) and Pesetsky & Torrego (2007), that features should be distinguished in terms of whether they enter the derivation as valued or unvalued. The structure of phi-features is also the central topic of Ackema & Neeleman's chapter, which focuses on distinctions between person and number: in particular, that agreement conflicts between third person and first/second person result in ungrammaticality, while conflicts between singular and plural number do not, but result in a default. Mensching's chapter crucially proposes a particular feature structure for Ds that license extraction from DP, involving an unvalued phi-set that probes the head noun, together with an optional second probe with a case-assigning property, enriched with an unvalued operator feature associated with an EPP-feature.

Finally, the issue of syncretism, discussed at the end of §2, becomes relevant in two chapters in this volume. In their discussion of omnivorous agreement, Ackema & Neeleman note that although feature clashes between the phi-features of the subject and object may prevent the realisation of agreement in such systems, the problem may be averted if the two feature-sets give rise to identical morphophonological realisations. (They give examples from agreement with nominative objects in Icelandic and agreement with the focus in Dutch clefts.) In Łęska's chapter, case syncretism between a relative operator and a numeral quantifier is a precondition for Case transmission from the numeral to the relative operator, resulting in default agreement on the relative clause predicate.

4 Summary of the chapters

We now provide a summary of each chapter in this volume. In the first chapter, Alexiadou & Anagnostopoulou discuss an asymmetry between backward subject and backward object control in Greek: backward subject control is fully productive, while backward object control is limited. They argue, following Tsakali et al. (2017), that backward control in Greek is derived not through movement, but through the formation of a chain between the phi-features of the controller (and ultimately the head licensing it) and those of a functional head in the matrix clause. While a chain can be formed between matrix T and the embedded subject and T, allowing for backward subject control, chain-formation between a higher Voice/*v*Appl and the embedded subject is generally impossible, presumably because T has pronominal phi-features while Voice does not. Backward object control is thus normally ruled out in Greek. This restriction, however, can be overridden in cases where an experiencer argument in the embedded clause is doubled by a dative or accusative clitic and matrix Voice also hosts a dative or accusative clitic (i.e., in cases of 'resumption'). The authors hypothesise that this is due to a condition on Backward Agree requiring it to apply to heads of the same type – T in the case of backward subject control; dative/accusative clitics in the case of backward object control.

In the same vein, Marchis Moreno focuses on backward object control, providing evidence that such control is possible in Brazilian Portuguese because both the external and internal copies are marked with default nominative case; hence there is no case mismatch and no case competition. Specifically, the paper argues that the inflected infinitive can be regarded as a diagnostic for backward object control patterns, because the percolation of default nominative case from the matrix T to the embedded T requires a local checking relation with an overt DP in the absence of a preposition. The overt realization of the lower copy in backward control is made possible by the loss of the [+person] feature. According to Cyrino (2010), the absence of the [+person] feature both in finite and non-finite domains allows nominative subjects to occupy the Spec of the inflected infinitival T, just as in finite clauses.

The relation between person and case features constitutes the focus of Ion Giurgea's chapter. He shows that the 'person constraint' on *se*-passives in Romanian and other Romance languages can be accounted for on the basis of the intervening person feature associated with the external argument. Giurgea documents the crosslinguistic variation in 'impersonal' *se* constructions in Romance and shows that Romanian only allows a *se*-passive construction where the verb

agrees with the internal argument and the accusative cannot be assigned. Building on Cornilescu (1998), Giurgea provides additional evidence that the person constraint on *se*-passives does not exclusively involve [+participant] pronouns (1st or 2nd person), but also affects DPs that require differential object-marking and are high on the person/animacy/definiteness hierarchy. From this, Giurgea derives an intervention-based account of passive *se* according to which the person feature triggered by the external argument (syntactically projected as a null arbitrary PRO in *se*-passives) intervenes in the case-licensing of internal arguments bearing a [Person] feature. By contrast, *by*-phrases do not count as interveners, as they do not have a Case to check.

Ackema & Neeleman's chapter discusses the feature structure of agreement and, in particular, a curious difference between person and number: while both third person and singular number may behave as defaults, third person gives rise to feature clashes that singular does not. The authors argue that this difference can be accounted for if third person has feature content while singular number does not (see also Nevins 2007; 2011). Specifically, third person is characterised by a feature DIST that is shared with second person (which also bears PROX, a feature shared with first person). What allows third person to act as a default is that it can deliver an empty set of referents: this follows if DIST operates on the set of discourse referents, eliminating the speaker and addressee and their 'associates', leaving a subset that only optionally contains referents. As singular number lacks features imposing a cardinality on the output of the person system, it may also deliver an empty set and hence act as a default. Ackema & Neeleman show that this difference in feature content between third person and singular number can account for cases of omnivorous number agreement in languages such as Dutch, Icelandic and Eastern Abruzzese, and they argue that their account also has advantages over a locality-based Agree account (e.g., Preminger 2014) with respect to capturing omnivorous person agreement in languages such as Ojibwe and Kaqchikel. Their contribution thus bears on both the feature makeup of agreement and the morphosyntactic mechanisms that give rise to agreement.

The effects of person and number features on agreement patterns also constitute the main topic of Lorusso's paper, which explores the patterns of agreement with progressive aspect in Apulian dialects. In many of these varieties, the present continuous is expressed through an aspectual inflected construction formed by an inflected stative verb, an optional prepositional element and a lexical verb that either appears in a present indicative form, agreeing in person and number with the matrix verb, or in a non-agreeing infinitival form. Lorusso argues that both constructions involve a locative derivation, but that in the in-

flected construction the preposition selects a full IP, while in the uninflected construction the preposition selects an 'indefinite CP' (CP_I in the terms of Manzini & Savoia 2003). He uses this syntactic difference to account for a number of differences between the two constructions (e.g., placement of frequency adverbs). The inflected construction seems to involve an instance of event identification (Kratzer 1996) between the auxiliary and the lexical verb, and shows a number of properties in common with restructuring or serial verb constructions (e.g. clitic-climbing). By contrast, the uninflected construction gives rise to a frequentative reading which is not found with genuine progressive constructions (Chierchia 1995), and shows properties in common with control/aspectual verbs. The author further describes and discusses person splits and number asymmetries that occur in the inflected construction, suggesting an analysis along the lines of Bobaljik (2008) and Manzini & Savoia (2007; 2011).

The tight link between case and agreement proposed in Chomsky's (2000; 2001) probe-goal system is the focus of Mensching's contribution. He reopens a topic that has been debated ever since Ross's (1967) dissertation: how to constrain extraction from nominals. The empirical focus is on PP-extraction from DP in French, and specifically on the question of why certain types of *de*-PPs can be extracted from DP, while other types of *de*-PP, along with adjunct PPs, cannot. For example, if a DP contains both a Possessor *de*-PP and an Agent *de*-PP, only the Possessor can be extracted. His solution is based on Kolliakou's (1999) proposal that extraction is restricted by the semantics of the *de*-PP, which has the consequence that if there are two *de*-PPs, only one can be an argument; the other must be an adjunct. The argument/adjunct distinction in extraction is then accounted for in terms of case-valuation: DP-internal arguments have their case feature valued as genitive under Agree with D, while DP-internal adjuncts do not enter into case-valuation. Given the idea that SpecDP is an 'escape hatch' for movement that only accommodates XPs that enter an Agree relation with D, only arguments will be able to move to SpecDP and hence out of DP. Mensching's paper can thus be seen as an an argument in favour of the probe-goal theory of Case and Agree in terms of its ability to constrain extraction.

The topic of possessives is also discussed in Weingart's paper, but from a very different perspective. Weingart shows, on the basis of a full set of clear diagnostics, that null (and simple) possessive pronouns in Portuguese have apparently contradictory properties that argue against analyses in terms of Agree (e.g., Hicks 2009) or Move (e.g., Floripi & Nunes 2009; Rodrigues 2010), or in terms of an operation on predicates (e.g., Reinhart 2006). Specifically, null possessives appear to have something in between a bound variable and an indexical interpre-

tation. Weingart thus suggests that they should be classified as logophoric *pro*, and outlines a syntactic proposal, based on the semantic analysis of Partee (1997), to account for their restriction to relational nouns.

