

# Agreement, case and locality in the nominal and verbal domains

Edited by

Ludovico Franco

Mihaela Marchis Moreno

Matthew Reeve

Open Generative Syntax 4



## Open Generative Syntax

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# Chapter 1

## 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.<sup>1</sup> 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

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<sup>1</sup>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).



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) [TP Sue T<sub>[u $\phi$  Nom, EPP]</sub> [ $v$ P Sue<sub>[u $\phi$ , Nom]</sub>  $v$ <sub>[u $\phi$ , Acc]</sub> [VP likes cake<sub>[u $\phi$ , Acc]</sub>]]]

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 (2019), 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 others). 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 contribu-

tions 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 2019), 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, including (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/ $\nu$ 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 (1<sup>st</sup> or 2<sup>nd</sup> 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 inflected construction the preposition selects a full IP, while in the uninflected construction the preposition selects an "indefinite CP" (CP<sub>I</sub> 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 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 interpretation. 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. Łęska 2016), 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

# Default person versus default number in agreement

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In this paper, we compare the behaviour of the default in the person system (third person) with the default in the number system (singular). We argue, following Nevins (2007; 2011), that third person pronouns have person features, while singular DPs lack number features. The evidence for these claims comes from situations in which a single head agrees with multiple DPs that have contrasting person and number specifications. In cases where the number of morphological slots in which agreement can be realized is lower than the number of agreement relations established in syntax, such contrasting specification may prove problematic. As it turns out, conflicts between singular and plural do not result in ungrammaticality, but conflicts between third person and first or second person do. Such person clashes can be avoided if the morphological realization of the relevant person features is syncretic. Alternatively, languages may make use of a person hierarchy that regulates the morphological realization of conflicting specifications for person. The argument we present is rooted in, and supports, the theory of person developed in Ackema & Neeleman (2013; 2018).

## 1 Introduction

The problem addressed in this paper is an apparent paradox involving singular number and third person. On the one hand, there is evidence that in the person system the default is third person, while in the number system the default is singular. For example, dummy pronouns and verbs that fail to agree (as in impersonal passives) show up in the third person singular:



- (1) a. It seems that a solution is hard to find.  
b. \*I/you/they seem(s) that a solution is hard to find.
- (2) Dutch  
Nog jaren is / \*ben / \*bent / \*zijn naar een oplossing gezocht.  
still years be-3SG / be.1SG / be.2SG / be.PL for a solution searched  
'People searched for a solution for many years.'

On the other hand, singular agreement can be overwritten by plural agreement in certain contexts, but in those same contexts third person agreement cannot be overwritten. For example, in (3) the expected singular agreement with the subject pronoun is replaced by plural agreement if the clefted constituent is plural, but not by first person or second person agreement if the clefted constituent is a first person or second person pronoun.

- (3) Dutch
- a. PL overwrites SG  
Het zijn zij die de whisky gestolen hebben.  
it are.PL they who the whisky stolen have  
'It's them who stole the whisky.'
- b. 1<sup>st</sup> clashes with 3<sup>rd</sup>  
\*Het ben ik die de whisky gestolen heeft.  
it am I who the whisky stolen has  
'It's me who stole the whisky.'
- c. 2<sup>nd</sup> clashes with 3<sup>rd</sup>  
\*Het ben jij die de whisky gestolen heeft.  
it are.SG you.SG who the whisky stolen has  
'It's you who stole the whisky.'
- d. No overwriting  
Het is hij die de whisky gestolen heeft.  
it is he who the whisky stolen has  
'It's him who stole the whisky.'

Nevins (2007; 2011) argues that singular is the absence of plural, while third person is not the absence of person but does in fact have a feature specification (see also Kerstens 1993; Halle 1997; contra Forchheimer 1953; Kayne 1993; Harley & Ritter 2002; Béjar & Rezac 2003; Cysouw 2003; Anagnostopoulou 2005; Adger

& Harbour 2007). We agree with this (see Ackema & Neeleman 2013; 2018). But if there is this asymmetry between singular number and third person, the question arises how can we account for the fact that both singular and third person are defaults. This would follow naturally from the idea, rejected here, that third person, like singular, is a name for the absence of information.

In this paper, we will account for the fact that the default in the person system has feature content while the default in the number system does not. We will show that our proposal captures data from various languages that involve the realization of a single agreement slot when there is agreement with multiple arguments, as in the examples in (3). The paper is organized as follows. In §2, we introduce a system of privative person features, in which third person has a specification. In §3, we introduce a system of privative number features, in which singular has no specification. We set out our theory of defaults in §4. We will argue that the default is that feature specification that allows reference to the empty set. In §5 and §6, we confront this theory with data in which multiple arguments agree with a single verbal head. §7 concludes the chapter.

## 2 The person system

Our starting point in exploring the person system is a generalization about the pattern of syncretisms found in the morphological realization of person. The relevant generalization was noted by Baerman et al. (2005: 59) and Baerman & Brown (2011) and is given in (4)

- (4) 1–2 and 2–3 syncretisms are far more common than 1–3 syncretisms.

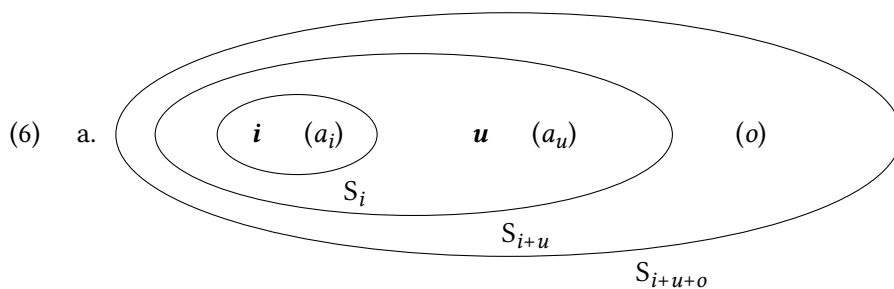
The asymmetry expressed in (4) suggests that the system of person features is organised as in (5) (compare Kerstens 1993; Halle 1997; Bennis & MacLean 2006; Aalberse & Don 2009; 2011):

- |                         |                                  |                     |
|-------------------------|----------------------------------|---------------------|
| (5) <i>First person</i> | <i>Second person</i>             | <i>Third person</i> |
| [F <sub>1</sub> ]       | [F <sub>1</sub> F <sub>2</sub> ] | [F <sub>2</sub> ]   |

In line with this, we propose in Ackema & Neeleman (2013) that there are two person features, PROX and DIST. PROX is shared by first and second person; DIST is shared by second and third person. Following insights in Harbour (2016), we interpret these features as functions. Both operate on an input set to deliver a subset as output.

The basic input set for the person system, which we call  $S_{i+u+o}$ , contains a subset  $S_{i+u}$ , which in turn contains a subset  $S_i$ .  $S_i$  contains the speaker, which

we will represent as  $i$ , and any associates of the speaker, represented as  $a_i$ .  $S_{i+u}$  additionally contains the addressee(s), represented as  $u$ , and any associates of the addressee ( $a_u$ ). Finally,  $S_{i+u+o}$  contains additional members that are neither associates of the speaker nor of the addressee(s); these other members are represented as  $o$ .<sup>1</sup> The only obligatory members of  $S_{i+u+o}$  are one  $i$  and one  $u$ :



- b.  $\text{PRED}(S_{i+u+o}) = S_{i+u}$
- c.  $\text{PRED}(S_{i+u}) = S_i$
- d.  $\text{PROX}(S) = \text{PRED}(S)$
- e.  $\text{DIST}(S) = S - \text{PRED}(S)$

The two person features are defined in terms of a function  $\text{PRED}$  (for ‘predecessor’) given in (6b,c).  $\text{PROX}$ , whose definition is given in (6d), discards the outer layer of the input set; applied to  $S_{i+u+o}$  it delivers  $S_{i+u}$ .  $\text{DIST}$ , whose definition is given in (6e), selects the outer layer; applied to  $S_{i+u+o}$  it delivers  $S_{i+u+o} - S_{i+u}$ .

We now consider how first, second and third person readings are derived, starting with the singular. The specification of the third person singular is straightforward: it should be  $[\text{DIST}]$ , as this feature will give  $S_{i+u+o} - S_{i+u}$ , a set that excludes the speaker and any addressees.

The first person singular is derived by two applications of  $\text{PROX}$ . It first applies to  $S_{i+u+o}$ , delivering  $S_{i+u}$ ; it then applies to the latter set, delivering  $S_i$ . The only obligatory member of  $S_i$  is the speaker, yielding the correct interpretation in the singular:

$$\begin{aligned}
 (7) \quad & \text{PROX}(\text{PROX}(S_{i+u+o})) \\
 & = \text{PROX}(S_{i+u}) && \text{by (6d)} \\
 & = S_i && \text{by (6d)}
 \end{aligned}$$

<sup>1</sup>For the purposes of this paper, the difference between associates and others is irrelevant. A detailed discussion of this distinction can be found in Ackema & Neeleman (2018).

## 2 Default person versus default number in agreement

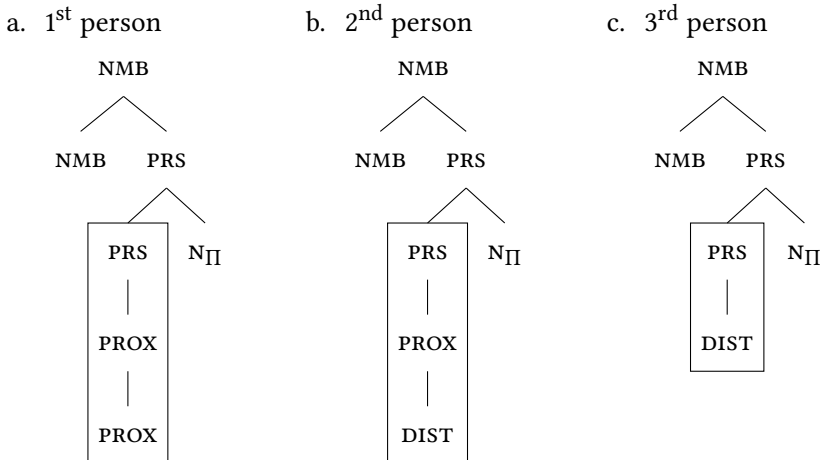
The second person singular is generated by applying both **PROX** and **DIST**. **PROX** is applied first, so that  $S_{i+u}$  is selected. Applying **DIST** to this set removes  $S_i$ , leaving a set with  $u$  as the only obligatory member:

$$\begin{aligned}
 (8) \quad & \text{DIST}(\text{PROX}(S_{i+u+o})) \\
 & = \text{DIST}(S_{i+u}) && \text{by (6d)} \\
 & = S_{i+u} - S_i && \text{by (6e)} \\
 & = S_u
 \end{aligned}$$

Note that the opposite order of function application (first **DIST**, then **PROX**) is not coherent. **DIST** applied to  $S_{i+u+o}$  yields  $S_{i+u+o} - S_{i+u}$ . But as this set is not layered, **PROX** cannot apply to it.

We assume that the ‘person space’ in (6a) is introduced by a node we refer to as  $N_{\Pi}$ . Person features are introduced in a **PRS** node that selects  $N_{\Pi}$ . The basic semantics of this node is the identity function  $\lambda P.P$ , but this specification can be enriched through function composition if **PROX** and/or **DIST** are added. The order of function application is reflected in syntax. The notation we use for this is borrowed from feature geometry (Gazdar & Pullum 1982; Harley & Ritter 2002): features representing functions applied later are dominated by features representing functions applied earlier:

(9) Singular



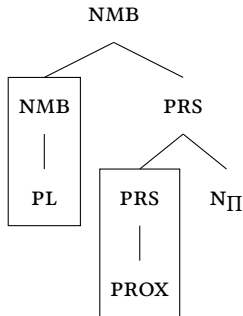
We now turn to plural pronouns. For now, we assume that number is encoded through an **NMB** node, which is merged above **PRS** and which can host a feature

PL (but see §3). If this feature is present, the cardinality of the output set of the person system must be larger than one.

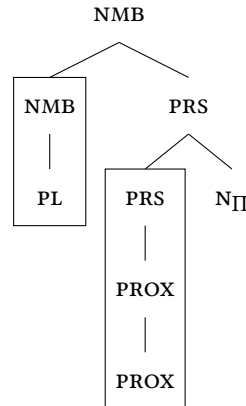
In the second and third person, the person specification in the plural is the same as the person specification in the singular. In the first person, however, there are two options. Suppose that the plural feature is simply added to the singular form in (9a), where PROX is applied twice. This delivers  $S_i$ , a set containing the speaker and in the plural also any contextually given associates, but no addressee. The result is an exclusive first person pronoun. Another option is to apply PROX only once. This delivers  $S_{i+u}$ , a set containing the speaker, at least one addressee, and any associates. The resulting pronoun is a first person inclusive:

(10) Plural

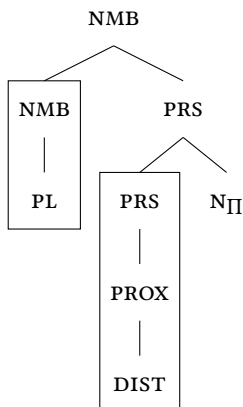
a. 1<sup>st</sup> person inclusive



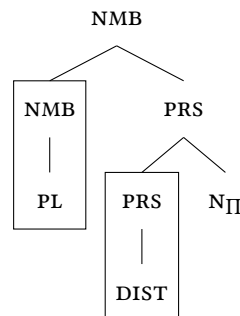
b. 1<sup>st</sup> person exclusive



c. 2<sup>nd</sup> person



d. 3<sup>rd</sup> person





Note that the option of applying PROX only once in the first person is incompatible with a singular reading. Such a derivation has as its output  $S_{i+u}$ , a set with two obligatory members.

The system just outlined exhausts the feature structures made available by the person system. No structures other than those in (9) and (10) deliver an interpretable output. Consider why. Both PROX and DIST require a layered input set. Given that  $S_{i+u+o}$  has only three layers, the number of possible feature combinations is restricted. If DIST is applied first, this delivers an unstructured set ( $S_{i+u+o} - S_{i+u}$ ), and hence neither PROX nor DIST can apply subsequently. If PROX is applied first, the output is a layered set ( $S_{i+u}$ ). This leaves open three possibilities: (i) PROX applies again, which yields an unstructured set ( $S_i$ ), or (ii) DIST applies, which again yields an unstructured set ( $S_{i+u} - S_i$ ), or (iii) neither PROX nor DIST applies, which delivers the first person inclusive.

As a result, the following generalizations about person distinctions expressed in pronouns follow (adapted from Bobaljik 2008):

- (11) a. No language distinguishes pronouns expressing  $i+i$  and  $i+a_i$ .  
 b. No language distinguishes pronouns expressing  $u+u$  and  $u+a_u$ .  
 c. No language distinguishes pronouns expressing  $i+i+u$ ,  $i+u+u$  and  $i+u+a_i/u$ .

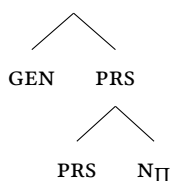
In the system just outlined, the first person (inclusive or exclusive) does not form a natural class with the third person to the exclusion of the second person. Similarly, the first person inclusive does not form a natural class with the second person to the exclusion of the first person exclusive. This is relevant in view of the results of a large-scale study reported in Harbour (2016). Harbour looked at which systematic patterns of syncretism are attested cross-linguistically, where a systematic pattern of syncretism is a syncretism characteristic of all paradigms of a given language. He found that no language had a systematic syncretism for first and third person, or for first person inclusive and second person. On the assumption that the distribution of systematic syncretisms reflects the underlying distribution of features, this shows that no set of features is shared uniquely by the relevant combinations of persons.

The absence of systematic syncretisms for first person inclusive and second person is in line with a typological generalization discussed by Zwicky (1977). Zwicky argues that in languages that lack the distinction between inclusive and exclusive first person pronouns, the inclusive reading is systematically expressed by the first person, rather than the second person plural pronoun – this despite the fact that the inclusive reading covers both speaker and addressee. An account

for this observation would be impossible if first person inclusive and the second person did form a natural class to the exclusion of the first person exclusive.<sup>2</sup>

For the purposes of this paper, the main characteristic of our person system is that third person has a person specification, namely [DIST]. We should note that this does not mean that there are no pronouns that lack person features. One would expect there to be such pronouns, especially in an analysis based on privative features. In Ackema & Neeleman (2018), we argue that a particular type of generic pronoun should be analyzed in this way (see also Egerland 2003 and D’Alessandro 2007). English *one*, West Frisian *men* (Hoekstra 2010) and Icelandic *maður* (Sigurðsson & Egerland 2009) are examples: in the absence of person features, the generic operator contained in them ranges over the entire person space ( $S_{i+u+o}$ ).

(12) Generic ONE



### 3 The number system

We now turn to the number system. We will argue that, like the person system, it is based on privative features that are interpreted as functions. We will show that in this system there cannot be a feature that encodes singularity. Rather, singular is one of the interpretations that results from the absence of a number feature specification.

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<sup>2</sup>Strictly speaking, in order to capture Zwicky’s generalization, not only the syntactic feature system, but also the system of morphological realization (spell out) must be considered. In fact, there is a way of constructing grammars that violate the generalization in our system, namely by impoverishment of DIST in in the context of both PL and PROX (so in the second person plural). In a language that has distinct spell-out rules that apply to the feature structures [PROX] and [PROX-PROX], this will create a formal opposition between first person exclusive on the one hand, and first person inclusive and second person on the other. Interestingly, Sanuma appears to have a pronominal spell-out system of this type (see Borgman 1990: 149 and Simon 2005: 127; see Perri Ferreira 2013 for critical discussion of Borgman’s observations). However, in the absence of the particular set of circumstances described above, we expect Zwicky’s generalization to hold, and we therefore expect it to be valid at least as a statistical universal.

## 2 Default person versus default number in agreement

In languages that make a distinction between inclusive and exclusive first person pronouns, two types of number system are found. The difference between these systems involves the interpretation of number in the inclusive. In what we will call absolute number systems, the inclusive is always marked as either dual or plural. Maori provides an example (Table 1; Maori paradigm from Cysouw 2003: 91).

Table 1: Maori pronouns

	Singular [ ]	Plural [PL]	Dual [PL MIN]
1 inclusive	-	tā-ua	tā-tou
1 exclusive	au	ā-ua	mā-tou
2	koe	kōr-ua	kou-tou
3	ia	rā-ua	rā-tou

As indicated, absolute number systems can in principle be analyzed using two features, PL (for ‘plural’) and MIN (for ‘minimal’), which we take to be hosted by a dedicated functional head NMB. PL encodes that the cardinality of the set referred to, which we will represent as  $n$ , exceeds 1 ( $n > 1$ ). MIN selects the minimal plural ( $n = 2$ ).

There is a second type of number system, which we will refer to as a relative number system. In such a system, the interpretation of number marking seems dependent on person, with a shift in the inclusive that is absent in the other persons. In particular, the inclusive pronoun need not be inflected for number. If it is, its cardinality is larger than two, whereas in other pronouns, number marking implies a cardinality larger than one. The Rembarrnga paradigm (see Cysouw 2003: 233) in Table 2 illustrates the point.

Table 2: Rembarrnga pronouns

	Singular	Plural	Dual	Trial
1 inclusive	-	yukku	ngakorru	ngakorr-bbarrah
1 exclusive	ngunu	yarru	yarr-bbarrah	
2	ku	nakorru	nakorr-bbarrah	
3	nawu/ngadu	barru	barr-bbarrah	

Such number systems are typically analyzed using the MIN feature already mentioned and – instead of PL – a feature AUG for ‘augmented’ (see Bobaljik

2008 and Cysouw 2011, and references mentioned there). AUG indicates that  $n$  is larger than the minimal cardinality allowed by the person system. Except in the inclusive, the minimal cardinality allowed by the person system is one, and so AUG delivers  $n > 1$ . In the inclusive, however, the minimal cardinality allowed by the person system is two, so AUG delivers  $n > 2$ . On this analysis, the Rembarrnga paradigm looks much more elegant (Table 3).

Table 3: Rembarrnga pronouns

	Non-aug. [ ]	Augmented [AUG]	Unit-augmented [AUG MIN]
1 inclusive	yukku	ngakorru	ngakorr-bbarrah
1 exclusive	ngunu	yarru	yarr-bbarrah
2	ku	nakorru	nakorr-bbarrah
3	nawu/ngadu	barru	barr-bbarrah

If we were to accept both the feature systems in Table 1 and 3, the resulting proposal would model parametric variation between absolute and relative number systems as a choice between features (PL versus AUG). However, this would make the parametrization of the number system something of an oddity. Our impression is that in other cases where feature systems are parametrized, languages select more or fewer features from a fixed inventory, rather than choosing between features that cannot co-occur in the same grammar. We propose to fix this problem by assuming that AUG is universal and that PL does not exist. However, the effects of AUG are dependent on information from the person system. If AUG has no access to the person system, then its interpretation defaults to the interpretation normally assumed for PL. This idea can be worked out as follows.

The input set for the number system is  $\mathbb{N}$ . The features AUG and MIN select a subset from  $\mathbb{N}$  in accordance with the definitions in (13a,b). The cardinality of the set delivered by the person system must be an element of this subset.

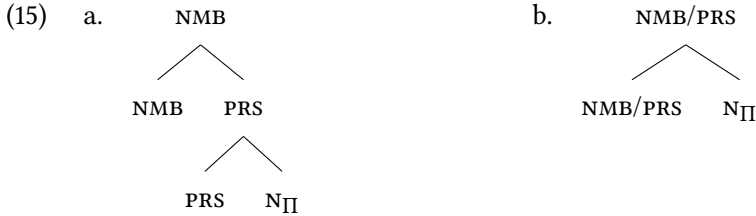
- (13) a.  $AUG(S) = S', S' \subseteq S, n \in S' \Leftrightarrow n > n_R$   
 b.  $MIN(S) = S', S' \subseteq S, n \in S' \Leftrightarrow n > 0 \wedge \nexists n', n' \in S \wedge n' < n$

As indicated in (13a), AUG refers to a reference number  $n_R$ , whose value is determined by the following procedure ( $S_{\text{person}}$  is the output of the person system):

- (14) a.  $n_R = n_{\text{person}}$  iff  $n_{\text{person}}$  is accessible and  $n_{\text{person}} > 0$ ; otherwise  $n_R = 1$   
 b.  $n_{\text{person}} = |\text{strip}(S_{\text{person}})|$   
 c.  $\text{strip}(S_{\text{person}}) = S', S' \subseteq S_{\text{person}}, p \in \{i, u\} \Leftrightarrow p \in S'$

## 2 Default person versus default number in agreement

The accessibility of person information depends on the functional structure of the pronoun. We assume, following Platzack (1983) and others, that there is parametric variation in whether certain functional heads project separately or conflate and project together. Applied to NMB and PRS, this gives the possible structures for pronouns in (15).



Our hypothesis is that  $n_{\text{person}}$  is accessible to AUG if and only if NMB and PRS conflate, so that AUG is located in the same node as the person features that deliver  $S_{\text{person}}$ . Given the definitions in (14), this means that only in (15b) can  $n_{\text{R}}$  assume a value other than 1.

Consider how this plays out in absolute and relative number systems, respectively. The situation in absolute number systems is straightforward, as  $n_{\text{R}}$  is always 1 (by default, as AUG has no access to person information):

(16) *Absolute number system – (15a)*

- $n_{\text{R}} = 1$  (by default)
- NMB–AUG:  $n > 1$
- NMB–AUG–MIN:  $n = 2$

In relative number systems, AUG does have access to the person system, which means that  $n_{\text{R}}$  varies depending on person, along the following lines:

(17) *Relative number system – (15b)*

a. First person inclusive:

- $n_{\text{person}} = |\text{strip}(\{i, a_i+, u, a_u+\})| = |\{i, u\}| = 2$
- $n_{\text{R}} = n_{\text{person}} = 2$
- NMB–AUG:  $n > 2$
- NMB–AUG–MIN:  $n = 3$

b. First person exclusive:

- $n_{\text{person}} = |\text{strip}(\{i, a_i+\})| = |\{i\}| = 1$
- $n_{\text{R}} = n_{\text{person}} = 1$
- NMB–AUG:  $n > 1$
- NMB–AUG–MIN:  $n = 2$

c. Second person:

- $n_{\text{person}} = |\text{strip}(\{u, a_u+\})| = |\{u\}| = 1$
- $n_{\text{R}} = n_{\text{person}} = 1$
- NMB-AUG:  $n > 1$
- NMB-AUG-MIN:  $n = 2$

d. Third person:

- $n_{\text{person}} = |\text{strip}(\{o+\})| = |\{\}\}| = 0$
- $n_{\text{R}} = 1$  (by default)
- NMB-AUG:  $n > 1$
- NMB-AUG-MIN:  $n = 2$

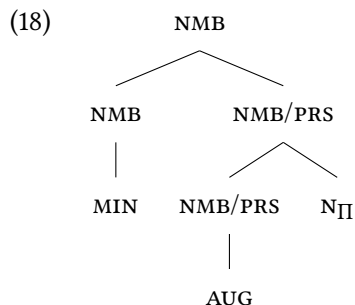
When the semantics of number in (15b) is computed, the value of  $n_{\text{person}}$  is accessible to AUG, because PRS is part of the same terminal node. This has an effect for the interpretation of number in the first person inclusive. Since applying PROX once delivers a set with  $i$  and  $u$  as obligatory members (see (10a)),  $n_{\text{R}} = n_{\text{person}} = 2$  here. The consequence is that AUG requires that  $n > 2$ . When the semantics of the terminal containing AUG in the structures in (15a) is computed, however, the value of  $n_{\text{person}}$  is not accessible, because [PRS-PROX] is generated in a sister node. This means that  $n_{\text{R}}$  assumes its default value of 1, also in the first person inclusive, so that AUG now requires that  $n > 1$ .

Our analysis makes a crucial prediction about the morphological form of pronominal number. In absolute systems, plural can be either agglutinative or fusional. If the terminals introducing person and number are spelled out separately, an agglutinative number paradigm will emerge; if spell-out targets a string of terminals or a non-terminal node (on a par with  $\{\text{go PAST}\} \Leftrightarrow \text{went}$ ), the number morphology will be fused with the person morphology. If person and number are introduced in the same terminal, however, as is the case in relative systems, they *must* be fusional (there is no position in which a distinct number morpheme could be anchored).<sup>3</sup> We predict, then, that if number marking is agglutinative in pronouns, the number system must be of the absolute type. This prediction appears to be confirmed by the discussion in Cysouw (2003: 89, 263), where it is noted that languages that have a relative number system and are agglutinative for AUG are extremely rare, if they exist at all (see also Greenberg 1988).

Note that it *is* possible for a relative number system to be agglutinating for MIN, as MIN need not have access to person information, but only to the output

<sup>3</sup>This is under the assumption that an operation like fission, as used in Distributed Morphology (see Halle & Marantz 1993 and Noyer 1997), either does not exist or must give rise to instances of multiple exponence, which is not at issue here.

of AUG. Hence, a language can have an interpretable structure in which NMB and PRS are partially conflated, as in (18).



Languages with a relative number system that have agglutinative morphology for MIN indeed exist; the Rembarnga paradigm in Table 3 provides an example.

In sum, the AUG feature is shared by all number systems, but its interpretive effects depend on whether or not it has access to information delivered by the person features, which in turn depends on the syntactic structure of pronouns. Notice that in this system singular and non-augmented must both equal the absence of AUG. There cannot be a contentful privative feature that characterizes singular and non-augmented number, given that the interpretation of these numbers as  $n=1$  or  $n=2$  is determined fully by the interpretation of AUG. Therefore, the default in the number system is characterized by the absence of a feature specification.

## 4 Defaults

If we are correct in assuming that singular is a non-number, while third person has a feature specification, the question arises why both are defaults. In order to address this question, we must first consider what a default is. There are several views of this; the following three are probably the most common.

- (i) Defaults are the most frequent forms. It is not clear what insight that can provide here.
- (ii) Defaults correspond to absence of features. This is an attractive idea, but it cannot work on our view of person, as the third person has feature content.
- (iii) Defaults correspond to feature structures that do not force an interpretation. This is the view we will defend.

Our core assumption is that only if a  $\varphi$ -feature structure may denote an empty set can it fail to be interpreted, and hence act as default. In the person system, [DIST] is the only feature structure that can deliver an empty set. DIST selects the outer layer in (6), discarding the only obligatory members of  $S_{i+u+o}$ , speaker and addressee. As  $o$  is optional, [DIST] may deliver an empty set. All other specifications deliver a set that contains either  $i$  or  $u$  or both and can therefore not act as a default. This holds, even, for a specification in which PRS does not contain person features, as this delivers a generic impersonal pronoun that ranges over the entire  $S_{i+u+o}$  input set, see (12).

In the number system, [ ] is the only feature structure that can deliver an empty set. [AUG] and [AUG-MIN] impose a positive cardinality on the output of the person system. However, [ ] does not, and is therefore compatible with a cardinality of 0 in both absolute and relative number systems, regardless of person specification.

## 5 Multiple agreement, single spell-out

We have argued that third person has a feature specification, as opposed to singular number, and explained why nevertheless both can function as defaults. We now show how the asymmetry in feature specification plays out in agreement.

Nevins (2011) discusses so-called omnivorous number systems, in which a verb shows plural agreement when either subject or object is plural (see 19)).

(19) Eastern Abruzzese (D'Alessandro & Roberts 2010)

- a. Giuwanne a pittate nu mure.  
John has painted.SG a wall
- b. Giuwanne e Mmarije a pittite nu mure.  
John and Mary have painted.PL a wall
- c. Giuwanne a pittite ddu mure.  
John has painted.PL two walls
- d. Giuwanne e Mmarije a pittite ddu mure.  
John and Mary have painted.PL two walls

Like Nevins, we assume that data like (19) involve multiple agreement. We further assume that this leads to a situation in which one morpho-phonological agreement slot must realize two distinct feature bundles:



- (20) a.  $DP_1 \dots V-\varphi_1-\varphi_2 \dots DP_2$   
 b.  $V-\varphi_1-\varphi_2 \Leftrightarrow /V/-/affix/$

In general, where one form realizes two feature bundles either unification is necessary or arbitration by rules of resolution. We begin by discussing unification. In the next section, we will discuss resolution rules.