Łęska's paper analyses the patterns of subject-verb agreement resulting from the interaction of Genitive of Quantification (GoQ) and relativisation in Polish. She shows that relative clauses modifying GoQ head nouns show distinct agreement patterns depending on whether the head noun is a subject or an object. When it is a subject, GoQ forces default agreement on the relative clause predicate (cf. **Łęska2016**), but when it is an object, agreement may vary between default and full agreement, depending on the type of relative clause (introduced by *który* vs. *co*) and the gender of the head noun. Łęska argues that the option of default agreement is due to 'Case attraction' (Bader & Bayer 2006): provided the morphological form of the relative pronoun is compatible with the case required by the numeral, the Case feature of the quantifier may be shared with the relative pronoun (or null operator), resulting in default agreement on the relative clause predicate. Because such extension is only seen when the head noun is a subject, however, the mechanism of case attraction must be restricted so that it does not overgenerate.

Gallego's chapter focuses on dialects of Spanish that exhibit long-distance agreement between T and a DP inside a PP. Given the standard assumption that phi-probes cannot probe inside a PP in Spanish, which is held to be responsible for the ban on preposition-stranding and pseudopassives (cf. Law 2006), the existence of such long-distance agreement is unexpected. Gallego compares this phenomenon with similar evidence concerning the differential object marker *a* (e.g., Torrego 1998; López 2012), arguing that there are three types of prepositions: P is merged external to TP; P is inserted at PF; P is reanalysed with V. While the differential object marker *a* is plausibly of the first type, allowing T to probe the DP object directly, this and the second option are less plausible for prepositions with a more 'semantic' flavour. Gallego thus suggests that such prepositions may reanalyse or incorporate with the verb, allowing the DP to be probed by T. His findings have implications for the typology of prepositions in Spanish, and more generally for the interaction of micro- and macro-parameters.

Almost all of the authors discussing the tight relation between case and agreement acknowledge that oblique case represents a distinct phenomenon, with no syntactic theory offering a satisfactory analysis. Manzini, Franco & Savoia attempt to fill this gap, offering an overview of oblique case and a set of phenomena discussed in the typological literature under the label of 'Suffixaufnahme'. The theoretical focus of the contribution is on the Minimalist operation Agree

and the notion of case, specifically oblique case. The authors question the necessity of referring to [interpretable] and [valued] features in the formulation of Agree. They suggest that a more primitive syntactic notion underlies the descriptive label 'oblique', specifically that of an elementary relator with a part/whole content. Thus, a DP embedded under a genitive case morpheme or adposition is interpreted as a possessor or 'whole' with respect to a local superordinate DP (the possessum or 'part'). They argue that case/agreement-stacking in languages such as Lardil (also discussed in Łęska's chapter) corresponds crosslinguistically to the presence of a partial copy of this second argument within the phrasal projection of the relator.

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Chapter 2

An asymmetry in backward control: subject vs. object control

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In this paper we discuss an asymmetry in the distribution of backward control in Greek. Greek has been argued to have subject backward control, however, as we will show, the language lacks backward object control. We will account for this asymmetry by appealing to case conflicts of the type discussed in the context of free relatives.

1 Aims and goals

In this paper, we discuss backward control configurations, focusing on Greek, a language showing an asymmetry between backward subject control (BSC), which is fully productive, and backward object control (BOC), which is severely limited. This is a puzzling state of affairs if Greek indeed has backward control understood as movement and spell-out of the lower copy of the chain, as has been argued in the literature. Based on new evidence, we argue that the movement approach to Greek BSC is an illusion. The correct analysis involves the formation of a chain between the phi-features of the matrix T, the phi-features of the embedded T and those of the embedded subject, which is possible as long as the embedded subject does not intervene between the matrix and the embedded T. The formation of such chains is possible due to the fact that Greek has pronominal agreement, being a pro-drop language (Alexiadou & Anagnostopoulou 1998, Barbosa 2009). The formation of comparable chains is severely restricted in BOC

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configurations, which are only possible if the full embedded subject is either a clitic-doubled experiencer bearing dative or accusative case or an emphatic nominative anaphoric pronoun. We will discuss potential reasons why this should be so from the perspective of current approaches to Agree.

The paper is structured as follows. We first briefly summarize the arguments in Alexiadou et al. (2010) that Greek has backward subject control (BSC), as well as more recent arguments, recently presented in Tsakali, Anagnostopoulou & Sevdali (2017), that this type of phenomenon does not involve scrambling and indeed instantiates agreement chains between a matrix T and an embedded subject. We then discuss the environments that have been argued to show object control in Greek and point out that there is an asymmetry between BSC (possible) as opposed to backward object control (BOC) (generally impossible) in Greek. We attribute the lack of BOC to the general unavailability of chain formation between a lower T and a higher Voice/vAPPL head, which can be overridden under certain conditions.

2 Introduction

As has been discussed in the work of Polinsky & Potsdam (2006; henceforth 'P& P'), the movement analysis of control, put forth in Hornstein (1999), coupled with the copy-and-delete theory of movement, predicts that next to canonical/forward control patterns, where the lower copy of the moved element is deleted, there should also exist backward control patterns, where the higher copy is deleted. A third possibility, which we do not consider in this section, is resumption, where both copies are pronounced, as depicted in Table 1.

Table 1: Typology of control and raising in P& P (2006)

Higher copy pronounced	Lower copy pronounced	Structure
✓	*	Forward Control (FC)
*	✓	Backward Control (BC)
✓	✓	Resumption

A lot of evidence has been provided in the literature for BC, which can be observed in several unrelated languages. For instance, BSC can be observed in several Nahk-Dagestanian languages, in Northwest Caucasian, in Malagasy, and in Korean; see e.g. Fukuda's (2008) overview. The claim that BC exists in natural

language is the strongest argument brought by the movement analysis of control against the PRO-based approach; see e.g. Landau (1999) and subsequent work.

In Alexiadou et al. (2010), we addressed Landau's (2007) objections to BSC. One of the objections raised in Landau (2007) concerned the rarity of the phenomenon in one of the languages in which BC has been argued to exist, namely Tsez: in Tsez, only **two** verbs display BC. In other languages, the numbers hardly exceed five. Most commonly, the BC verbs are aspectuals (*begin*, *continue*, *stop*), which also have a standard raising analysis. On the basis of Greek and Romanian control constructions, we argued that BC is real in these two languages, as it is exhibited by the same verbs that allow OC (hence the 'rarity' objection doesn't hold for Greek and Romanian).

Recently, a re-evaluation of the empirical picture was put forth in Tsakali et al. (2017) that can be summarized as follows: what has been analyzed as BSC in Greek, Romanian and Spanish is an illusion. In Spanish, it involves complex predicate formation, while in Greek/Romanian it involves co-reference with an embedded subject. Specifically, BC in Greek is a side-effect of the availability of an agreement chain between a null main subject and an overt embedded subject in all types of subjunctives (*na*-clauses) and, to a certain extent, in indicatives (*that*-clauses). While backward coreference is allowed in both types of clauses if the order is VSO or VOS, embedded SVO orders, which are available in indicatives, lead to a robust Principle C effect. Tsakali et al. (2017) thus propose that what has been analysed as BC actually reflects φ-agreement between matrix T, embedded T and the overt S(ubject), licit only if the S doesn't intervene between the two T heads, as in (1a):

(1) a. $[\mathrm{T}\varphi_{\mathrm{k}}\ [_{\mathrm{TP/CP}}\ T\varphi_{\mathrm{k}}\ \mathrm{DP}\varphi_{\mathrm{k}}]]$
b. * $[\mathrm{T}\varphi_{\mathrm{k}}\ [_{\mathrm{TP/CP}}\ \mathrm{DP}\varphi_{\mathrm{k}}\ T\varphi_{\mathrm{k}}]]$

In what follows, we summarize both aspects of this discussion. Nevertheless, as we will show in §3, such co-reference is not available in the case of object control.

3 BSC in Greek: An epiphenomenon

In Greek, control is instantiated in a subset of subjunctive complement clauses, as the language lacks infinitives; see e.g. Varlokosta (1994) and references therein. These subjunctive complement clauses are introduced by the subjunctive marker *na* (2). The embedded verb, similarly to the matrix verb, shows agreement in

number and person with the matrix subject.[1]

(2) Greek ()

Greek

O Petros/ego kser-i/-o **na** koliba-i/-o
the Peter.NOM/I know-3SG/-1SG SBJV swim-3SG/-1SG
'Peter/I knows/know how to swim.'

The literature on Greek control recognizes two main types of subjunctive complements (but cf. **Spyropoulos2007** and Roussou 2009 for refinements): Obligatory Control (OC) ones and non-OC ones (NOC) (or *C(ontrolled)-subjunctives* and *F(ree)-subjunctives* in Landau's (2004) terminology).

1. **OC/C-subjunctives** are found as complements of verbs such as *ksero* 'know how', *tolmo* 'dare', *herome* 'be happy', *ksehno* 'forget', *thimame* 'remember', *matheno* 'learn', *dokimazo* 'try', aspectual verbs such as *arhizo* 'start/begin', *sinehizo* 'continue'.

(3) a. * o Petros kseri na **kolimbao**
the Peter.NOM knows SBJV swim.1SG
Lit. 'Peter knows how I swim.'

b. * o Petros kseri na **kolimbai** I Maria
the Peter.NOM knows SBJV swim.3SG the Mary.NOM
Lit. 'Peter knows how Mary swims.'

2. **NOC/F-subjunctives** are found with e.g. volitional/future-referring predicates:

(4) a. O Petros perimeni na **erthun**
the Peter.NOM expects SBJV come.3PL
'Peter expects that they come.'

b. o Petros elpizi na figi i **Maria**
the Peter.NOM hopes SBJV go.3SG the Mary.NOM
'Peter hopes that Mary goes.'

Alexiadou et al. (2010) present evidence that **all** OC verbs in Greek allow BC. In fact, the subject DP can appear in a number of positions (here Greek differs from

[1] *Na* has been analyzed as a subjunctive mood marker (cf. Philippaki-Warburton & Veloudis 1984), a subjunctive complementizer (Tsoulas 1993, **Aggouraki1991**

Aggouraki was missing from bib

) or a device to check EPP (Roussou 2009). Here we side with the first view.

Tsez). Preverbal subjects are considered to be in a left-dislocated position, while post-verbal subjects are located within the vP; see Alexiadou & Anagnostopoulou (1998) for discussion. VSO and VOS orders have different information structure properties; see Alexiadou (1999; 2000) for discussion. Generally, the DP in the subjunctive complement agrees with both the low and the matrix verb in person and number:

(5) (O **Janis**) emathe (o **Janis**) na pezi (o **Janis**) kithara (o **Janis**)
the John.NOM learned.3SG the John.NOM SBJV play.3SG the John.NOM guitar the John.NOM
'John learned to play the guitar.'

The pattern in which the DP resides in the complement clause qualifies as a case of BC on the basis of P& P's argumentation. First, these constructions are bi-clausal (contra Roussou 2009), as can be shown on the basis of evidence from *negation* and *event modification*.

-*Two separate negations* are possible:

(6) a. **Den** emathe na magirevi o Janis
not learned.3SG SBJV cook.3SG the John.NOM
'John didn't learn to cook.'

b. Emathe na **min** magirevi o Janis
learned.3SG SBJV not cook.3SG the John.NOM
'John learned not to cook (i.e. 'John got into the habit of not cooking').'

c. **Den** emathe na **min** magirevi o Janis
not learned.3SG SBJV not cook.3SG the John.NOM
'John didn't learn not to cook (i.e. 'John still has the habit of cooking').'

- The *event of each clause can be modified independently*:

(7) a. Fetos tolmise **tesseris fores** na pirovolisi o Janis
this.year dared.3SG four times SBJV shoot.3SG the John.NOM
'This year there were four times that John dared to shoot.'

b. Fetos tolmise na pirovolisi **tesseris fores** o Janis
this.year dared.3SG SBJV shoot.3SG four times the John.NOM
'This year John dared to shoot four times (in a row).'

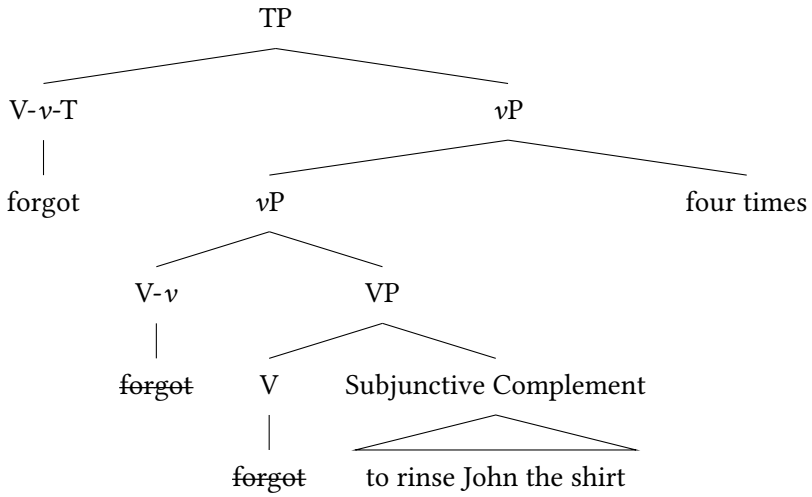
The subject is truly embedded, as it precedes both *embedded objects* and *embedded VP-modifiers*. Clause-final event adverbials have the potential of modifying either the matrix verb or the embedded one, depending on where they are situated:

(8) a. ksehase na ksevgali o Janis to pukamiso **teseris fores**
forgot SBJV rinse the John.NOM the shirt four times
'John forgot to rinse the shirt four times.' (*four rinsings/forgettings*)

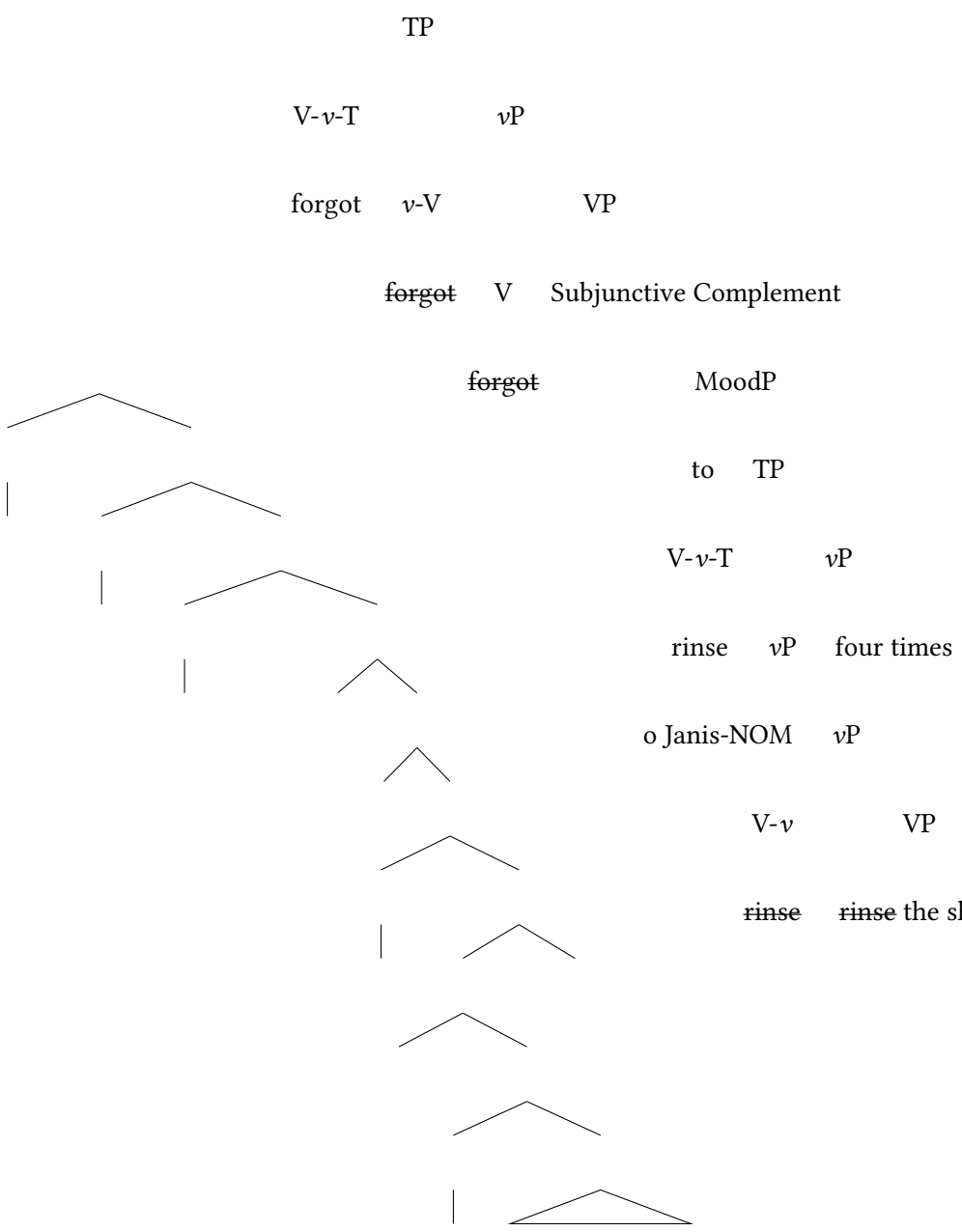
b. ksehase **teseris fores** na ksevgali o Janis to pukamiso
forgot four times SBJV rinse the John.NOM the shirt
'John forgot four times to rinse the shirt.' (*four forgettings*)