We assume that unification is either unification of sets of syntactic feature structures or of phonological forms. The syntactic unifications relevant to the data in (19) are given below. These can all be realized without difficulty, as a singular form in (21a) and a plural form in (21b-d):

- (21) a.  $V-[ ]_1-[ ]_2 \rightarrow V-[ ]_{1+2}$   
 b.  $V-[AUG]_1-[ ]_2 \rightarrow V-[AUG]_{1+2}$   
 c.  $V-[ ]_1-[AUG]_2 \rightarrow V-[AUG]_{1+2}$   
 d.  $V-[AUG]_1-[AUG]_2 \rightarrow V-[AUG]_{1+2}$

Given that third person is different from singular in that it does have feature content, syntactic unification in parallel cases involving person can result in feature bundles with multiple person specifications:

- (22) a.  $V-[DIST]_1-[DIST]_2 \rightarrow V-[DIST]_{1+2}$   
 b.  $V-[DIST]_1-[PROX (...)]_2 \rightarrow V-[DIST \text{ PROX } (...)]_{1+2}$

While realization of the output in (22a) is unproblematic, the feature specification in (22b) makes spell-out impossible, on the assumption that the process is blocked if a single agreement slot contains multiple feature bundles for the same class of  $\varphi$ -features.<sup>4</sup> This means that where the input contains conflicting person specifications, spell-out cannot proceed on the basis of syntactic unification. Instead, phonological unification is necessary. Hence the structure in (22b) can be realized only if the spell-out rules for [DIST] and [PROX (...)] deliver the same phonological form:

- (23) a.  $\{DIST\} \Leftrightarrow /aaa/$   
 b.  $\{PROX(...)\} \Leftrightarrow /aaa/$   
 c.  $V-[DIST]_1-[PROX (...)]_2 \Leftrightarrow /V/-/aaa/$

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<sup>4</sup>Note that there is a fundamental difference between the feature specification [DIST PROX] in (22b) on the one hand and the feature specification [PROX-DIST] (second person) on the other. The former contains two (simplex) feature bundles (for third and first person), with the result that spell-out is blocked.

There are other situations in which a derivation converges if a single phonological element can realize multiple conflicting syntactic feature bundles; an example involves case morphology on free relatives in German, see Groos & van Riemsdijk (1981).

We will now discuss instances of (22) and (23). In particular, we will consider two structures in which a low DP must have the same person specification as imposed on the verb by the subject in a double agreement structure.<sup>5</sup> One is the Dutch cleft construction already introduced in (3). The other involves the well-known case of nominative objects in Icelandic. Let us start with the latter.

Agreement with nominative objects in Icelandic is possible when the subject carries quirky case. However, such agreement is usually impossible with first or second person objects:<sup>6</sup>

(24) Icelandic (Sigurðsson & Holmberg 2008)

- a. \*Honum líkum við.  
him.DAT like-1PL we.NOM  
'He likes us.'
- b. \*Honum líkið þið.  
him.DAT like-2PL you.PL.NOM  
'He likes you all.'
- c. Honum líka þeir.  
him.DAT like-3PL they.NOM  
'He likes them.'

We follow a strand in the literature according to which the verb agrees with both the quirky subject and the nominative object (see Burzio 2000, Schütze 2003, and Ussery 2013). Thus, Icelandic agreement is regulated by two rules: (i) agree

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<sup>5</sup>In contrast, there are no similar cases in which a low DP must have the same number specification as the subject. This follows from the hypothesis that singular is absence of number features. Nevins (2011) proposes an analysis of relevant person-number contrasts along similar lines. His account assumes that the person system is built on bivalent features, while features in the number system are privative, with singular lacking number. The above preserves the insights of Nevins' proposal while avoiding this duality of design. Both the person system and the number system have privative features, and there is a principled reason why singular is featureless while third person has content.

<sup>6</sup>D'Alessandro (2007) shows that impersonal *si* constructions in Italian behave in a fashion parallel to the Icelandic examples discussed below: *si* triggers default third person singular agreement, and when the object is nominative the verb agrees in number with it. Crucially, in the latter case the object cannot be first or second person. Any adequate analysis proposed for Icelandic can therefore be extended to Italian impersonal constructions, as indeed argued by D'Alessandro.

with the subject; (ii) agree with nominatives. Non-nominative DPs trigger default third person singular agreement, presumably because they differ from nominatives in having a Case shell which prevents access to their  $\varphi$ -features. Therefore, quirky subjects behave just like other categories that lack  $\varphi$ -features, such as clausal subjects. Indeed, in examples with a quirky subject in which the object is not nominative, the verb must carry third person singular inflection:

- (25) (Schütze 2003)  
 Mig hefur / \*hef / \*hafa vantað mýts.  
 me.ACC has-3SG / \*1SG / \*3PL lacked mice.ACC  
 ‘I have lacked mice.’

Structures like those in (24), which involve agreement with both a quirky subject and a nominative object, will then have a verb that carries two distinct  $\varphi$ -feature bundles, one of which will be [DIST] (KP stands for ‘Case Phrase’, in this structure the quirky subject):

- (26)  $KP_1 \dots V\text{-}[\text{DIST}]_1\text{-}\varphi_2 \dots DP_2$

Whether or not (26) can be realized depends on the content of  $\varphi_2$ . Consider the various possibilities listed in (27).

- (27) a.  $KP_1 \dots V\text{-}[\text{DIST}]_1\text{-}[\text{DIST}]_2 \dots DP_2$   
 b.  $KP_1 \dots V\text{-}[\text{DIST}]_1\text{-}[\text{DIST AUG}]_2 \dots DP_2$   
 c.  $KP_1 \dots V\text{-}[\text{DIST}]_1\text{-}[\text{PROX}(\dots)]_2 \dots DP_2$

Syntactic unification of feature bundles applied to these structures yields the following:

- (28) a.  $KP_1 \dots V\text{-}[\text{DIST}]_{1+2} \dots DP_2$   
 b.  $KP_1 \dots V\text{-}[\text{DIST AUG}]_{1+2} \dots DP_2$   
 c.  $KP_1 \dots V\text{-}[\text{DIST PROX}(\dots)]_{1+2} \dots DP_2$

The feature bundles in (28a) and (28b) are unproblematic as far as spell-out is concerned. The feature bundle in (28c) is not, however, as it contains contradictory values for person. This means that spell-out must proceed on the basis of the non-unified structure in (27c). But that will only meet the condition that there be a single affix if phonological unification is possible, which is only the case if the phonological realization of [DIST]<sub>1</sub> is identical to the phonological realization of [PROX (...)]<sub>2</sub>.

Indeed, Sigurðsson (1996) observes that the person restriction on object agreement is lifted (for many speakers) when the first/second person form of the verb is syncretic with the third person form:<sup>7</sup>

- (29) a. bored.at-3SG  $\Leftrightarrow$  /leiddist/ (Sigurðsson 1996)  
 b. \* Henni leiddumst við.  
     her.DAT bored.at-1PL we.NOM  
 c. % Henni leiddust þið.  
     her.DAT bored.at-2PL you-PL.NOM  
 d. ? Henni leiddist ég.  
     her.DAT bored.at-1SG I.NOM  
 e. ? Henni leiddist þú.  
     her.DAT bored.at-2SG you-sg.NOM

Agreement with lower nominative DPs does not only occur in mono-clausal, but also in bi-clausal structures with a raising verb. In such structures, the same person restriction is observed as in mono-clausal structures (see (30)).

- (30) a. (Sigurðsson & Holmberg 2008)  
     \* Honum mundum virðast við (vera) hæfir.  
     him.DAT would.1PL seem we.NOM (be) competent  
 b. \* Honum munduð virðast þið (vera) hæfir.  
     him.DAT would.2PL seem you.PL.NOM (be) competent  
 c. Honum mundu virðast þeir (vera) hæfir.  
     him.DAT would.3PL seem they.NOM (be) competent  
     ‘They would seem to be competent to him.’

Interestingly, many speakers allow suspension of agreement with the nominative in the bi-clausal construction. Crucially, the person restriction disappears in

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<sup>7</sup>Note that the fact that syncretism prevents the problem with conflicting person features indicates that the solution should not be sought in syntax proper. This rules out a number of accounts that attempt to deal with such data in terms of an intervention effect, such as Sigurðsson & Holmberg 2008. While the relevant syncretism in Icelandic is a relatively rare phenomenon, we will see below that in a similar situation in Dutch clefts, syncretism indeed systematically ameliorates person clashes. An analysis should therefore not centre on a putative problem with syntactically establishing the agreement relation(s) in question, but on a problem with how these relations are expressed on the verb.

that case (see (31)). This is as expected: if there is only agreement with the quirky subject, there cannot be conflicting feature bundles in the verb.

(31) (Sigurðsson & Holmberg 2008)

- a. Honum mundi virðast við (vera) hæfir.  
him.DAT would.3SG seem we.NOM (be) competent
- b. Honum mundi virðast þið (vera) hæfir.  
him.DAT would.3SG seem you.PL.NOM (be) competent
- c. Honum mundi virðast þeir (vera) hæfir.  
him.DAT would.3SG seem they.NOM (be) competent

Sigurðsson & Holmberg (2008) observe that there is considerable variation in whether suspension of agreement is allowed, preferred or required. In one variant (their Icelandic C), agreement with low nominatives is dispreferred in general, even in mono-clausal constructions. We predict that in that variant there should not be a person restriction on nominative objects at all. This appears to be in line with Sigurðsson and Holmberg's assessment of the relevant data.

Dutch clefts show almost the same pattern of core observations as Icelandic quirky subject constructions (see also den Dikken 2014). They have the following properties.

- (i) Number agreement with a clefted nominative is obligatory (see (32)).
  - (ii) If there is unambiguous person agreement, first and second person nominatives cannot be clefted (see (33)).
  - (iii) Some speakers allow suspension of person agreement with clefted nominatives. In that case, there is no person restriction (hence the %-sign on the variants with third singular *is* in (33a,b)).
  - (iv) Where the verb forms triggered by the pronoun in subject position (*het* 'it') and by the clefted nominative DP are identical, the person restriction is lifted for all speakers. This is the case with some modal verbs and in the past tense (see (34)).
- (32) Dutch
- Het zijn / \*is zij die de whisky gestolen hebben.  
it are.PL / is they that the whisky stolen have  
'It's them who stole the whisky.'

- (33) a. Het %is / \*ben ik die de whisky gestolen heeft.  
 it is / am I that the whisky stolen has  
 ‘It’s me who stole the whisky.’
- b. Het %is / \*ben(t) jij die de whisky gestolen heeft.  
 it is / are.SG you.SG that the whisky stolen has  
 ‘It’s you who stole the whisky.’
- c. Het is hij die de whisky gestolen heeft.  
 it is he that the whisky stolen has  
 ‘It’s him who stole the whisky.’
- (34) a. Het zal ik / jij wel geweest zijn die de whisky gestolen  
 it will I / you.SG indeed been be who the whisky stolen  
 heeft.  
 has  
 ‘It is likely that it was me/you who stole the whisky.’
- b. Het was ik / jij die de whisky gestolen heeft.  
 it was I / you.SG who the whisky stolen has  
 ‘It was me/you who stole the whisky.’

These data allow an analysis similar to that proposed for Icelandic. Dutch requires agreement with the subject and (usually) agreement with nominatives. If the clefted constituent is a nominative DP, this yields the following representation:

- (35)  $het_1 \dots V\text{-}[\text{DIST}]_1\text{-}\varphi_2 \dots \text{DP}_2 [\text{CP} (Op_2) \dots t_2 \dots]$

This structure can be realized without problems if the syntactic unification of  $[\text{DIST}]_1$  and  $\varphi_2$  delivers a feature bundle that does not contain multiple person specifications (i.e. when  $\varphi_2$  is  $[\text{DIST} (\text{AUG})]$ ). Where syntactic unification does not lead to such a feature bundle, the derivation may converge under phonological unification (i.e. when  $/[\text{DIST}]_1/ = / \varphi_2/$ ). If neither type of unification allows spell-out, the derivation crashes. This accounts for the person restriction observed in (33). Some speakers allow agreement with the clefted nominative to be suspended under these circumstances (through deletion of  $\varphi_2$ ). For those speakers, first and

second person singular clefted nominatives may show up with a third person singular copula:<sup>8</sup>

(36) *het*<sub>1</sub> ... V-[DIST]<sub>1</sub> ... DP<sub>2</sub> [CP (*Op*<sub>2</sub>) ... *t*<sub>2</sub> ...]

There is an interesting twist in the plural. Here, all speakers require number agreement, but there are no effects of the person restriction:

(37) Het zijn / \*is wij / jullie die de whisky gestolen hebben.  
 it are.PL / is we / you.PL that the whisky stolen have  
 ‘It’s us/you who stole the whisky.’

These data have no parallel in Icelandic quirky subject constructions and cannot be accounted for through phonological unification, since the third person singular form of the copula is *is* and the first/second person plural form is *zijn*. However, in contrast to Icelandic, Dutch shows full neutralization of person distinctions in the plural, as illustrated for the copula in (38). This fact can be accounted for in terms of two rules of impoverishment that delete person features in the context of AUG, as in (39).

(38) a. Ik ben even weg.  
 I am momentarily away  
 ‘I am out at the moment.’  
 b. Jij bent even weg.  
 you are momentarily away

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<sup>8</sup>In Icelandic clefts, there is always full agreement between the copula and the clefted constituent. In contrast to sentences with a quirky subject and nominative object, there is no evidence for a person clash (Jóhannes Jónsson, Sigríður Sigurjónsdóttir and Höskuldur Þráinsson, p.c.):

(i) Í gær varst það þú sem tókst bókina.  
 yesterday was.2SG it you that took.2SG book.DEF  
 ‘Yesterday it was you who took the book.’

Apparently, then, Icelandic clefts also permit deletion of one of the  $\varphi$ -feature bundles in the verb before spell-out, but as opposed to the relevant variety of Dutch, it is the agreement with the subject that is suppressed in Icelandic, rather than the agreement with the nominative predicate. This gives rise to the question why the same deletion is not allowed in quirky subject constructions. One possibility is that this is related to the fact that the agreement induced by such a subject is default agreement. Arguably, default agreement cannot be deleted because it is not recoverable, as opposed to regular agreement, which reflects features of the controller.

- c. Hij is even                      weg.  
     He is momentarily away
- d. Wij/jullie/zij    zijn even                      weg.  
     we/you.PL/they are momentarily away
- (39) a. PROX  $\rightarrow \emptyset / \_\_\_ [AUG]$   
       b. DIST  $\rightarrow \emptyset / \_\_\_ [AUG]$

If the rules in (39) apply to the output of syntactic unification of the two feature bundles on the verb, they will remove the conflicting person specifications, leaving only [AUG], and therefore the structure will be realized with the plural form of the copula. We give the derivation for a case with a clefted first person plural pronoun in (40).<sup>9</sup>

- (40) a. *het*<sub>1</sub> ... V-[DIST]<sub>1</sub>-[PROX AUG]<sub>2</sub> ... DP<sub>2</sub> [CP (*Op*<sub>2</sub>) ... *t*<sub>2</sub> ...] (syntactic output)  
       b. *het*<sub>1</sub> ... V-[DIST PROX AUG]<sub>1+2</sub> ... DP<sub>2</sub> [CP (*Op*<sub>2</sub>) ... *t*<sub>2</sub> ...] (after unification)  
       c. *het*<sub>1</sub> ... V-[AUG]<sub>1+2</sub> ... DP<sub>2</sub> [CP (*Op*<sub>2</sub>) ... *t*<sub>2</sub> ...] (after application of (39))

In summary, third person agreement can induce a person clash in cases of multiple agreement, while singular number agreement never induces a number clash. This confirms that third person has a feature specification, while singular number does not. However, not all cases of multiple agreement give rise to person clashes. Sometimes, conflicts in person specification are resolved by rules that operate before spell-out, which delete one of the problematic feature bundles. In the next section, we will explore such rules of resolution.