This difference in interpretation depends on the adjunction site of the adverb. When it modifies the matrix verb, it (right-)adjoins to the matrix vP or TP (10a). When it modifies the embedded verb, it adjoins to the embedded vP or TP (10b):

(9) a. High reading



b. Low reading



Evidence from *negative concord* potentially suggests that in BC the subject does **not** belong to the higher clause and surface to the right of the embedded verb as a result of rightward scrambling. Negative quantifiers in Greek, a nega-

tive concord language, must be either in the clause containing sentential negation (11a) or in the c-command domain of a higher sentential negation (11b). They cannot be licensed by a negation in a lower clause (11c) (see Giannakidou & Merchant 1997):

(10) a. O Petros dietakse *na* **min** apolithi **kanis**
the Peter.NOM ordered SBJV not was.fired nobody.NOM
'Peter ordered that nobody was fired.'

b. O Petros **den** dietakse *na* apolithi **kanis**
the Peter.NOM not ordered SBJV was.fired nobody.NOM
'Peter did not order that anybody was fired.'

c. * **Kanis** dietakse *na* **min** apolithi o Petros
nobody.NOM ordered SBJV not fired.NACT the Peter.NOM

The same pattern is found in OC contexts:

(11) a. **Kanis** **den** tolmise *na* fai to tiri
nobody.NOM not dared.3SG SBJV eat.3SG the cheese.ACC
'Nobody dared to eat the cheese.'

b. **Den** tolmise *na* fai **kanis** to tiri
not dared.3SG SBJV eat.3SG nobody the cheese
'Nobody dared to eat the cheese.'

c. * **Kanis** tolmise *na* **min** fai to tiri
nobody dared.3SG SBJV not eat.3SG the cheese

If the subject in BC constructions were part of the main clause, we would expect BC sentences with a low negation to have exactly the same status as (12c), which contains a negative matrix subject and an embedded sentential negation. This is not what we find. There is a clear difference in status between (12c) and its BC counterpart:

(11) d. % Tolmise *na* **min** fai **kanis** to tiri
dared.3SG SBJV not eat nobody the cheese

Even though (11d) is not perfect, it is much better than (12c). Alexiadou et al. (2010) take this to be evidence that the subject in BC resides in the embedded clause.

Negative concord points to the existence of a higher copy in BC. If such a copy wasn't present, (12d) should be fully acceptable. Further evidence in support

of this comes from the observation that in Greek, *nominal secondary predicates and predicative modifiers* like 'alone' agree in gender and number with the c-commanding DP they modify:

(12) Greek ()

a. O **Janis** efige **panikovlitos**/*-i
the John-NOM left panicking-MS/*-FEM
lit. 'John left in panic.'

b. O **Janis** irthe **monos tu**/*moni tis
the John-NOM came alone-MS/*alone-FEM
'John came alone.'

In BC constructions, such modifiers can be licensed in the matrix clause, while the DP they modify resides in the embedded clause; see Alexiadou et al. 2010: 103–104, examples (36–38). Hence, a silent copy must be present in the higher clause.

On the basis of these and similar arguments, Alexiadou et al. (2010) thus conclude that Greek has BC. Unlike Tsez, BC in Greek is optional (FC is also permitted). Crucially, all OC verbs in Greek and Romanian allow BC, providing a stronger argument for BC.

Tsakali et al. (2017) re-evaluate the empirical picture, using extensive questionnaires, by focusing on the following configurations with OC/NOC verbs favoring co-reference and NOC verbs that do not favor coreference:

(13) a. V *na* V Subj Obj
b. V *na* V Obj Subj

Their results suggest the following:

1. OC verbs show obligatory co-reference which can be analyzed as BC.
2. There is no clear contrast between OC and NOC verbs as far as Principle C effects are concerned (contra Alexiadou et al. 2010). A significant number of speakers allow co-reference with NOC verbs.

Note that, as well as examples like (6) where the embedded subject is nominative, native speakers were also asked to evaluate examples like (15) below involving BC between an embedded dative/genitive or accusative experiencer and a matrix null (nominative) subject.

(14) OC verb (verb of knowing)

a. Emathe siga siga na tis aresun i operes
learned-3SG gradually subj CL-DAT/GEN like-3PL the opera-NOM-PL
otan gnorise to Jiani
when met-3SG the Jiani-ACC
'She learned gradually to like opera, when she met John.'
Try/manage verbs (strongly favoring coreference)

b. Prospathi na min tin stenahori i ikonomiki
try-3SG SBJV NEG CL-ACC make-3SG sad the financial
krisi
crisis-NOM
'She tries not to feel sad about the financial crisis.'

c. Katafere na min tin apasholi i ikonomiki krisi
manage-3SG SBJV NEG CL-ACC worry-3SG the financial crisis-NOM
'She managed not to feel anxious about the financial crisis.'
Future referring verb NOC (not favoring coreference)

d. Apofasise na min tin katavali i asthenia
decided-3SG SBJV NEG CL-ACC put-3SG down the illness-NOM
'She decided not to become depressed by the illness.'

e. Iposhethike na min tin stenahori pia i
promised-3SG SBJV NEG CL-ACC feel-3SG sad anymore the
siberifora tu jiu tis
behavior-NOM the son-GEN CL-POSS
'She promised not to feel sad about her son's behavior.'

The majority of the speakers these authors asked accept examples of the type in (15), and the rate of ungrammaticality ranges from 1.9–11.1%.

3. The comparison between VSO and VOS order in *na*-clauses shows that the preference for the disjoint reading is stronger in VSO orders than in VOS orders, but co-reference is still possible for many speakers, who do not have a significant contrast between VOS and VSO.

Importantly, Tsakali et al. (2017) show that the Greek pattern cannot be analyzed as involving restructuring implemented in terms of remnant movement, as proposed for Spanish by Ordóñez (2009) and Herbeck (2013), and suggested by an anonymous reviewer. Specifically, Ordóñez presents several arguments

against a BC analysis for Spanish. First of all, he points out that similar patterns are found in structures that are standardly considered not to involve control. This is the case, for instance, in causative and perception verb constructions, where the subject may appear overtly in the post-infinitival position:

(15) Ayer nos hizo leer Juan el libro.
yesterday to us make to read Juan the book
'Yesterday Juan made us read the book.'

Second, it is not the case that only main subjects are permitted after the infinitive, as assumed by the backward control analysis; the object of a main verb may also be inserted in this post-infinitival position with object control verbs. This is shown by the orders V DO INF XP and V INF DO XP in (17a–b). Examples (17b) and (17c) show that main object controllers, just like main subject controllers, can be embedded and appear after the infinitival verb:

(16) a. Obligaron a Bush a firmar los acuerdos de paz
obliged-3PL to Bush to sign the peace agreements
'They obliged Bush to sign the peace agreement.'

b. Obligaron a firmar a Bush los acuerdos de paz
obliged-3PL to sign to Bush the peace agreements
'They obliged Bush to sign the peace agreement.'

c. ? Obligó a firmar el Congreso a Bush los acuerdos de pa
obliged to sign the Congress to Bush the peace agreement
'The Congress obliged Bush to sign the peace agreement.'

Ordóñez proposes a remnant movement analysis of BC (and restructuring constructions) in the spirit of **Hinterhölzl2005**'s (**Hinterhölzl2005**)and Koopman & Szabolcsi's (2000) analyses of verbal complexes:

did you mean to cite his 2006 here?

(17) a. [$_{VP}$ Juan [querer [$_{CP}$ PRO [$_{VP}$ comprar el libro]]
Juan to want PRO to buy the book
Step 1: Movement of the verb *to want* above VP:

b. [$_{TP}$ querer Juan V_i [$_{TP}$ PRO[$_{VP}$ comprar el libro]]]
to want Juan to buy the book
Step 2: Movement of the TP above *wanted*:

c. [$_{TP}$ PRO [$_{VP}$ comprar el libro]] [$_{TP}$ querer$_i$ [$_{VP}$ Juan V_i
to buy the book wanted Juan

Step 3: Scrambling of the object out of TP + movement of the main subject *Juan* to its licensing position above the scrambled object:

d. [Juan$_1$ el libro$_2$ [$_{TP}$ PRO [$_{VP}$ comprar t_2]] [$_{TP}$ querer$_i$ [$_{VP}$ t_1
Juan the book to buy to want

Step 4: Movement of the VP containing *to buy* above the licensing position of subject and object:

e. [[$_{VP}$ comprar t]] Juan el libro [$_{TP}$ PRO] [$_{TP}$ querer$_i$ [$_{VP}$ t
to buy Juan the book wanted

Step 5: Movement of TP+*querer* to SpecCP and final Spell Out:

f. [$_{CP}$ [$_{TP}$ querer$_i$ [$_{VP}$ t [$_{VP}$ comprar t_i]] Juan el libro [$_{CP}$ PRO t_i

Crucially for Ordóñez (2009), object scrambling (step 3) is a local movement and cannot cross a finite clause boundary. This explains why there are no comparable verbal complexes formed with finite clauses:

(18) a. *? Ayer les hizo$_i$ [que comprasen Juan$_i$ el libro]
yesterday to them made that buy-3PL Juan the book

b. Ayer les hizo$_i$ comprar Juan$_i$ el libro
yesterday to them made to buy-INF Juan the book

Further evidence for the scrambling analysis in Spanish is provided by the following contrast. In examples involving infinitival wh-islands, as discussed by Torrego (1996), BC and FC behave differently. While the upper copy is available, the lower one is ungrammatical. According to Ordóñez, the ungrammaticality of (20a) can be explained, if scrambling out of non-tensed CPs is blocked by filled CPs.

(19) a. Backward control
*? No sabe si contestar Juan las cartas.
not know whether to answer Juan the letters

b. Forward control
Juan no sabe si contestar Juan las cartas.

Tsakali et al. (2017) show that the Greek facts are very different: specifically, there is no blocking of VSO orders and BC in OC constructions involving a filled SpecCP; cf. (20):

(20) de kseri pos na apandisi o Janis ta gramata
not know-3SG how SBJV answer John-NOM the letters-ACC
'John does not know how to answer the letters.'

Moreover, embedding of the main object controller is not possible; i.e. here we have an asymmetry between subjects and objects:

(21) a. anagasan ton Bush na ipograpsi ti
obliged-3PL Bush-ACC SBJV sign-3SG the peace
sinthiki irinis
agreement-ACC
'They obliged Bush to sign the peace agreement.'

b. * anagasan na ipograpsi ton Bush ti sinthiki
obliged-3PL SBJV sign-3SG Bush-ACC the peace agreement-ACC
irinis

Furthermore, in Spanish, no argument may intervene between finite verbs and infinitives with a postverbal subject. This is not the case in Greek, where no locality effect is caused by an IO intervener in the matrix clause:

(22) *? les prometió a los familiares [darles el jurado la libertad
to them-promised to the family members to give the jury
a los prisioneros]
liberty to the prisoners

(23) iposhethikan tis Marias na dosun i
promised-3PL Maria-GEN SBJV give-3PL the judges-NOM
dikastes amnistia sto filakismeno andra tis
amnesty-ACC to the imprisoned husband hers
'The judges promised Mary to give amnesty to her imprisoned husband.'

As Greek lacks clitic climbing, there is no evidence for restructuring (see **Terzi1992** and others). Moreover, BC is found with all control verbs, not just with a small class (the restructuring class in Spanish).

Terzi was missing from bib

Finally, Tsakali et al. (2017) show that the obviation of Principle C effects in embedded VSO constructions is also found **with finite clauses**, as shown in (25b). Crucially, there is a robust Principle C effect in embedded *that*-SVO sequences illustrated in (25a), indicating that Greek does have Principle C effects caused by a matrix null subject when the embedded subject precedes the inflected verb.

(24) a. pro$_{*j/k}$ emathe oti o Petros$_j$ kerdise to lahio
learned-3SG that Peter-NOM won-3SG the lottery-ACC
'He/she learned that Peter won the lottery.'

b. pro$_{j/k}$ emathe oti kerdise (o Petros$_j$
learned-3SG that won-3SG (Peter-NOM) the lottery-ACC
) to lahio (o Petros$_j$)
(Peter-NOM)
'He/she learned that Peter won the lottery.'

We can thus conclude that Greek BC configurations do not involve complex predicate formation. While there is evidence for verb clustering in Spanish, there is no such evidence in Greek. Moreover, in Greek, backward co-reference is even allowed within finite clauses unless the subject is in preverbal position.

Tsakali et al. (2017) thus conclude that a backward dependency can productively be established in Greek provided that the embedded DP subject remains *in situ*. They propose that what has been analysed as BC should not be analysed in terms of movement, because on a movement analysis it would be hard to explain the emergence of a Principle C effect when the subject occurs preverbally.[2] For this reason, they propose that Greek BC actually reflects φ-agreement between matrix T, embedded T and the overt S(ubject), which can also take place across embedded indicative CPs and is licit only if the S doesn't intervene between the two T heads, as in (2a), repeated below:

(2) a. [Tφ_k [$_{TP/CP}$ $T\varphi_k$ DPφ_k]]
b. * [Tφ_k [$_{TP/CP}$ DPφ_k $T\varphi_k$]]

Tsakali et al. (2017) relate the availability of long-distance agreement chains as in (2a) to the pro-drop status of the language. Their analysis assumes a version of (30): see Rizzi (1982), Alexiadou & Anagnostopoulou (1998), Holmberg (2005), Barbosa (2009).[3] The crucial intuition is that Agr in null subject languages is pronominal and can thus enter long-distance agreement relationships, like pronouns.

[2] One could attempt to save the movement analysis by appealing to improper movement. Under the hypothesis that SVO orders in Greek involve Clitic Left Dislocation (CLLD; Alexiadou & Anagnostopoulou 1998), one could account for the lack of BC in such configurations by analyzing the preverbal position as an A'-position. Such configurations would thus involve an improper A-A'-A movement chain. However, such an analysis would be strongly undermined by the fact that the subject in SVO orders does have A-properties and that CLLD in general has mixed A/A'-properties akin to medium-distance scrambling (see Miyagawa 2017 for relevant discussion).

[3] This is called Hypothesis A in Holmberg (2005) and Barbosa (2009). Holmberg rejects it while Barbosa argues for a version of it, implemented in terms of Pesetsky & Torrego's (2007) modification of Chomsky's (2001) theory of Agree.

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(25) The set of phi-features in T (Agr) is pronominal in null subject languages (NSLs); Agr is a referential, definite pronoun, albeit a pronoun phonologically expressed as an affix. As such, Agr is also assigned a subject theta-role, by virtue of heading a chain whose foot is in vP, receiving the relevant theta-role.