## 6 Omnivorous person agreement

While we have seen that there is an asymmetry between person and number in that person clashes in agreement exist, but number clashes do not, it is not the case that multiple agreement for different persons necessarily leads to ungrammaticality. Some languages allow resolution of a potential clash on the basis of a

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<sup>9</sup>The person restriction discussed above for Dutch clefts is also absent when the pronoun used as subject is not the weak pronoun *het* ‘it’ but the strong pronoun *dat* ‘that’. Arguably, this is because the strong pronoun is a fronted (accusative) predicate, so that in this construction the postverbal DP (the subject) is the only agreeing element; see Ackema & Neeleman (2018) for discussion.



person hierarchy: the feature structure highest on the hierarchy is realized, while the feature structure lower on the hierarchy is not.

A good example is the agreement system in Ojibwe, which is sensitive to a person hierarchy  $2 > 1 > 3$  (see Valentine 2001, among others). The agreement morphology on the Ojibwe verb reflects features of both its subject and object. That there must be simultaneous subject and object agreement is clearest when considering the so-called theme sign on the verb. This is a suffix that expresses the relative position of subject and object on the person hierarchy. In particular, when the subject is higher on this hierarchy than the object, a ‘direct’ theme-sign appears, while an ‘inverse’ form appears when the object is higher on the hierarchy. The form of the theme sign is also determined by whether or not both arguments are ‘local’ persons (first or second) or only one of them is. Thus, the distribution in Table 4 of theme signs obtains (adapted from Lochbihler 2008).

Table 4: Ojibwe theme signs

	Subject outranks object	Object outranks subject
Both subject and object are 1 or 2.	<i>-i</i>	<i>-in(i)</i>
Either subject or object is 3.	<i>-aa</i>	<i>-igw</i> (and allomorphs)

This simultaneous sensitivity to the features of subject and object can only be accounted for under the assumption that both agree with the verb. Only if the features of both arguments are represented in the verb is it possible to have a spell-out system for the verbal agreement that is based on a comparison of their position on the person hierarchy. For the theme-sign suffixes, then, resolution of person clashes is achieved by spell-out rules that insert a single morpheme as the realization of pairs of feature bundles.

In addition to the theme-sign suffix, the Ojibwe verb also carries a prefix that expresses person agreement. Interestingly, this prefix shows omnivorous person effects: it expresses agreement with the argument that is highest on the person hierarchy, regardless of whether this is the subject or the object (*g-* realizes second person, *n-* first person, *w-/∅-* third person). Given the discussion above, we know that the person features of both subject and object are represented in the verb. Hence, the behavior of the Ojibwe prefix shows that resolution of a person clash can also consist of non-realisation of the feature structure lower on the

person hierarchy. The following examples illustrate the system (from Valentine 2001, cited here from Lochbihler 2008):

- (41) Ojibwe
- a. *n-waabm-aa*  
1-see-DIR  
'I see him.'
  - b. *n-waabm-ig*  
1-see-INV  
'He sees me.'
- (42) a. *g-waabam-i*  
2-see-DIR(local)  
'You see me.'
- b. *g-waabm-in*  
2-see-INV(local)  
'I see you.'

Not all languages that allow resolution of person clashes on the basis of a hierarchy make use of the same hierarchy. There is one cross-linguistic constant, though: third person is outranked by both first and second. The variation lies in the ranking of first and second person, as follows:

- (43) a.  $2 > 1 > 3$  (example: Ojibwe, see above)  
b.  $1 > 2 > 3$  (example: Nocte, see below)  
c.  $1,2 > 3$  (example: Kaqchikel, see below)

We suggest that this cross-linguistic variation comes about through variation in weighting of the two conditions in (44). (For the purpose of (44b), a feature structure is less uniform if it contains instances of more features.)

- (44) a. PROX outranks DIST.  
b. Less uniform feature structures outrank more uniform feature structures.

A constraint equivalent to (44a) is present in some form or other in most any theory of person hierarchies, sometimes expressed directly and sometimes expressed in the order of functional projections, or in the order of probing of features (see below). The constraint in (44b) may look unfamiliar, but it is an instantiation of the general idea that feature structures containing more features are

marked compared to feature structures containing fewer. The only innovation is that markedness is assumed not to increase with repetition of the same feature, as in the first person exclusive (characterized by [PROX-PROX], see §2).

If the first condition in (44) is more important than the second, the resulting hierarchy will be  $1 > 2 > 3$ . This is because first person is maximally marked according to this principle, as it contains only instances of PROX. By contrast, third person is maximally unmarked, as it contains only DIST. Second person is in between, as it contains both PROX and DIST. If the second condition in (44) is more important, second person will be highest in the hierarchy, as this is the only person with a non-uniform feature structure. The relative ranking of first and third person is still determined by the first condition, so that the result is a hierarchy  $2 > 1 > 3$ . Finally, if the two conditions are equally weighted, a hierarchy results in which first and second person are ranked equally, and are both ranked above third person.

Nocte is an example of a language that is like Ojibwe, but with first and second person reversed on the hierarchy (that is, it uses a  $1 > 2 > 3$  hierarchy). The following data (from DeLancey 1981: 641, cited here from Croft 2003: 172) illustrate this:

(45) Nocte

- a. Nga-ma ate hetho-ang.  
1SG-ERG 3SG teach-1  
'I will teach him.'
- b. Ate-ma nga-nang hetho-h-ang.  
3SG-ERG 1SG-ACC teach-INV-1  
'He will teach me.'
- c. Nang-ma nga hetho-h-ang.  
2SG-ERG 1SG teach-INV-1  
'You will teach me.'
- d. Nga-ma nang hetho-e.  
1SG-ERG 2SG teach-1PL  
'I will teach you.'

As in Ojibwe, an inverse marker appears on the verb in case the object is higher on the person hierarchy than the subject, the only difference being that, since the hierarchy is  $1 > 2 > 3$  in Nocte, the inverse marker is used when the subject is second person and the object first person. As before, the presence of this kind

of morphology can only be understood if there is double agreement, so that the features of both subject and object are represented in the verb. Also as in Ojibwe, there is a second morpheme, in this case a suffix, that agrees in person with that argument whose feature specification is highest on the hierarchy (the omnivorous person effect). There is an interesting twist when the subject is first person and the object second person, as in (45d). As expected, the person agreement shown by the relevant suffix is with first person. However, the number expressed is an unexpected inclusive plural, rather than the singular. We will not attempt to analyse this observation, but it is another indication that the agreement morphology reflects agreement with both subject and object.

The final possibility of the system outlined above is a person hierarchy in which first and second person are equally ranked. This should result in a language that allows resolution of clashes between third person and either first or second person, but not resolution of clashes between first and second person. An example of such a language is Kaqchikel, as discussed in Preminger (2014) (all Kaqchikel data below are taken from this source). In ordinary transitive clauses, the verb agrees with both subject and object, and this configuration of multiple agreement is reflected in two distinct agreement morphemes:

- (46) Kaqchikel
- a. rat x-Ø-aw-ax-aj ri achin.  
YOU.SG COM-3SG.ABS-2SG.ERG-hear-ACT the man  
'You heard the man.'
- b. ri achin x-a-r-ax-aj rat.  
the man COM-2SG.ABS-3SG.ERG-hear-ACT you.SG  
'The man heard you.'

The interesting twist in Kaqchikel is that there is a construction, known as the Agent Focus construction, in which the number of agreement slots on the verb is reduced to one. This, of course, creates a situation in which person clashes arise. When one of the arguments of the verb is third person and the other one is not, the clash is resolved in favour of the non-third person argument. This is illustrated in (47) for a combination of a first person and third person argument, and in (48) for a combination of a second person and third person argument.

- (47) a. ja y'in x-in / \*Ø-ax-an ri achin.  
FOC me COM-1SG / \*3SG.ABS-hear-AF the man  
'It was me that heard the man.'

## 2 Default person versus default number in agreement

- b. ja ri achin x-in / \* $\emptyset$ -ax-an yin.  
 FOC the man COM-1SG / \*3SG.ABS-hear-AF me  
 ‘It was the man that heard me.’
- (48) a. ja rat x-at / \* $\emptyset$ -ax-an ri achin.  
 FOC you.SG COM-2SG / \*3SG.ABS-hear-AF the man  
 ‘It was you that heard the man.’
- b. ja ri achin x-at / \* $\emptyset$ -ax-an rat.  
 FOC the man COM-2SG / \*3SG.ABS-hear-AF you.SG  
 ‘It was the man that heard you.’

This indicates that there is a person hierarchy in Kaqchikel on which both first and second person outrank third person.<sup>10</sup> That first and second person are not ranked with respect to each other on this hierarchy is shown by the fact that, in the Agent Focus construction, no resolution is possible in case both arguments are local. As in Icelandic and elsewhere, unresolved clashes result in ungrammaticality. Thus, the following are impossible, regardless of the choice of agreement on the verb, whether first person, second person, or (default) third person.

- (49) a. \*ja rat x-in / at /  $\emptyset$ -ax-an yin.  
 FOC you.SG COM-1SG / 2SG / 3SG.ABS-hear-AF me  
 Intended: ‘It was you that heard me.’
- b. \*ja yin x-in / at /  $\emptyset$ -ax-an rat.  
 FOC me COM-1SG / 2SG / 3SG.ABS-hear-AF you.SG  
 Intended: ‘It was me that heard you.’

Preminger (2014) argues that it is undesirable to appeal to person hierarchies to deal with the Kaqchikel data. He proposes a syntactic account which he claims

<sup>10</sup>When both arguments in the Agent Focus construction are third person, the result is third person agreement. If one of the third person arguments is plural and the other singular, we get plural agreement (omnivorous number). This indicates that, as expected, when unification is possible, this is used as the strategy for determining the spell-out of a single agreement slot for two feature bundles. When one of the arguments is first or second person and the other argument is third person, the first or second person argument will be agreed with not only for person but also for number (no omnivorous number in this case; see Preminger 2014: 20). This shows that ‘partial unification’ is impossible (either there is unification for all  $\varphi$ -features, or no unification at all) and that, when unification fails, the person hierarchy determines which argument’s features are realized. This is a property of unification in general: if there is a clash in any feature, it fails.

to be motivated independently, and which derives the effects of the person hierarchy. The account is based on a Probe-Goal system of syntactic agreement regulated by relativized minimality. In the Kaqchikel Agent Focus construction, there is one functional head that acts as a Probe for person features. This head specifically probes for a participant feature. Given relativized minimality, the highest DP that has a participant feature will act as the Goal. However, Preminger assumes, following Béjar & Rezac (2003), that all first or second person features in DPs must be licensed by entering an agreement relation:<sup>11</sup>

- (50) Person Licensing Condition (Béjar & Rezac 2003)  
Interpretable 1<sup>st</sup>/2<sup>nd</sup> person features must be licensed by entering into an Agree relation with an appropriate functional category.

The consequence of this is that the lower DP in the Agent Focus construction cannot be licensed if it, too, is first or second person. In contrast, if the subject is third person, this is skipped in the Probe's search for a participant feature, and agreement will be with the first or second person object.

Whether or not an account that appeals to a person hierarchy is more stipulative than this syntactic account can only be evaluated properly when cross-linguistic variation in the effects of person hierarchies is considered. After all, we have seen that it is certainly not always the case that a clash between first and second person results in ungrammaticality. In some languages, these clashes are resolved as well, sometimes in favour of first person and sometimes in favour of second person (see above). It seems to us that the only way in which the syntactic account just outlined can deal with such variation is by specifying the features that the Probe is searching for. However, the language variation implies that it is not sufficient to specify a fixed feature content for the Probe per language. Probes must be allowed to search for different features, and in addition the features searched for must be ordered such that agreement with some is preferred over agreement with others.

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<sup>11</sup>Béjar & Rezac (2003) invoke this condition in an account of the so-called Person Case Constraint (PCC). This is a constraint on the possible features of an accusative clitic or weak pronoun in the presence of a dative clitic or weak pronoun. There is language variation in what is prohibited, but a common form of the constraint is that the accusative pronominal cannot be first or second person in the context of any dative pronominal. We think that PCC effects should not be linked to agreement, however, simply because in most of the languages that show PCC effects, neither dative nor accusative objects agree with the verb. At the least, this shows that the Agree operation invoked in (50) cannot be equated with actual agreement, but it is the latter in which we are interested here. For accounts of the PCC that are not based on Agree, see Haspelmath (2004); Runić (2013); Kiss (2015), among others.

Consider a language with a  $2 > 1 > 3$  hierarchy, for instance. Given that second person defeats first person in a clash, the verbal head must probe specifically for a feature that is unique to second person, say *ADDRESSEE*. Otherwise, it should not be able to skip a first person argument in its search. However, if the Probe is specified as *ADDRESSEE* also in a context where there is a clash between a first person and a third person argument, the situation would be unresolvable. In order to explain why the third person is ignored in favour of the first person argument, the feature content of the Probe must be different. In particular, the Probe must search for a feature that distinguishes first and third person, that is, either a *SPEAKER* feature or a more general *PARTICIPANT* feature. But in the  $1 > 2$  situation, the Probe cannot be permitted to search for either of these features. The implication is that there is a hierarchy that determines which features are preferably selected as the specification of the Probe. Clearly, this is simply the counterpart of the  $2 > 1 > 3$  person hierarchy. Given the attested language variation, it must be the case that this hierarchy of preferred feature content for the Probe can vary from language to language. We conclude that there is no difference between the syntactic account and the morphological account proposed here in terms of the necessity of stipulating a language-particular feature hierarchy.<sup>12</sup>

The main objection to the syntactic alternative, however, is that it fails to account for those situations in which third person DPs are involved in person clashes. As we have seen in the previous sections, the agreement data from Icelandic quirky subject constructions and Dutch clefts can be understood as the

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<sup>12</sup>Preminger argues that the syntactic account, but not an account based on a person hierarchy directly, provides insight into the morphology of the agreement markers in *Kaqchikel*. In particular, first and second person agreement markers are reduced versions of strong pronouns, while third person agreement markers are not. Moreover, the third person marker is a number marker; third person singular is null. Preminger's account for this is that probing by the person head results in clitic doubling of the Goal, while probing by the number head does not. Since the person head does not probe a third person DP, we get only number agreement when a third person DP agrees, and therefore not a clitic. (This holds both in the Agent Focus construction and in ordinary transitive clauses, so is not related to the occurrence of a person clash.) Of course, the generalisation that agreement with first and second person takes the form of a clitic can be made in any theory that can generalise over first and second person. In our account, one could say that agreement for *PROX* takes the form of a clitic. Neither of these accounts provides insight for why this should be so. It is a well-known observation that in a number of languages the morphology of first and second person agreement markers diachronically developed from pronouns, while the morphology of third person agreement markers did not (see Fuß 2005 and references mentioned there). This may not have anything to do with the internal logic of the person feature system, but rather with the high accessibility in discourse of first and second person, which Ariel (2000) argues favours reduction of the pronominal markers expressing these persons to clitics and subsequently to agreement markers.

result of just such a clash. If the person clash in the Kaqchikel Agent Focus construction is the result of the Person Licensing Condition in (50), third persons should never lead to a similar problem. At the least, then, this implies that a unified account of all the data discussed in this paper is not possible on a syntactic account based on this particular constellation of assumptions.