In order to make (30) compatible with the theory of Agree, Barbosa (2009) proposes that the phi-features of T in consistent null subject languages (NSLs) are valued and can therefore value the phi-features of *v*P-internal pro in pro-drop configurations. She furthermore proposes that they are uninterpretable, in order to account for the Agree relationship they establish with overt or covert subjects which have interpretable features. If she is correct, then we must assume that they are not deleted until they form a chain with the higher agreement in long-distance agreement chains, which means that Greek has phase-suspension in the relevant configurations (see **Alexiadou2014** for phase-suspension in long-distance Agree configurations arising in raising subjunctives); i.e. there is obligatory phase suspension in OC subjunctives and optional phase suspension in NOC subjunctives with BC, and even in indicatives.

Alternatively, we can maintain that the phi-features on T in Greek are pronominal, and this permits them to enter long-distance agreement relationships, even across finite clauses, like pronouns do. Being pronominal can either be taken to mean that they are interpretable and unvalued (receiving a value either from a null Topic, as argued for in Frascarelli 2007, or by entering a chain with a higher DP, depending on context), or they are valued, as Barbosa proposes, but also interpretable.[4]

Turning to the Agree relationships established in BSC configurations, (30) holds in the embedded clause of the non-Principle C VSO/VOS cases investigated by Tsakali et al. (2017), as in (31):

[4]Either way, depending on what the facts in other NSLs turn out to be, we might need to parametrize these hypotheses. Specifically, it is well-known that Romance subjunctives show obviation, and this seems to correlate with the fact that they have infinitives. Thus, obviation in those contexts can be accounted for by appealing to global competition between infinitives and subjunctives. But what has not been investigated so far, to our knowledge, is how finite clauses behave. If they consistently show Principle C effects with embedded VSO and VOS orders, then this would indicate that either the phi-features of T are uninterpretable and thus they disappear after local Agree with the vP-internal subject (as proposed by Barbosa 2009), or that phase-hood cannot be suspended in Romance indicatives.

(26) $[_{\text{TP/CP}}\ T\varphi_{\text{k}}\ \text{DP}\varphi_{\text{k}}\ ]$

A further Agree relationship is established between matrix T and embedded CP; i.e. in the phase-hood version of BSC (see above), C is not an intervener for Agree. Following Rackowski & Richards (2005), Tsakali et al. (2017) assume that PIC/intervention effects are obviated if a higher head first agrees with *the entire phase* and then continues on to agree with an element *inside* the phase; see also Halpert (2016).

(27) $[\ \text{T}\varphi_{\text{k}}\ [_{\text{TP/CP}}\ T\varphi_{\text{k}}\ \text{DP}\varphi_{\text{k}}\ ]]$

Matrix T (and the *v*P-internal pro-subject associated with it) agrees with the CP and then with embedded T which agrees with the *v*P-internal subject. Note here that in Zulu, as argued in Halpert (2016), the EPP forces raising of the embedded subject out of the *v*P. DP-raising does not have to take place in Greek/Romanian, as V-movement satisfies the EPP (Alexiadou & Anagnostopoulou 1998), but when the subject occurs pre-verbally a Principle C effect arises. Tsakali et al. (2017) suggest that the embedded subject DP is an intervener blocking Agree between matrix and embedded T; i.e. Agree between heads can happen as long as no DP intervenes between them. When matrix pronominal agreement directly c-commands a DP with which it shares no thematic index, it gives rise to a standard Principle C effect. This effect does not arise in embedded VSO/VOS orders because matrix T forms a chain with embedded T and embedded T shares the same thematic index with the subject DP.[5]

On the basis of this discussion, we can submit the following conclusions: what Alexiadou et al. 2010 called BC in subjunctives actually involves the formation of agreement chains. BC (broadly/roughly understood as backward co-reference) involves agreement chains rather than actual movement because there is no obvious way of accounting for the asymmetry between embedded SVO vs. VSO orders (evidenced in finite clauses due to the option of SVO orders, which are unavailable in subjunctives for independent reasons having to do with the phonological clitic-like status of *na*) with respect to Principle C effects in a DP-movement approach. When the word order in the embedded clause is SVO, we get a clear Principle C violation, as expected.

[5]Note that this analysis is compatible both with analyses taking full DP-subjects to optionally raise to SpecTP in Greek (e.g. Spyropoulos & Revithiadou 2009) and with analyses taking the pre-verbal subject to reside in a CLLD position (Alexiadou & Anagnostopoulou 1998, Barbosa 2009 and others). In the latter approach, we can even sharpen the explanation for the Principle C effect, attributing it to the nature of CLLDed elements as topic shifters (cf. Frascarelli 2007).

In this light, let us now see what happens in object control configurations. The question here is the following: if the availability of 'BC' in Greek is related to the availability of agreement chains of the type described above, are such agreement chains possible in object control configurations?

4 No object BC in Greek

4.1 Introduction

Similarly to BSC, it has been argued that object control can also be subdivided into forward and backward object control (BOC):

(28) a. Forward object control
I persuaded Kim_i [$\triangle_i$ to smile]
controller *controllee*

b. Backward object control
I persuaded $\triangle_i$ [Kim_i to smile]
controllee *controller*

BOC is attested in e.g. Malagasy (Potsdam 2006, 2009), Korean (Monahan 2003), and Omani Arabic (**Al-Balushi2008**). We illustrate the phenomenon with a Korean example in (34). (34a) shows that Korean object control predicates permit an accusative-nominative alternation. While the accusative is a constituent of the matrix clause, binding a null element in the embedded clause, (34b), the nominative resides in the embedded clause and is coindexed with a null element in the matrix, (34c):

(29) a. Cheolsu-neun Yeonghi-leul/ka kake-e ka-tolok
Cheolsu-TOP Yeonghi-ACC/NOM store-to go-COMP
seolteukha-eoss-ta
persuade-PAST-DECL
'Cheolsu persuaded Yeonghi to go to the store.'

b. Cheolsu-neun Yeonghi-leul_i [$\triangle_i$ kake-e ka-tolok]
Cheolsu-TOP Yeonghi-ACC store-to go-COMP
seolteukha-eoss-ta
persuade-PAST-DECL
'Cheolsu persuaded Yeonghi to go to the store.'

c. Cheolsu-neun $\triangle_i$ [Yeonghi-ka$_i$ kake-e ka-tolok]
Cheolsu-TOP Yeonghi-NOM store-to go-COMP
seolteukha-eoss-ta
persuade-PAST-DECL
'Cheolsu persuaded Yeonghi to go to the store.'

Before we turn to the question of whether BOC can be evidenced in Greek, we should offer a brief description of the predicates that have been analyzed as object control predicates in Greek. This is a controversial issue, as these structures are in principle also amenable to an ECM analysis; it thus has to be shown that the DP is generated in the object position of the matrix predicate. Alexiadou & Anagnostopoulou (1997) addressed this, and we briefly summarize their argumentation here; see also Kotzoglou (2002) and Kotzoglou & Papangeli (2007).

4.2 Object control in Greek

Constructions that could be analyzed as ECM in Greek involve perception and causative verbs (cf. Burzio 1986 for Italian):

(30) a. ida ton Petro na milai me tin Ilektra
saw-1SG the Peter-ACC SBJV talk-3SG with the Ilektra
'I saw Peter talking with Ilektra.'

b. evala ton Petro na katharisi to domatio tu
put-1SG the Peter-ACC SBJV clean-3SG the room his
'I made Peter clean his room.'

Iatridou (1993) treats cases like (35a) as instances of object control. In fact, Burzio argues against an ECM analysis for (35a-b) and his arguments also hold for Greek (cf. Burzio 1986: 287-290). As Alexiadou & Anagnostopoulou (1997) point out, unlike tensed/infinitival pairs like *I believe that Eric delivered the speech/I believe Eric to have delivered the speech*, which are closely synonymous, pairs like (36) below are not synonymous:

(31) a. Ida oti o Petros telioni ti diatrivi tu
saw-1SG that the Peter-NOM finishes the dissertation his
'I saw that Peter is finishing his dissertation.'

b. ida ton Petro na telioni ti diatrivi tu
saw-1SG the Peter-ACC SBJV finishes the dissertation his
'I saw Peter finishing his dissertation.'