## 7 Conclusion

In this paper we have shown that there is a fundamental distinction between default person and default number. Third person has a feature specification, while singular number does not. The argument is based on configurations in which two  $\varphi$ -feature bundles compete for spell-out. In the case of number, this never results in a clash. Instead, there will be omnivorous number: the verb shows plural agreement whenever at least one of the feature bundles is specified as plural. In contrast, in the case of person this situation can lead to a clash. This accounts for the impossibility of having a lower nominative with a different person specification than the subject in both Icelandic quirky subject constructions and Dutch clefts. Those cases where a verb does show omnivorous person agreement are the result of language-specific person hierarchies used for resolution. We have presented an account of such hierarchies that is in line with the assumption that third person is not feature-less.

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## Chapter 3

# 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 the nature of Backward Agree, which seems to require heads of the same type.

## 1 Aims and goals

In this paper, we discuss backward control configurations, focusing on Greek, a language showing a *prima facie* 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;

Artemis Alexiadou & Elena Anagnostopoulou. 2019. An asymmetry in backward control: Subject vs. object control. In Ludovico Franco, Mihaela Marchis Moreno & Matthew Reeve (eds.), *Agreement, case and locality in the nominal and verbal domains*, 55–84. Berlin: Language Science Press.  
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Barbosa 2009). The formation of comparable chains is severely restricted in BOC 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 et al. (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/ $\nu$ APPL 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)

Copy pronounced		Structure
Higher	Lower	
✓	*	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 Nakh-Daghestanian 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  $\varphi$ -agreement between matrix T, embedded T and the overt S(subject), licit only if the S doesn't intervene between the two T heads, as in (1a), as opposed to (1b):

- (1) a.  $[T\varphi_k [TP/CP T\varphi_k DP\varphi_k]]$   
 b. \*  $[T\varphi_k [TP/CP DP\varphi_k T\varphi_k]]$

In what follows, we summarize both aspects of this discussion. Nevertheless, as we will show in §4, 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.<sup>1</sup>

(2) 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. Spyropoulos 2007 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.’

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<sup>1</sup>Na has been analyzed as a subjunctive mood marker (cf. Philippaki-Warbuton & Veloudis 1984), a subjunctive complementizer (Agouraki 1991; Tsoulas 1993) or a device to check EPP (Roussou 2009). Here we side with the first view.



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 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**)  
 the John.NOM learned.3SG the John.NOM SBJV play.3SG the John.NOM  
 kithara (o **Janis**)  
 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.’

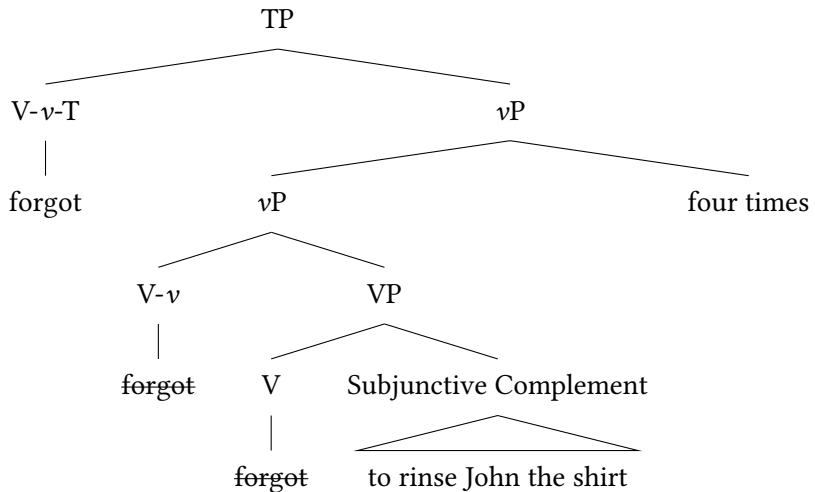
- b. fetos tolmise na pirovolisi tesseris fores o Janis  
 this.year dared.3SG SBJV shoot.3SG four times the John.NOM  
 ‘This year John dared to shoot four times (in a row).’

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:

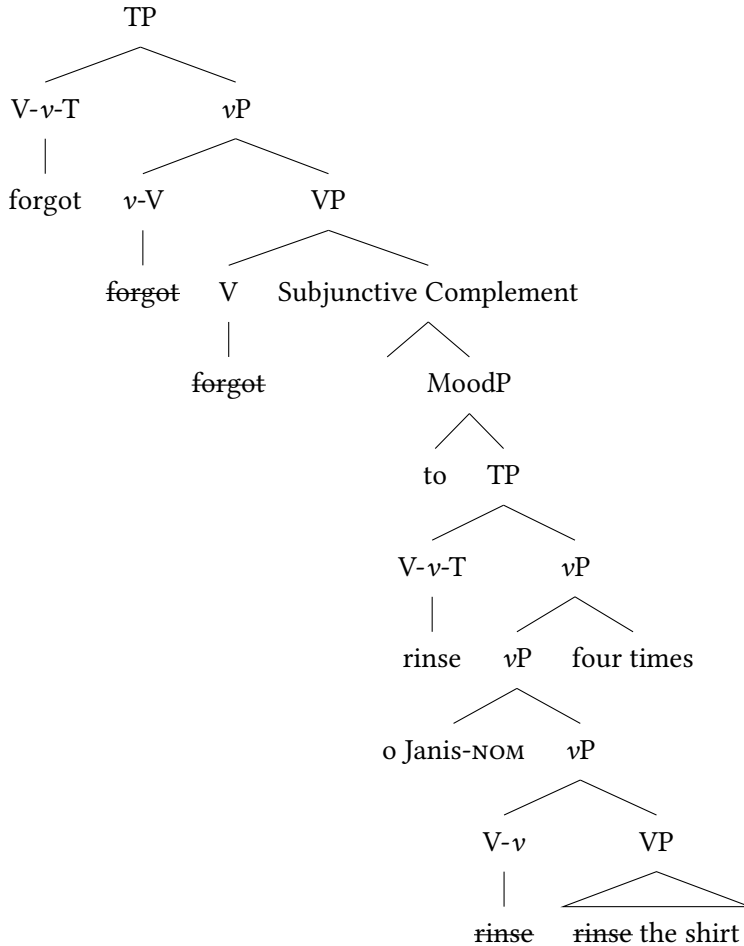
- (8) a. ksehase na ksevgali o Janis to pukamiso tesaris fores  
 forgot SBJV rinse the John.NOM the shirt four times  
 ‘John forgot to rinse the shirt four times.’ (*four rinsings/forgettings*)  
 b. ksehase tesaris fores na ksevgali o Janis to pukamiso  
 forgot four times SBJV rinse the John.NOM 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 (9a). When it modifies the embedded verb, it adjoins to the embedded *vP* or TP (9b):

- (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 negative concord language, must be either in the clause containing sentential negation (10a) or in the c-command domain of a higher sentential negation (10b). They cannot be licensed by a negation in a lower clause (10c) (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 (11c), 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 (11c) 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 (11c). 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, (11d) 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 her  
 '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. They focus 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, along with examples like (5) where the embedded subject is nominative, native speakers were also asked to evaluate examples like (14) 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 SBJV 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 krisi*  
try.3SG SBJV NEG CL.ACC feel.sad.3SG the financial 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.down.3SG 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.sad.3SG 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 (14), 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 (16a–b). Examples (16b) and (16c) 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 agreements of peace  
 ‘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 agreements of peace  
 ‘They obliged Bush to sign the peace agreement.’  
 c. ?Obligó a firmar el Congreso a Bush los acuerdos de paz.  
 obliged.3SG to sign the Congress to Bush the agreements of peace  
 ‘The Congress obliged Bush to sign the peace agreement.’

Ordóñez proposes a remnant movement analysis of BC (and restructuring constructions) in the spirit of Hinterhölzl’s (2006) and Koopman & Szabolcsi’s (2000) analyses of verbal complexes:

- (17) a. [<sub>VP</sub> Juan querer [<sub>CP</sub> PRO [<sub>VP</sub> comprar el libro]]]  
 Juan to.want PRO to.buy the book  
**Step 1:** Movement of the verb *to want* above VP:  
 b. [<sub>TP</sub> querer Juan V<sub>i</sub> [<sub>TP</sub> PRO [<sub>VP</sub> comprar el libro]]]  
 to.want Juan to.buy the book  
**Step 2:** Movement of the TP above *to want*:  
 c. [[<sub>TP</sub> PRO [<sub>VP</sub> comprar el libro]] [<sub>TP</sub> querer<sub>i</sub> [<sub>VP</sub> Juan V<sub>i</sub> ...]  
 to.buy the book to.want 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<sub>1</sub> el libro<sub>2</sub> [[TP PRO [VP comprar t<sub>2</sub>]] [TP querer<sub>i</sub> [VP t<sub>1</sub> ...  
           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<sub>2</sub>] [Juan el libro [[TP PRO] [TP querer<sub>i</sub> [VP t ...  
           to.buy                   Juan the book                                   to.want

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

- f. [CP [TP querer<sub>i</sub> ... [VP t ...]] [[VP comprar t<sub>i</sub>] [Juan el libro [[TP PRO  
           t<sub>i</sub> ...

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<sub>i</sub> [que comprasen Juan<sub>i</sub> el libro].  
           yesterday to.them made that buy.3PL Juan the book  
       b. Ayer les hizo<sub>i</sub> comprar Juan<sub>i</sub> el libro.  
           yesterday to.them made 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 (19a) can be explained, if scrambling out of non-tensed CPs is blocked by filled SpecCPs.

- (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):



### 3 An asymmetry in backward control: Subject vs. object control

- (20) de kseri pos na apandisi o Janis ta gramata  
 not know.3SG how SBJV answer the.NOM 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 sinthiki irinis  
 obliged.3PL the.ACC Bush SBJV sign.3SG the peace agreement.ACC  
 ‘They obliged Bush to sign the peace agreement.’  
 b. \*anagasan na ipograpsi ton Bush ti sinthiki irinis  
 obliged.3PL SBJV sign.3SG the.ACC Bush the peace agreement.ACC

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  
 to.them promised to the family.members to.give the jury the  
 libertad a los prisioneros]  
 liberty to the prisoners

- (23) iposhethikan tis Marias na dosun i dikastes  
 promised.3PL the.GEN Maria.GEN SBJV give.3PL the judges.NOM  
 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 Terzi 1992 and others). Moreover, BC is found with all control verbs, not just with a small class (the restructuring class in Spanish).

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 (24b). Crucially, there is a robust Principle C effect in embedded *that-SVO* sequences illustrated in (24a), 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*\*<sub>j/k</sub> emathe oti o Petros<sub>j</sub> kerdise to lahio  
 learned.3SG that the.NOM Peter.NOM won.3SG the lottery.ACC  
 ‘He/she learned that Peter won the lottery.’

- b. *pro<sub>j/k</sub> emathe oti kerdise (o Petros<sub>j</sub>) to lahio*  
 learned.3SG that won.3SG (the.NOM Peter.NOM) the lottery.ACC  
 (o Petros<sub>j</sub>)  
 (the.NOM 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) show 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.<sup>2</sup> For this reason, they propose that Greek BC actually reflects  $\varphi$ -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 (1a), repeated below:

- (1) a. [ T $\varphi_k$  [TP/CP T $\varphi_k$  DP $\varphi_k$  ]]  
 b. \* [ T $\varphi_k$  [TP/CP DP $\varphi_k$  T $\varphi_k$  ]]

Tsakali et al. (2017) relate the availability of long-distance agreement chains as in (1a) to the pro-drop status of the language. Their analysis assumes a version of (25): see Rizzi (1982), Alexiadou & Anagnostopoulou (1998), Holmberg (2005), Barbosa (2009).<sup>3</sup> The crucial intuition is that Agr in null subject languages is pronominal and can thus enter long-distance agreement relationships, like pronouns.

<sup>2</sup>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).

<sup>3</sup>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.

- (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  $\nu$ P, receiving the relevant theta-role.

In order to make (25) 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  $\nu$ 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 Alexiadou et al. 2014 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, they can either be taken to be 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 valued, as Barbosa proposes, but also interpretable.<sup>4</sup>

Turning to the Agree relationships established in BSC configurations, (25) holds in the embedded clause of the non-Principle C VSO/VOS cases investigated by Tsakali et al. (2017), as in (26):

- (26) [TP/CP T  $\varphi_k$  DP  $\varphi_k$  ]

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

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<sup>4</sup>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  $\nu$ P-internal subject (as proposed by Barbosa 2009), or that phase-hood cannot be suspended in Romance indicatives.

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) [  $T\varphi_k$  [TP/CP  $T\varphi_k$  DP $\varphi_k$  ] ]

Matrix T (and the  $\nu$ P-internal pro-subject associated with it) agrees with the CP and then with embedded T which agrees with the  $\nu$ P-internal subject. Note here that in Zulu, as argued in Halpert (2016), the EPP forces raising of the embedded subject out of the  $\nu$ 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.<sup>5</sup>

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.

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?

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<sup>5</sup>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).

## 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<sub>i</sub> [<sub>Δ</sub><sub>i</sub> to smile]  
*controller controllee*
- b. Backward object control  
 I persuaded <sub>Δ</sub><sub>i</sub> [Kim<sub>i</sub> to smile]  
*controllee controller*

BOC is attested in e.g. Malagasy (Potsdam 2006; 2009), Korean (Monahan 2003), and Omani Arabic (Al-Balushi 2008). We illustrate the phenomenon with a Korean example in (29). (29a) 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, (29b), the nominative resides in the embedded clause and is coindexed with a null element in the matrix, (29c):

- (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<sub>i</sub> [<sub>Δ</sub><sub>i</sub> 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 <sub>Δ</sub><sub>i</sub> [Yeonghi-ka<sub>i</sub> 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 (30a) as instances of object control. In fact, Burzio argues against an ECM analysis for (30a–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 (31) 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 (31b) the phrase corresponding to *Petros* is the object of direct perception, while this is not true of sentences like (31a). 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 (32b) below:

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- (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:<sup>6</sup>

- (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.

Under the assumption that quantifier scope is clause-bounded, the difference between (33a) and (33b) follows if (33b) has the two quantifiers in different clauses.

<sup>6</sup>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*  
*entered.1SG in and with surprise saw.1SG nobody.ACC SBJV NEG work.3SG alone*  
*tu. Oli ixan xoristi se omades.*  
*his.NOM all had separated into teams*  
 ‘I entered and to my surprise I saw nobody working on his own. They had all separated into teams.’