In (36b) the phrase corresponding to *Petros* is the object of direct perception, while this is not true of sentences like (36a). A related point has to do with the non-synonymy of active and passive forms. While S complements maintain rough synonymy 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, as is evident from the semantic anomaly of the verb *ida* in (37b) below:

(32) a. ida/akusa to Petro na ekfoni to logo
saw-1SG/heard-1SG the Peter-ACC SBJV deliver-3SG the speech
'I saw/heard Peter delivering the speech.'

b. # ida/akusa to logo na ekfonite apo ton Petro
saw-1SG/heard-1SG the speech SBJV be delivered by the Peter
'I saw/heard the speech being delivered by Peter.'

Another standard test for distinguishing _NP S from _S complements involves the relative scope of quantifiers. By this test, the structures in question also qualify as non-ECM:[6]

(33) 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 kathe aftokinito
saw-1SG one customs official SBJV control every car
'I saw a customs official controlling every car.'
i. I saw one customs official who checked every passing car.
ii. * I saw that for each passing car there was one customs official who would check it.

[6] Alexiadou & Anagnostopoulou (2016) point out, however, that in the context of perception verbs, the subject of the embedded clause is assigned accusative in the matrix clause, but is licensed by the negation in the subordinate clause. This is compatible with an ECM analysis, suggesting that perception verbs behave like quasi-ECM predicates in Kotzoglou & Papangeli's (2007) terminology. (i) Bika mesa ke me ekpliksi idha kanenan na min dulevi monos tu. alone his-NOM entered-1SG in and with surprise saw-1SG nobody-ACC SBJV NEG work-3SG Oli ixan xoristi se omades. all had separated into teams 'I entered and to my surprise I saw nobody working on his own. They had all separated into teams.'

Under the assumption that quantifier scope is clause-bounded, the difference between (38a) and (38b) follows if (38b) has the two quantifiers in different clauses.

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

(34) a. oti irthe o Petros den to perimena
that came the Peter-NOM NEG CL-ACC expected-1SG
'That Peter came, I didn't expect it.'

b. na erthi o Petros den to vlepo
SBJV come-3SG the Peter-NOM NEG CL-ACC see-1SG
Lit. 'I do not see it that Peter will come.'

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

(35) a. [ton logo]$_i$ na ekfonite den ton$_i$ akusa
the speech SBJV be delivered NEG him heard-1SG
'The speech being delivered, I did not hear it.'

b. * [ton logo na ekfonite] $_i$ den to$_i$ akusa
the speech SBJV be delivered NEG it heard-1SG

c. [ton Petro] $_i$ na tiganizi psaria den ton$_i$ ida
the Peter-ACC SBJV fry fish NEG him saw-1SG
'Peter frying fish, I did not see him.'

d. * [ton Petro na tiganizi psaria]$_i$ den to$_i$ ida
the Peter SBJV fry fish NEG it saw-1SG

These examples are grammatical only with a resumptive clitic, which agrees in features with the DP, not with the whole clause.

On the basis of these examples, then, we can conclude that perception verbs are object control predicates in Greek (but see footnote 7 for a complication). Other object control predicates include *pitho* 'persuade', *diatazo* 'order', *parakalo* 'beg', and *voitho*, 'help', which all behave similarly to perception verbs; see (41), which tests CLLD, and Kotzoglou (2002) for discussion:

(36) * [ton Jani na aposiri ti minisi]$_i$ to $_i$ episa
the John **SBJV** withdraw the prosecution it persuaded-**1SG**

Before we proceed to the behavior of these predicates in terms of BC, we note that Kotzoglou & Papangeli (2007) discuss so-called quasi-ECM predicates such as *perimeno* 'expect' and *thelo* 'want'. Applying several of the tests for object control, as in (42) (their (27b)), involving CP doubling, they conclude that these predicates also involve a matrix DP; i.e. they can be subsumed as a case of object control.

(37) * to$_i$ perimena [ton Jani na aghapisi ti Maria] $_i$
it expected-1SG the John-ACC SBJV love-3SG the Maria-ACC
'I expected John to love Maria.'

The authors do, however, notice some important differences between quasi-ECM verbs and object control verbs. First, as they state (Kotzoglou & Papangeli 2007: 129), "there is a crucial difference in the thematic information that is realized in the Greek examples. Object control verbs cannot select a clause as their single argument, while this was shown to be possible in the quasi-ECM examples." Moreover, object control verbs "always realize the subject matter role as a clause. They thus lack the PP alternate that is attested with verbs of the 'quasi-ECM' type." A second difference involves wh-extraction, which is banned in Greek 'quasi-ECM' domains, but is licit out of the object control clause; see (43) (their (42)):

(38) a. ?? pjon itheles ton prothipurgho na entiposiasi?
who-ACC wanted-2SG the prime-minister-ACC SBJV impress-3SG
'Who did you want the prime minister to impress?'

b. pjon epises ton prothipurgho na entiposiasi?
who-ACC persuaded-2SG the prime-minister-ACC SBJV impress-3SG
'Who did you persuade the prime minister to impress?'

This, in combination with the observation made in Kotzoglou & Papangeli (2007) that the accusative object of quasi-ECM verbs licenses nominative secondary predicates in the embedded clause, as in (46), leads us to suggest that quasi-ECM configurations actually involve movement of the embedded DP to the CP level, where it is assigned accusative by the matrix predicate. This is an instance of an edge-effect in Baker's (2015) terminology:

(39) perimena to Jani na ine arostos/*arosto
expected-1SG the John-ACC SBJV be sick-NOM/*-ACC
'I expected John to be sick.'

In (46), the DP is first assigned nominative in the lower clause, and then accusative, after movement, at the CP level. This means that accusative, which we treat following Marantz (1991) and Baker (2015) as dependent case, can be assigned on top of a case assigned lower, inside the embedded clause. As Baker notes, there is cross-linguistic variation as to whether multiple realization is possible.

Note that from the perspective of the 'control as movement' theory, the derivation of (46) is similar, if not identical, to that of control predicates. In both cases, the DP raises from the embedded clause to the matrix clause, where it is assigned dependent accusative. The difference between the two might presumably be related to the fact that in (46) the DP raises to SpecCP, where it is frozen, while in the object control cases, it raises higher, to the matrix *v*P, in order to be receive a thematic role. However, on the basis of our argumentation in §2 regarding Tsakali et al.'s (2017) results, it is crucial that there is movement in so-called quasi-ECM environments, but not in control configurations.

4.3 Greek lacks BOC

Interestingly, none of the object control verbs in Greek allows BOC. The movement analysis of control would predict that the lower copy is spelled out as nominative; i.e. that it bears the case of the embedded clause. However, the examples in (47b) and (48b-c) are all ungrammatical:

(40) a. I Maria epise to Jani na hamogelasi
the Mary persuaded the John-ACC SBJV smile-3SG
'Mary persuaded John to smile.'

b. * I Maria (ton) epise na homogelasi o Janis
the Mary (CL-ACC) persuaded SBJV smile-3SG the John-NOM

(41) a. I Maria voithise to Jani na simazepsi to domatio tu
the Mary-NOM helped the John SBJV tidy.up-3SG the room his
'Mary helped John to tidy up his room.'

b. I Maria voithise na simazepsi o Janis to domatio tu
the Mary-NOM helped SBJV tidy.up-3SG the John-NOM the room his
[*good but not on the reading where she helped John*]

c. * I Maria (ton) voithise na simazepsi o Janis to
the Mary-NOM (CL-ACC) helped SBJV tidy.up-3SG the John-NOM the
domatio tu
room his

On the backward control analysis, this asymmetry is puzzling and unexpected. If, however, control does not involve movement, as Tsakali et al. (2017) argue, then the observed asymmetry boils down to configurations that enable co-reference; i.e. the formation of long-distance agreement chains of the type we described in §2.

At first sight, the above behavior seems to suggest that the distribution of BC patterns is related to the presence of *pro*. Greek has subject *pro* and allows BSC. By contrast, Greek lacks object *pro* (Giannakidou & Merchant 1997) and disallows BOC. While this would be in agreement with our conclusions in §2, Potsdam (2006; 2009) argues that this does not hold across languages, as Malagasy lacks object *pro* but allows BOC. One of the arguments Potsdam brings against the *pro* analysis in Malagasy involves variable binding. As he points out, the *pro* analysis would predict that a bound variable interpretation for the controller-controllee relation should be impossible, as there is no c-command. However, the example in (49), involving a distributed universal quantifier, shows that variable binding is possible in backward control. Thus, it seems that the controller and controllee must be in a c-command relationship to obtain the right configuration for binding.

(42) boky inona avy no nanontania- nao hovidian' ny mpianatra tsirairay
book what each FOC ask.CT you buy.TT the student each
?

'For each *x*, *x* a student, which book did you ask *x* to buy?' (Potsdam 2006: ex. (17a))

We can thus maintain that Malagasy has BOC control, and that the availability of object *pro* does not correlate with the availability of BOC in true BC-as-movement languages. But, crucially, Greek was argued in §2 not to be such a language.

The only cases of BOC that seem possible in Greek involve a Gen/Dat or Acc object realized as a clitic and a Gen/Dat or Acc experiencer in the embedded clause, a pattern that seems similar to that of resumption; see Table 1. Note that (47b)-(48c) remain ungrammatical in spite of the presence of a clitic in the matrix clause:

(43) a. O Janis **tu** epevale/ton katafere na **tu** aresi
the John-NOM CL-GEN imposed/ cl-acc managed SBJV CL-GEN
tu Kosta i opera.
like the Kostas-GEN the opera
'John imposed on Kostas to like the opera/convinced Kostas to like the opera.'

b. O Janis **tu** epevale/ton katafere na **ton** efxaristi
the John-NOM CL-GEN imposed/CL-ACC managed SBJV CL-ACC please
ton Kosta i opera.
the Kostas-GEN the opera
'John imposed on Kostas to like the opera/convinced Kostas to like the opera.'

Let us consider now the configuration for OC in comparison to our analysis of BSC: in the case of forward control, an Agree relationship must be established between matrix Voice and matrix DP and subsequently the phi-features of T in the embedded CP.

(44) $[_{CP}\ [_{VoiceP}\ [\ DP_{\varphi k}\ [_{TP/CP}\ T\varphi_{k}\ ]]]]$

If the phi-features of embedded T are unvalued, we can follow Grano & Lasnik (2016), building on Kratzer (2009), and Landau (2015), who propose two variants for analyzing such configurations, (52a)-(52b):

(45) a. i. An unvalued pronoun can be valued via feature transmission.
ii. Transmission of phi-features piggybacks on predication.
iii. A complement clause can be turned into a predicate via Fin.
iv. Transmission proceeds from antecedent to Fin and from Fin to [Spec,FinP].

b. i. An unvalued pronoun can be valued via feature transmission.
ii. Transmission of phi-features piggybacks on binding.
iii. Binding is mediated by verbal functional heads.
iv. C and *v* intervene for each other in the way they transmit features.

On the latter approach, a matrix binder transmits features onto embedded C, and embedded C binds and values an unvalued pronoun in its c-command domain.

In forward object control configurations, we usually have a genitive or an accusative in the matrix clause that controls the nominative subject of the embedded verb. As we see in (53), the DP *John* bears accusative, assigned by the matrix predicate. The presence of a nominative modifier in the embedded clause suggests that it has been assigned nominative in that context. Thus, it bears two cases, but only one is realized.

(46) vlepo to Jani na pezi basket monos tu.
see the John-ACC SBJV play-3SG basket alone-NOM
'I see John playing basketball alone.'

This is a so-called multiple-case-marked A-chain similar to the kind discussed for Niuean in **Bejar1999**.

For backward object control, what we would need first, similarly to what we outlined for the BSC cases, is for the Agree relation to hold within the embedded clause:

(47) $[_{\text{TP/CP}}\ T\varphi_{\text{k}}\ \text{DP}\varphi_{\text{k}}\ ]$

While in the case of subject co-reference the Agree chain ultimately holds between two T heads, the matrix and the embedded one, in the case of object control the embedded T head must enter Agree with the matrix Voice head, and this configuration seems generally illegitimate (cf. Kayne 1989). We believe that part of the reason for this is the different requirements that T and Voice impose. T has been argued to have pronominal phi-features while Voice doesn't: Greek is not a rich object agreement, object-drop language, which can be taken to mean that the phi-features of embedded T are not allowed to enter long-distance agreement with the phi-features of the matrix Voice.

But we have seen that this is exceptionally possible if the embedded clause has a dative or accusative clitic doubling the experiencer and the matrix Voice hosts a dative or accusative clitic; i.e. in cases of 'resumption' crucially involving an experiencer in the downstairs clause. This leads us to formulate the hypothesis in (55) as a condition for BC:[7]

[7] An anonymous reviewer suggests two alternative hypotheses to us, (i) and (ii). (i) In a chain with multiple case positions, realize the copy with the more marked case (ACC/GEN >NOM).(ii) In a chain with multiple case positions, realize the higher copy. If both positions are assigned the same case, the lower copy can be realized.The second hypothesis would capture the fact that BSC is possible when the lower clause contains an experiencer and the higher clause a null *pro* bearing nominative, as was seen in the examples in (15), but it would have to be reformulated in terms of agreement chains if control does not involve movement, as we suggest in §2. (i) can

(48) Backward Agree applies to heads of the same type.

In the BOC cases at hand, the relationship is between a clitic in the embedded clause and a clitic in the matrix clause. Note that when the downstairs experiencer surfaces as a nominative DP, backward co-reference seems to us to be degraded:[8]

(49) # O Janis **tu** epevale/ton katafere
the John-NOM CL-GEN imposed/CL-ACC managed SBJV
na **efxaristiete o Kostas** me tin opera.
please-NACT the Kostas-NOM with the opera
'John imposed on Kostas to like the opera/convinced Kostas to like the opera.'

Moreover, note that if the clitic-doubled argument in the embedded clause is not an experiencer, backward coreference is not possible (this is indicated by # in the passive (57a), featuring a clitic-doubled goal, which is well-formed in the non-coreference reading, and by ?? in (57b), featuring an affected argument combined with an unaccusative, which seems to us to admit the coreference reading but to be degraded compared to the experiencer cases mentioned above):

(50) a. # O Janis **tu** epevale/ton katafere na
the John-NOM CL-GEN imposed/CL-ACC managed SBJV CL-GEN
tu dothi **tu Kosta** to danio.
give-NACT the Kostas-GEN the loan
'John imposed on him for a loan to be given to Kostas.'

b. ?? O Janis **tu** epevale/ton katafere na
the John-NOM CL-GEN imposed/CL-ACC managed SBJV NEG CL-GEN
min **tu** pesi **tu Kosta** to vazo.
fall the Kostas-GEN the vase'
'John imposed on Kostas not to drop the vase.'

be reformulated as suggesting that only a dependent case in the sense of Marantz (1991) and Baker (2015) must be realized (see Anagnostopoulou & Sevdali 2017 for arguments that Greek GEN is a dependent case).

[8] Because these facts have not been investigated before, we are relying on our own intuitions. They need to be checked with a large number of speakers via extensive questionnaires, just as Tsakali et al. (2017) did with the BSC constructions. The same applies to the data discussed immediately below.

This seems to suggest that backward coreference of this type is not only subject to the condition in (55), but requires, in addition, that the embedded clitic-doubled argument encode point of view. Perhaps this is because only experiencers qualify as subjects at some level of representation, which means that they relate to T (Anagnostopoulou 1999 for Greek, **Landau2010Locative**).

5 Conclusion

In this paper, we have discussed an asymmetry in the distribution of backward control in Greek. While the language has been argued to have BSC, it lacks BOC. As we pointed out, recently Tsakali et al. (2017) argued that BSC in Greek is a side effect of the availability of an agreement chain between a null main subject and an overt embedded subject in all types of subjunctives (*na*-clauses), and to a certain extent in indicatives (*that*-clauses). If this is the correct analysis for BSC, the question still remains whether Greek has BOC. We showed in this paper that BOC configurations are severely limited. We related this limitation to the nature of Backward Agree, which seems to require heads of the same type. In BOC configurations, the phi-features of embedded T are not allowed to enter long-distance agreement with the phi-features of the matrix Voice. Backward coreference is only possible in case of resumption with a dative/genitive clitic in the matrix clause and a clitic-doubled experiencer in the embedded clause, and crucially depends on the experiencer status of the embedded argument.

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