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]<sub>i</sub> na ekfonite den ton<sub>i</sub> akusa*  
 the speech SBJV be.delivered NEG him heard.1SG  
 ‘The speech being delivered, I did not hear it.’  
 b. \**[ton logo na ekfonite]<sub>i</sub> den to<sub>i</sub> akusa*  
 the speech SBJV be.delivered NEG it heard.1SG  
 c. *[ton Petro]<sub>i</sub> na tiganizi psaria den ton<sub>i</sub> 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]<sub>i</sub> den to<sub>i</sub> 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 6 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 (36), which tests CLLD, and Kotzoglou (2002) for discussion:

- (36) \**[ton Jani na aposiri ti minisi]<sub>i</sub> to<sub>i</sub> 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



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control, as in (37) (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<sub>i</sub> perimena [ton Jani na aghapisi ti Maria]<sub>i</sub>  
 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 & Papanageli 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 (38) (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 & Papanageli (2007) that the accusative object of quasi-ECM verbs licenses nominative secondary predicates in the embedded clause, as in (39), 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 (39), 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 (39) 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 (39) 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 §3 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 (40b) and (ex:alexiadou: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  
the Mary.NOM helped SBJV tidy.up.3SG the John.NOM the room  
tu  
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

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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 §3.

For Greek, 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 §3, 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 (42), 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 §3 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 (40b–41c) 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 like  
 tu Kosta i opera.  
 the Kostas.GEN the opera  
 'John imposed on Kostas to like the opera/convincing 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/convincing 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.

$$(44) \quad [CP [VoiceP [DP_{\phi_k} [TP/CP T\phi_k ]]]]$$

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, (45a–b):

- (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 (46), 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 Béjar & Massam (1999: 67).

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) [TP/CP  $T\varphi_k$  DP $\varphi_k$ ]

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 (48) as a condition for BC:<sup>7</sup>

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

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<sup>7</sup>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 §3. (i) can 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).

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:<sup>8</sup>

- (49) # o Janis **tu** epevale / ton katafere na **efxaristiete** o  
the John.NOM CL.GEN imposed / CL.ACC managed SBJV please.NACT the  
**Kostas** me tin opera.  
Kostas.NOM with the opera  
‘John imposed on Kostas to like the opera/convincing 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 (50a), featuring a clitic-doubled goal, which is well-formed in the non-coreference reading, and by ?? in (50b), 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 **tu**  
the John.NOM CL.GEN imposed / CL.ACC managed SBJV CL.GEN  
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 **min tu**  
the John.NOM CL.GEN imposed / CL.ACC managed SBJV NEG CL.GEN  
pesi **tu** **Kosta** to vazō.  
fall the Kostas.GEN the vase  
‘John imposed on Kostas not to drop the vase.’

This seems to suggest that backward coreference of this type is not only subject to the condition in (48), but requires, in addition, that the embedded clitic-doubled argument encode point of view. Perhaps this is so because only experiencers qualify as subjects at some level of representation, which means that they relate to T (Anagnostopoulou 1999 for Greek; Landau 2010).

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<sup>8</sup>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.

## 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, Tsakali et al. (2017) have recently 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 co-reference 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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## Chapter 4

# Long distance agreement in Spanish dialects

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This paper discusses data from various dialects of Spanish manifesting agreement between an inflected verb and a PP-internal NP in the context of non-paradigmatic SE (e.g., *Se vieron a los niños* – Eng. ‘Children were seen’). An analysis is put forward in terms of Long Distance Agreement (cf. Chomsky 2000; 2001) between T (the locus of nominative Case) and an NP Goal within a KP/PP. It is shown that this derivational possibility is subject to different microparametric layers teasing apart varieties allowing agreement across dative-like Case assigners (in differential object marking) and other prepositions that do not obviously participate in standard Case-agreement dependencies—thus giving rise to a pattern that qualifies as a pseudopassive of sorts.

## 1 Introduction

It is an old observation that languages of the Spanish type fail to deploy both preposition stranding and pseudopassives, as the examples in (1) and (2) below show (cf. Law 2006 and references therein for discussion).

- (1) \* Spanish (Campos 1991: 741)  
Quién contaron todos con?  
who counted.3PL all with  
‘Who did everybody count on?’
- (2) \* Spanish (Campos 1991: 741)  
José es contado con por todos.  
José be counted.3SG with by everybody  
‘José is counted on by everybody.’



Plausibly, the factor responsible for (1) is also behind (2), at least if the key element for both processes to take place is the category P, a locus of parametric variation (cf. Hornstein & Weinberg 1981; Kayne 1984; 1994; 2005; Abels 2003; and references therein). In more abstract terms, we seem to be dealing with two constraints affecting prepositions and blocking both A and A-bar dependencies, which is what (3) is meant to capture:

- (3) In the context Probe » P » XP ( » = c-command)
  - ii. ... XP cannot move (no P-stranding)
  - iii. ... XP cannot be a Goal (no pseudopassives)

This paper discusses data from certain dialects of Spanish that depart from (3) in the context of passive SE sentences, at least for agreement cases. In particular, it will be shown that Long Distance Agreement (LDA) is possible between T (the locus of Nominative Case; cf. Chomsky 2000; 2001) and a DP Goal within a PP. I will compare the data with previously reported evidence involving the Differential Object Marking preposition *a* (cf. Torrego 1998; López 2012) in order to argue that there are three types of prepositions when it comes to the possibility for external Probes ( $\varphi$ -complete T) to bypass them.

The paper is organized as follows. §2 reviews the agreement options of passive SE sentences. §3 discusses the main properties of two patterns where T can agree with a DP introduced by a preposition; the first pattern covers what RAE-ASALE (2009) dubs the ‘hybrid pattern’ (agreement across the differential marker *a*), whereas the second pattern involves agreement in the context of more full-fledged prepositions; §4 puts forward a Probe-Goal analysis of the facts (cf. Chomsky 2000; 2001) that makes use of the idea that P can undergo incorporation (cf. Hornstein & Weinberg 1981; Law 2006). §5 contains the main conclusions.

## 2 Agreement properties of SE sentences in Spanish

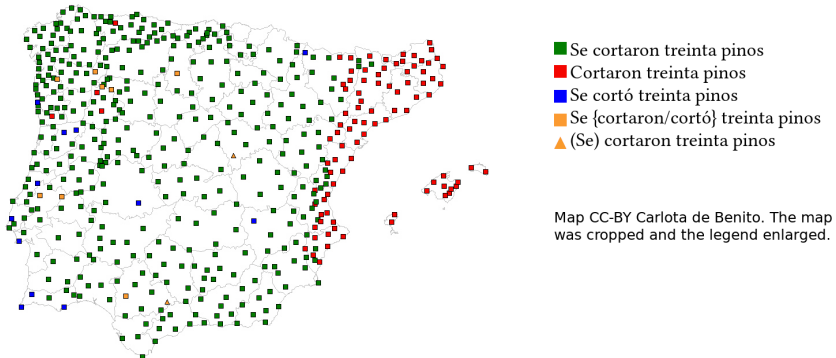
Passive/impersonal SE sentences have been the focus of much research (cf. Mendikoetxea 1992; 1999; Raposo & Uriagereka 1996; D’Alessandro 2007; López 2007; among others). If we concentrate on Spanish, it has been noted that the clitic SE can be part of structures where T agrees with the internal argument (IA, henceforth) (so-called Passive SE; see (4)), but it can also be part of structures where agreement fails (so-called Impersonal SE; see (5)), where T shows default agreement and the IA may or may not be headed by a Case marker, which depends on independent factors:

- (4) Spanish  
 Se criticaron los recortes.  
 SE criticize.3PL the cuts  
 ‘Budget cuts were criticized.’
- (5) Spanish
- a. Se criticó los recortes.  
 SE criticize.3SG the cuts  
 ‘Budget cuts were criticized.’
- b. Se criticó a los políticos.  
 SE criticize.3SG DOM the politicians  
 ‘Politicians were criticized.’

Consider the patterns above. The sentence in (4) contains a  $\varphi$ -defective  $v$  that cannot Case-license the IA *los recortes* (Eng. ‘the budget cuts’). As argued by both Raposo & Uriagereka (1996), SE may be taken to occupy the external argument position (cf. López 2007), thus behaving like an expletive of sorts (an idea that has been applied to spurious SE in clitic combinations; cf. Kayne 2000: 160; Gallego & Uriagereka 2017). The sentences in (5) are not *bona fide* passives: in such cases,  $v$  is presumably  $\varphi$ -complete, and the IA receives accusative Case, which can be differentially marked (as in (5b)) or not (as in (5a)); as expected, T shows defective (3<sup>rd</sup> person singular) agreement.

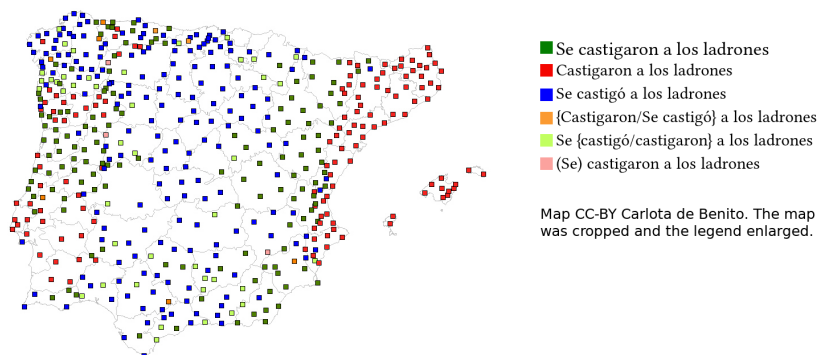
The two agreeing patterns of sentences involving SE have also been reported in traditional atlases such as the ALPI (Atlas Lingüístico de la Península Ibérica). The following data, taken from de Benito (2010), show this:<sup>1</sup>

- (6) (de Benito 2010: 8, 14)
- a. Se cortaron treinta pinos. (Eng. ‘Thirty pines were cut.’)



<sup>1</sup>Just to address a question by an anonymous reviewer, although the ALPI also collects information from Portugal, here I am focusing on Spanish data alone.

b. Se castigó a los ladrones (Eng. ‘Thieves were punished.’)



As a closer look at the data in (4) and (5) reveals, passive and impersonal SE sentences have a common base – they have the same argument structure, the only difference being agreement. In this context, Mendikoetxea (1999: §26.3.2.2) observes that passive SE sentences can manifest full or partial (defective) agreement, as illustrated in (7a) and (7b) respectively (cf. Martín Zorraquino 1979 for discussion):

(7) Spanish

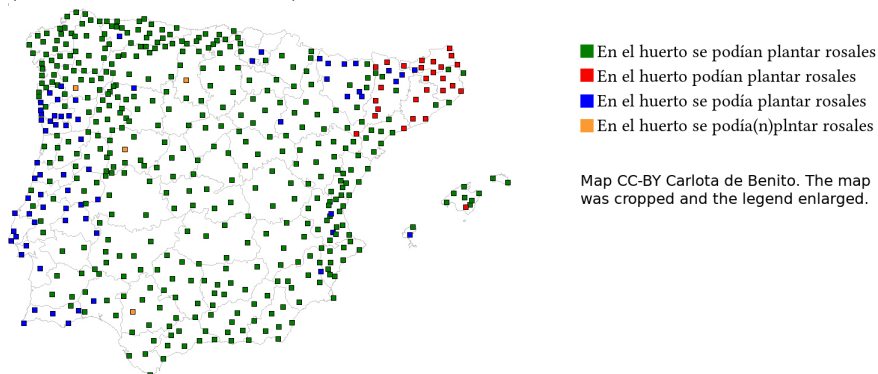
- a. En este país se dicen muchas gilipolleces.  
in this country SE say.3PL many bullshit  
‘People say bullshit in this country.’
- b. En este país se dice muchas gilipolleces.  
in this country SE say.3SG many bullshit  
‘People say bullshit in this country.’

Although (7a) is clearly better to my ear, the patterns in (7) are both possible, and there is no consistent dialectal tendency, as far as I can tell. The  $\varphi$ -defective configuration has been reported in Old Spanish texts, and it is also present in varieties of present-day European and American Spanish (cf. Mendikoetxea 1999).<sup>2</sup> The  $\varphi$ -complete configuration involves unproblematic local agreement between

<sup>2</sup>RAE-ASALE (2009) discusses a series of factors that may be behind the lack of agreement in such cases (the category of the internal argument, its preverbal/postverbal position, the presence of dative arguments, etc.). I put these issues aside here.



- (10) En el huerto se **podían** plantar **rosales**.  
 in the garden SE could.3PL plant rose.bushes  
 ‘Rose bushes can be planted in the garden.’  
 (from de Benito 2010: 13)



Interestingly, LDA situations go beyond SE scenarios, as shown in (11). As before, the  $\varphi$ -Probe on T scans into the embedded clause, displaying a phenomenon we can dub “hyperagreement”.<sup>4</sup>

- (11) a. Siempre nos **tocaron** [ resolver **problemas** ].  
 always to.us be.our.turn.3PL solve problems  
 ‘We always had to solve problems.’  
 b. Nos **faltan** [ hacer **dos goles** ].  
 to.us lack.3PL make two goals  
 ‘We still have to score two goals.’

Notice that, in both SE and SE-less cases, agreement is only in number, not person (cf. Etxepare 2006), but there seems to be robust evidence that we are dealing with syntactic LDA.<sup>5</sup> To conclude, consider previously unnoticed situations in which intervention-like effects arise in the context of an auxiliary:

<sup>4</sup>Fernández-Serrano (2016) provides a detailed analysis of the data above based on the idea that agreement takes place whenever the embedded clause projects fewer layers of structure (undergoing a restructuring of sorts, but from a phase-theoretic perspective; cf. Gallego 2009), which has morphological and interpretive consequences.

<sup>5</sup>A reviewer suggests that agreement is also for third person here, but this is not accurate, as this is a default value. If agreement was complete (number and person), then one would expect



- (12) a. ? Me **faltaron** [ *corregir esos exámenes* ].  
to.me lacked.3PL mark those exams  
‘I couldn’t mark those exams.’
- b. ?\* Me **faltaron** [ *haber corregido esos exámenes* ].  
to.me lacked.3PL have marked those exams  
‘I couldn’t have marked those exams.’

A second piece of evidence comes from clitic climbing (cf. Gallego 2016; Paradís 2016; and references therein). As (13) shows, LDA is worse if a clitic stays in situ:

- (13) a. Se **pueden** [ *leer esos libros* ].  
SE can.3PL read those books  
‘Those books can be read.’
- b. Se (me) **pueden** [ *leer(?\*me) esos libros* ].  
SE to.me can.3PL read to.me those books  
‘Those books can be read to me.’

Let us conclude. This section has reviewed the main properties of SE sentences in Spanish, paying attention to the various agreement patterns they display in the different varieties of Spanish. Two main patterns have been identified, following the literature. One features a  $\varphi$ -defective  $v$ , which explains the lack of accusative Case (and thus agreement with T). The other features a  $\varphi$ -complete  $v$ , which blocks Agree (T, IA). As we have seen, the alternation between agreeing and non-agreeing options is not subject to any systematic dialectal logic (there is no “isogloss” telling us where agreement stops), so we seem to have a case of

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to find, for instance, SE sentences with 1st or 2nd person agreement; however, as López (2007) points out, this is impossible in Spanish:

- (i) Spanish (López 2007: 127)
- a. \* Se vimos unos lingüistas en el mercado ayer.  
SE saw.1PL some linguists in the market yesterday  
‘Some linguists were seen in the market yesterday.’  
(intended meaning: Some of us linguists were seen in the market)
- b. \* Se visteis unos lingüistas en el mercado ayer.  
SE saw.2PL some linguists in the market yesterday  
‘Some linguists were seen in the market yesterday.’  
(intended meaning: Some of you linguists were seen in the market)



(16) Spanish

- a. Se criticó        los recortes.  
 SE criticize.3SG the cuts  
 ‘Budget cuts were criticized.’
- b. Se criticó        a    los políticos.  
 SE criticize.3SG DOM the politicians  
 ‘Politicians were criticized.’

As noted, if  $v$  is  $\varphi$ -complete (the (15) example), the IA presumably receives accusative Case, which can be coupled with the differential marker  $a$ , as in (16b). This is precisely the pattern in which agreement is most unlikely to happen – for the same reason agreement does not bypass prepositions more generally. That said, agreement does seem to be possible in some cases, even in the context of DOM; this variant of the pattern in (16b), to which I return below, is called “hybrid” by RAE-ASALE (2009).<sup>7</sup>

The  $v$  of (16) should be  $\varphi$ -complete  $v$ , therefore  $v^*$  in the sense of Chomsky (2001). However, it is not immediately obvious that *bona fide* Accusative Case is assigned in the two examples offered in (16). Consider the contrast in (17), where the accusative clitic *lo* (Eng. ‘it’) can only be used if the antecedent is animate (*a Trump* – Eng. ‘Trump’):<sup>8</sup>

- (17) a. \* Los poemas, se **los**        recita    en clase de literatura.  
 the poems   SE it.ACC.M.PL read.3SG in class of literature  
 ‘Poems, we read them in literature class.’
- b. ? A    Trump, aquí se **lo**        ve        como a un matón.  
 DOM Trump here SE it.ACC.M.SG see.3SG like    to a thug  
 ‘Trump, he is seen as a thug here.’

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<sup>7</sup>Variation in this domain does not seem to adhere to any clear-cut geographical distinction. For some speakers, agreement is optional, and has no interpretive consequences. Planells (2017) approaches the facts by taking T to agree optionally with SE or the (shifted, for DOM reasons) internal argument – which are responsible for partial and complete agreement respectively. The approach makes use of Chomsky’s (1995) *equidistance* (cf. Gallego 2013 for discussion), but the facts could also be handled by the approach to variation put forward in Obata & Epstein (2016), where parameters boil down to SMT-compliant derivations whose order of operations varies.

<sup>8</sup>As an anonymous reviewer rightly points out, there is non-trivial variation concerning the case of clitics in these constructions, even within European varieties of Spanish. Taking into account all the dialectal subtleties that concern clitics is beyond the scope of this paper.

The asymmetry in (17) looks consistent, so let's assume the following generalization, taking it for granted that only DOM signals Accusative Case assignment:<sup>9</sup>

(18) If the IA is differentially-marked (*a* XP), then SE *v* is *v*\* ( $\varphi$ -complete).

An interesting piece of evidence indicating that accusative Case may not be at play even in the presence of DOM comes from the observation that *leísta* varieties of Spanish show a preference for the dative clitic *le* (Eng. 'to him/her') in the presence of SE, as in (19):

(19) a. Non-*leísta*/American Spanish

Se **lo** critica.  
SE CL.ACC criticize.3SG  
'He is criticized.'

b. *Leísta*/European Spanish

Se {?lo / le} critica.  
SE CL.ACC CL.DAT criticize.3SG  
'He is criticized.'

This raises the more general question whether differentially-marked IAs receive true accusative. If the answer is negative, this would explain the restricted availability of *lo/la* (only with animates), and the preference for *le* in European Spanish. The tendency to have a *lo > le* shift in the context of SE is noted by Ordóñez (2004):

(20) European Spanish

Si hay que fusilar-**lo**, SE **le** fusila.  
if there.be.3SG that shoot-CL SE CL shoot.3SG

'If he must be shot, he is shot.' (from P. Preston, *Franco*, cited by Ordóñez 2004)

This accusative-dative connection would naturally align with *leísmo*, which seems to be present in the only Romance language with consistent DOM: Spanish. Colomina et al. (2017) in fact argue that DOM involves a process of accusative Case displacement, assuming that the structure that underlies (21) is (22):

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<sup>9</sup>Although (18) is stable across dialects, there are well-known exceptions. In particular, the pattern is more restricted in European Spanish. In non-European varieties, on the other hand, RAE-ASALE (2009: §41.12m) observes that *v*\* can assign Accusative Case to inanimate IAs in the Andean, Chilean, and River Plate areas (cf. Gallego 2016).

- (21) Spanish  
 Nadie visitó a Trump.  
 nobody visited.3SG DOM Trump  
 ‘Nobody visited Trump.’

- (22) [<sub>VP</sub> nadie v [<sub>VP</sub> PROVIDE [ (to) Trump [ P VISIT ] ] ] ]

In this context, it is interesting to note that Mexican Spanish, which is not *leísta*, becomes (obligatorily) *leísta* if SE is introduced. In fact, as (23) reveals, this type of *leísmo* is more general than the one present in European varieties, for it applies to both masculine and feminine DPs (as in *bona fide* datives, as emphasized by Colomina et al. 2017).

- (23) Mexican Spanish
- a. A tu amigo SE le ve preocupado.  
 DOM your friend.M.SG SE him.DAT.M.SG see.3SG worried  
 ‘Your friend, he looks worried.’
- b. A tu amiga SE le ve preocupada.  
 DOM your friend.F.SG SE her.DAT.F.SG see.3SG worried  
 ‘Your friend, she looks worried.’

Gallego (2016) builds on the previous description of the facts to argue that impersonal SE sentences can be divided into two broad dialects:

- (24) a. Dialect A: *v* is  $\varphi$ -defective  
 b. Dialect B: *v* is  $\varphi$ -complete

The morphological distinction targeting *v* implies the following:

- (25) a. *Leísta* Spanish  
 Dialect A: [<sub>VP</sub> v [<sub>VP</sub> V [PP a [<sub>DP</sub> OBLIQUE] ] ] ]
- b. Non-*leísta* Spanish  
 Dialect B: i. [<sub>VP</sub> v $\varphi$  [<sub>VP</sub> V [KP a DP ACC] ] ]
- c. Hybrid pattern  
 Dialect B: ii. [ ... T $\varphi$ ... [<sub>VP</sub> v [<sub>VP</sub> V [KP a DP NOM] ] ] ]

The key distinction between A and B dialects is whether Accusative Case is assigned or displaced. If the latter is the case, some oblique (dative, if some version of Marantz’s (1991) Dependent Case approach is at work) assigner takes care of the IA.

The most intriguing pattern is (25c), which is reported by Ordóñez & Treviño (2007). As these authors note, Mexican and Argentinian varieties of Spanish feature what RAE-ASALE (2009) calls the ‘hybrid’ pattern (cf. Planells 2017 and references therein for discussion).

(26) (Ordóñez & Treviño 2007: 12)

a. Mexican Spanish

Finalmente, se **castigaron** a los culpables.

finally SE punished.3PL to the culprits

‘Finally, the culprits were punished.’

b. Argentinian Spanish

Se **evacuaron** a más de 120.000 damnificados.

SE evacuated.3PL to more of 120,000 damaged

‘More than 120,000 damaged people were evacuated.’

These data are not expected if the IA is inactive, after receiving accusative Case. In order to account for them, we would need to assume that: (i) the IA is Caseless (otherwise the  $\varphi$ -Probe on T could not match it) and (ii) the Case marker *a* cannot give rise to a PP or a KP projection. It must in fact be analyzed as an element inserted in the NS  $\rightarrow$  PF wing of the derivation – in other words, as a dissociated morpheme (cf. Halle & Marantz 1993).

Now that we have reviewed agreement across differential markers, in the next section I pay attention to situations where agreement is rampant, and in fact ignores elements that are not mere functional Case markers, but are seemingly full-fledged prepositions.

### 3.3 Agreement across full-fledged P

We have just discussed data where the  $\varphi$ -Probe on T within SE sentences matches a differentially marked IA. Such cases, though subject to a rather unclear dialectal distribution, fall into place if Spanish *a* can be considered a functional element, not a preposition in its own right. Surprisingly, some American Spanish dialects seem to allow a pattern of agreement that can also ignore prepositions other than *a*. Consider the examples in (27), taken from internet searches:

(27) American Spanish

a. Dijo que se **hablaron** con las autoridades.

said.3SG that SE talked.3PL with the authorities

‘He said that the authorities were talked to.’

[http://www.santiagodigital.net/index.php?option=com\\_content&task=view&id=13837&Itemid=17](http://www.santiagodigital.net/index.php?option=com_content&task=view&id=13837&Itemid=17)

- b. En Santiago anoche se **informaron** de cuatro homicidios.  
in Santiago last night SE informed.3PL of four homicides  
'Four homicides were reported last night in Santiago.'  
<http://www.periodismoglobal.cl/2006/08/la-democracia-de-la-udi.html>
- c. El comercio online sumó [...] 100 millones de transacciones.  
the trade online added.3SG 100 millions of transactions  
[...] cuando se **llegaron** a los 74,3 millones de operaciones.  
when SE arrived.3PL to the 74.3 millions of operations  
'The online trading added 100 million transactions when 74.3 million operations were reached.'  
[http://www.elpais.com/articulo/economia/comercio/electronico/volvio/batir/record/2010/elpepueco/20110506elpepueco\\_7/Tes](http://www.elpais.com/articulo/economia/comercio/electronico/volvio/batir/record/2010/elpepueco/20110506elpepueco_7/Tes)
- d. En realidad se **dependen** de tantos factores que esto provoca  
in reality SE depend.3PL of so.many factors that this provokes  
una extrema dificultad  
a extreme difficulty  
'Actually, one depends on so many factors that it makes things extremely difficult.'  
<http://diegotenis9.wordpress.com/>

Analogous data can be obtained from searches in both the CREA data bank and on Google:

(28) (from CREA: <http://corpus.rae.es/creanet.html>)

- a. El Salvador  
Sólo se **disponen** de datos de matrículas ...  
just SE dispose.3PL of data of registration  
'We just have data on registration ...'
- b. Costa Rica  
Aunque no se **disponen** de cifras exactas ...  
although not SE dispose.3PL of numbers exact  
'Although we don't have exact numbers ...'
- c. Spain  
Sí se **saben** de diversos factores que influyen ...  
yes SE know.3PL of diverse factors that influence  
'We do know factors that influence ...'

(29) a. Mexico

Todavía se **confían** en los milagros.

yet SE trust.3PL in the miracles

‘They still believe in miracles.’

<http://www.sinembargo.mx/30-03-2014/947521>

b. Chile

Cuando se **hablan** de las **supuestas desigualdades**

when SE talk.3PL of the alleged asymmetries

‘When they talk about the alleged asymmetries’

<http://blog.lanacion.cl/2014/03/11/desigualdades-de-genero-en-el-emprendimiento/>

These data have not been described in reference grammars of Spanish (cf. Bosque & Demonte 1999; RAE-ASALE 2009), plausibly because they can be regarded as production errors. The data have, however, also been reported by the Syntactic Atlas of Spanish (ASinEs) (see Figure 1).

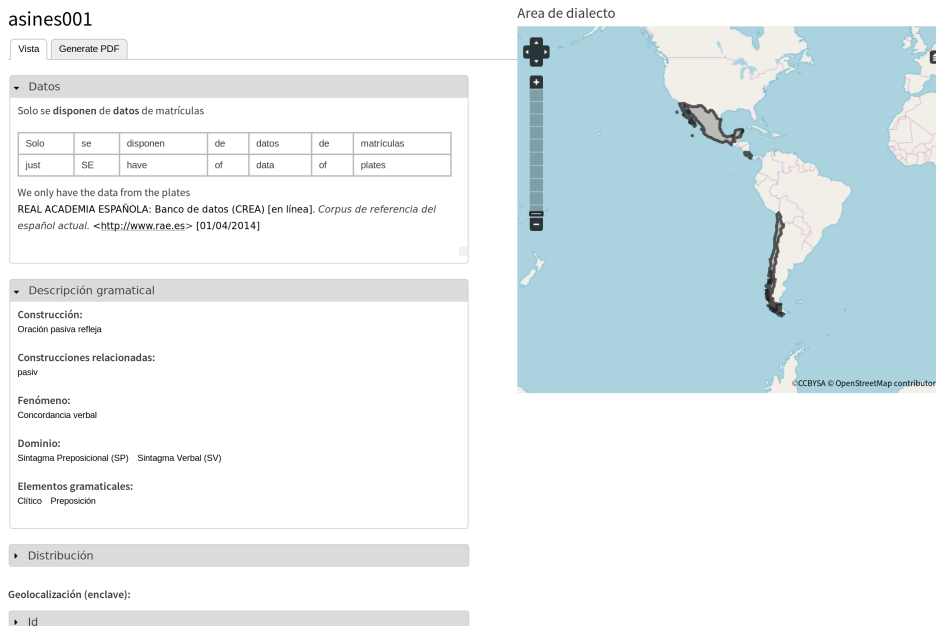


Figure 1: Syntactic Atlas of Spanish. (Gallego 2018)



Furthermore, note that the texts from which I have gathered the examples are not oral, and they are not isolated online hits. The fact that this type of evidence can also be found in the CREA database seems to me enough to regard it as part of the speakers' competence. Therefore, what one could plausibly conclude from these examples is that American dialects of Spanish display a restricted variety of pseudopassives (modulo P-stranding). Let us refer to this process as "P-phasing", merely to indicate that the P undergoes a change of state that allows the  $\varphi$ -Probe on T to match the DP.

#### 4 A Probe-Goal analysis of the facts

Some questions arise if, as I have argued, the prepositions in the examples can be bypassed by a  $\varphi$ -Probe. To begin with, one may wonder whether the same phenomenon is found not only with SE passives, but also with periphrastic (BE) passives. The answer is negative, as examples like the following are ruled out by American Spanish speakers who accept the data in (27), (28) and (29):

(30) American Spanish

- a. \* **Fueron habladas** con las autoridades.  
be.3PL talked.F.3PL with the authorities  
'The authorities were spoken to.'
- b. \* **Fueron informados** de cuatro homicidios.  
be.3PL informed.M.3PL of four homicides  
'Four homicides were reported.'

The process of P-phasing might further be related to the prepositional-transitive alternation, illustrated in (31), that many prepositional verbs undergo in Spanish (cf. Demonte 1991; García-Miguel 1995; Gallego 2010; and references therein):<sup>10</sup>

(31) Spanish

- a. He pensado (en) la respuesta.  
have.1SG thought in the answer  
'I thought of the answer.'

---

<sup>10</sup>Plausibly too, the speakers that allow for P-phasing also accept P-stranding in Spanish (cf. Depiante & Thompson 2013; Lemos 2013; and references therein).

- b. Hemos discutido (de) ese asunto en la reunión.  
have.1PL discussed about that matter in the meeting  
'We discussed that matter in the meeting.'

This very point takes us back to a second question posed by the data above. What is the relevant parameter that makes agreement possible across prepositions? I will assume that the T head is morphologically equivalent in all the Spanish dialects under consideration – hence, there is no parametrically ‘tweaked’ version of T that allows for a deeper search (cf. Chomsky 2001). I will instead argue that it is the status of P that varies, as whatever happens in these dialects affects the *v*P syntax. There are three specific alternatives to implement the idea that the parameter is anchored to P:

(32) Parametrizing P

- a. P is external to the VP (as in Kayne’s 2004 analysis of causatives)  
b. P is inserted at PF (as a dissociated morpheme)  
c. P is reanalyzed with V

The first option is tempting in the case of the hybrid pattern, where the preposition has a clear-cut functional nature – like complementizers, as Kayne (2004) argues. This is in fact the approach that Ordóñez & Treviño (2016) put forward in their analysis of DOM, whose derivation is reproduced in (35) for a sentence like (34):

(33) Spanish

Vimos a María.  
saw.1PL DOM María  
'We saw María.'

- (34) a. ... [<sub>vP</sub> v [<sub>VP</sub> vimos [<sub>DP</sub> María ] ] ] DP [+anim, +spec]  
Merge of *a*  
b. ... a [<sub>vP</sub> v [<sub>VP</sub> vimos [<sub>DP</sub> María ] ] ]  
Movement to Spec  
c. ... [<sub>aP</sub> [María]<sub>i</sub> a [<sub>vP</sub> v [<sub>VP</sub> vimos [t]<sub>i</sub> ] ] ]  
Merge of W  
d. ... W [<sub>aP</sub> [María]<sub>i</sub> a [<sub>vP</sub> v [<sub>VP</sub> vimos [t]<sub>i</sub> ] ] ]  
Head raising

- e. ... [a<sub>j</sub>+W] [a<sub>P</sub> [María]<sub>i</sub> t<sub>j</sub> [v<sub>P</sub> v [v<sub>P</sub> vimos [t]<sub>i</sub> ] ] ]  
 Remnant movement
- f. ... [WP [v<sub>P</sub> v [v<sub>P</sub> vimos [t]<sub>i</sub> ] ] ]<sub>k</sub> [a<sub>j</sub>+W] [a<sub>P</sub> [María]<sub>i</sub> t<sub>j</sub> t<sub>k</sub>

Suppose that, following the logic of these authors' analysis, the differential marker is introduced above the TP (not the vP), then there is no obstacle preventing T's  $\varphi$ -Probe from matching the IA. It is not obvious, though, that the same idea should be adopted for prepositions that have a semantic flavor, like many of those featured in the examples above. For this very reason, it is not obvious that the analysis in (34) can be phrased in terms of PF insertion: the prepositions in (27), (28) and (29) are not dissociated morphemes. We are left, therefore, with some variant of the reanalysis approach (cf. Hornstein & Weinberg 1981; Kayne 1975; 2004, among many others). Of course, notice that it must be the case that the preposition is not heading an adjunct, since these seem to block agreement at all costs. Hence, the examples in (36) are totally out:

(35) Spanish

- a. \* Se **trabajaron** en las **reuniones**.  
 SE work.3PL in the meetings  
 'People worked in the meetings.'
- b. \* Se **criticaron** al Presidente por **varias razones**.  
 SE criticize.3PL DOM-the president for various reasons  
 'The President was criticized for various reasons.'

Consequently, the V-P reanalysis option seems to be necessary with some prepositions. Accordingly, the process depicted in (36) seems to be relevant for capturing the data in (27), (28) and (29):

- (36) a. [ SE T( $\varphi$ -Probe) [v<sub>P</sub> V ... [ P XP (Goal) ] ] ] (P = full-fledged preposition)
- b. [ SE T( $\varphi$ -Probe) [v<sub>P</sub> [V-P] ... [ t XP (Goal) ] ] ] (P = full-fledged preposition)

Literally, what (37) is saying is that P is incorporated into V so that the XP Goal is probeable by T and agreement can take place. This raises interesting typological questions of the sort involved in teasing apart satellite-framed and verb-framed languages (cf. Mateu 2012 and references therein). An observation to keep in mind in order to support the Probe-Goal analysis is that, again, agreement is only in number (cf. Etxepare 2006), as the following asymmetries reveal:

- (37) \* Spanish  
Se {pensa-mos/-áis} en {nosotros / vosotros}.  
SE think-1PL/-2PL in we / you.PL  
'We/you are thought about.'

Finally, there is evidence arguing against the existence of a non-referential (indefinite) 3PL pronoun (cf. Suñer 1983; Cabredo Hofherr 2003). These pronouns can be spelled out, and then the non-referential reading is lost. However, these sentences reject the spell-out of a pronoun. So, the following is possible:

- (38) Spanish  
En España, (ellos) se acuestan tarde.  
in Spain they SE go.to.bed.3PL late  
'In Spain, (they/people) go to bed late.'

But the following is not:

- (39) Spanish  
En la reunión, (\*ellos) se hablaron de temas muy importantes.  
in the meeting they SE talked.3PL of topics very important  
'Very important topics were talked about in the meeting.'

And the same holds if the subject is indefinite, which can also trigger the impersonal reading that the sentences we are considering deploy:

- (40) Spanish  
En la reunión, (\*algunos) se hablaron de temas muy importantes.  
in the meeting some SE talked.3PL of topics very important  
'Very important topics were talked about in the meeting.'

Nonetheless, definiteness does seem to be relevant when it comes to the Goal of the agreement process. Consider the following examples, which indicate that the more indefinite it is, the more possible the agreement dependency becomes:

- (41) Spanish  
a. ? Se evacuaron a mas de 200.000 damnificados.  
SE evacuate.3PL DOM more of 200,000 affected  
'More than 200,000 affected were evacuated.'

- b. ?? Se castigaron a los culpables.  
 SE punished.3PL DOM the culprits  
 ‘The culprits were punished.’
- c. ?\* Se castigaron a ellos.  
 SE punished.3PL DOM them  
 ‘They were punished.’

Although I cannot go into the details, all of this suggests that there are deeper layers of analysis around this phenomenon, indicating that the type of Goal has a role in determining how good agreement is.

## 5 Conclusions

This paper has discussed new data from Spanish dialects concerning agreement in SE sentences. Although this is a well-known topic in the literature, the previous pages have shown that along with the “hybrid pattern”, some dialects of Spanish display a pseudopassive structure of sorts. Needless to say, a more careful empirical study is needed, and the factors to control for are the following: (i) the type of verb (non-pronominal, agentive, etc.) that allows pseudopassives, (ii) the preposition that allows agreement, (iii) the type of Goal (DP, NP, bare plural, etc.), and (iv) the source from which the data have been obtained.

I have argued against the possibility that the facts can be considered as typos or oral errors. There are various arguments for rejecting that possibility: the pattern does not appear in isolated online hits (we could add more examples to the data in (27), (28) and (29)), one cannot find analogous examples with adjuncts (see (36)), and similar agreement facts are found with DOM and partitive prepositions, as noted by Treviño (2010) for Mexican Spanish:

- (42) Mexican Spanish  
 Por aquí **pasaron** de **esos aviones**.  
 by here passed.3PL of those planes  
 ‘Some of those planes passed by here.’

The descriptive and theoretical consequences of the discussion above are not minor. It forces us not only to reconsider the distinction between different types of prepositions in Spanish (and other languages; cf. Demonte 1987; 1991; 1995; Abels 2003; Cuervo 2003; Pesetsky & Torrego 2004; Romero Morales 2011), but also to sharpen our analysis of how micro- and macroparameters interact. Since

the agreement data reported here align with phenomena that concern the V-P connection, we are in a good position to improve our understanding of linguistic variation, typological correlations, and language contact.

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## Chapter 5

# On the Person Constraint on Romanian *se*-passives

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It has long been recognized that sentences with passive *se* obey a Person constraint: the subject cannot be 1<sup>st</sup> or 2<sup>nd</sup> person. I discuss a further constraint on the subject, manifest in Romanian: not only 1<sup>st</sup> or 2<sup>nd</sup> person pronouns, but all those DPs that must be marked by the prepositional object marker accompanied by clitic-doubling when functioning as direct objects are excluded from being subjects of *se*-passives. Following Richards (2008), I propose that these DPs, which are high on the Person/Animacy scale, have a Person feature (manifested by clitic-doubling when they are case-licensed by *v*\*), whereas those that can occur as subjects of *se*-passives lack the Person feature completely. The ban on +Person internal arguments in *se*-passives is due to the intervention of the Person feature associated with the external argument. I argue that the element saturating the external argument is differently projected in *se*-passives vs. participial passives, which explains the lack of an intervention effect in the latter case.

## 1 Introduction

As is well-known (Belletti 1982; Burzio 1986; Manzini 1986; Cinque 1988; Dobrovie-Sorin 1998; 2006; D’Alessandro 2007, a.o.), across the Romance domain there are two types of ‘impersonal’ constructions based on the reflexive clitic *se*: a passive construction, where the verb agrees with the internal argument (IA) and accusative cannot be assigned, and a bona fide impersonal, where *se* behaves as a subject clitic, like the counterpart of French *on* or German *man*. Whereas the passive construction is found in all Romance languages, the subject clitic *se* is only found in Italian and Ibero-Romance.



It has long been recognized that sentences with passive *se* obey a Person constraint: the IA cannot be 1<sup>st</sup> or 2<sup>nd</sup> person (Burzio 1986; Cinque 1988; Cornilescu 1998; D’Alessandro 2007; Mendikoetxea 2008; Rezac 2011; MacDonald 2017, a.o.). Cornilescu (1998) noticed that certain 3<sup>rd</sup> person subjects are also excluded. I will argue that all these cases can be subsumed under a Person constraint of the following form:

- (1) DPs that bear [Person] are banned as IAs of *se*-passives.

After providing background on Romanian *se*-passives (§2) and arguing for the constraint in (1) (§3), I will derive this constraint from the configurational properties of *se*-passives (§4-5), comparing them with participial passives, where no Person constraint is found: as *se*-passives lack a dedicated passivizing morpheme, unlike participial passives, the External argument (EA) is projected as a null pronominal marked +Person; this element blocks Person agreement between T and IA, leading to the failure of nominative licensing for those DPs that bear Person. The background assumption is that in order to be case-licensed, a DP must match in all of its  $\varphi$ -features with the case licensor (Chomsky 2000; 2001).

## 2 Passive *se* in Romanian

Like other Romance languages, Romanian, in addition to passives based on the ‘past’/‘passive’ participle, has a passive based on the reflexive clitic *se* (a marker also used for anticausatives, inherent reflexives, and middles). The following sentences exemplify this type, with the usual tests for a passive reading – agent-oriented adverbials (ex. (2a)), purpose clauses with control by the EA (ex. (2b)), and *by*-phrases (ex. (2c-d)).

- (2) a. Asta s-a făcut deliberat.  
this SE-has done deliberately  
‘This has been done deliberately.’
- b. Aceste haine se vând pentru a ajuta săracii.  
these clothes SE sell for to help poor.the  
‘These clothes are sold to help the poor.’
- c. S-au adus mai multe îmbunătățiri de către specialiști.  
SE-have.3PL brought several improvements by experts  
‘A number of improvements have been brought by experts.’

- d. Convocarea Camerei Deputaților se face de către  
 convocation.the chamber.the.GEN deputies.the.GEN SE does by  
 președintele acesteia.  
 president.the this(F).GEN  
 ‘The summons of the Chamber of Deputies is done by its president.’  
 (*Regulamentul Camerei Deputaților*, II, 4,  
<http://www.cdep.ro/pls/dic/site.page?id=235>)

Regarding *by*-phrases, it should be noted that the complex preposition *de către* (< *de* ‘of, from’ + *către* ‘towards’) is specialized for demoted EAs, being found only in passives and eventive nominalizations.

Romanian also uses *se* to demote the EA of intransitive verbs – the so-called ‘impersonal *se*’ – see (3), where I also show that the participial passive cannot be used in this case:

- (3) {Se vorbește / \*Este vorbit} prea tare în această cameră.  
 SE speaks is spoken too loud in this room  
 ‘People speak too loud in this room.’

As shown by Dobrovie-Sorin (1998), the impersonal *se* of Romanian is an instance of passive *se*. I will summarize her arguments below.

The label ‘impersonal *se*’ covers two types in Romance (cf. Belletti 1982; Manzini 1986; Burzio 1986 for Italian, Dobrovie-Sorin 1998; 2006; 2017): (i) passivizing / ‘accusative’ *se*, found in all Romance languages; (ii) an active impersonal construction, labelled ‘nominative’ *se* by Dobrovie-Sorin, found in Italian and Ibero-Romance, but not in Romanian or French.<sup>1</sup>

Let us now look at the evidence that Romanian only has the type in (i), unlike Italian or Spanish. First, nominative *se* can occur in transitive configurations, manifested by lack of agreement between the verb and the IA (4a) and accusative marking on the IA (5a, 6a); in Romanian, the verb must agree with the IA (4b) and accusative on the IA is not allowed (5b, 6b):

- (4) a. Italian (Dobrovie-Sorin 2017: ex. (31c))  
 In questa università si insegna le materie letterarie.  
 in this university SE teaches the humanities  
 ‘Humanities are taught in this university.’

<sup>1</sup>For Italian, Cinque (1988) treats the two types as two varieties of nominative *si*, a [+arg] one that absorbs the external theta-role and blocks accusative assignment (hence the ‘passivizing’ effect), and a [-arg] one, allowed with unaccusative and raising verbs; Dobrovie-Sorin (1998) argues that only Cinque’s [-arg] *si* bears nominative.

- b. Romanian (ibid.: ex. (32c))  
În această universitate se predau / \*predă științele umane.  
in this university SE teach.3PL / teaches sciences.the human
- (5) a. Italian (ibid.: ex. (31d))  
(Le materie letterarie) le si insegna in questa università.  
(the humanities) CL.3FPL.ACC SE teaches in this university  
'(The humanities,) one teaches them in this university.'
- b. Romanian (ibid.: ex. (32d))  
\* (\*Științele umane) le se predă / se le  
(sciences.the human) CL.3FPL.ACC SE teaches / SE CL.3FPL.ACC  
predă în această universitate.  
teaches in this university
- (6) a. Spanish (Dobrovie-Sorin 2017: ex. (33))  
En esta escuela se castiga a los alumnos.  
in this school SE punishes DOM the students  
'In this school they punish the students.'
- b. Romanian (ibid.: ex. (34))  
\* În școala asta se pedepsește pe elevi.  
in school.the this SE punishes DOM students

Secondly, nominative *se* can occur in copular constructions, including copular passives. Romanian impersonal *se* is excluded from these environments:

- (7) a. Italian (Dobrovie-Sorin 2017: ex. (31a))  
Non si è mai contenti.  
not SE is ever satisfied.MPL  
'One is never satisfied.'
- b. Romanian (ibid.: ex. (32a))  
\* Nu se este niciodată mulțumit/mulțumiți.  
not SE is never satisfied.MSG/MPL
- (8) a. Italian (Dobrovie-Sorin 2017: ex. (31b))  
Spesso si è traditi dai falsi amici.  
frequently SE is betrayed by.the false friends  
'One is frequently betrayed by false friends.'

b. Romanian (ibid.: ex. (32b))

\* Adesea se este trădat de prieteni falși.  
frequently SE is betrayed by false friends

This property indicates that Romanian impersonal *se* involves an operation on the argument structure of the verb, acting as a Voice marker. As copular verbs do not have arguments of their own, but combine with a small clause (they are raising verbs), the Voice marker *se* cannot apply to such verbs.

Thirdly, nominative *se* behaves like standard subjects with respect to control into complement clauses (see (9a)). Romanian disallows this type of control:<sup>2</sup>

(9) a. Spanish (Dobrovie-Sorin 2017: ex. (8a))

En ciertos estudios basados en fenómenos lingüísticos, se ha  
in certain essays based on linguistic phenomena, SE has  
intentado reformar la historia política y social.  
tried reconstruct.INF the history political and social  
'In certain studies based on linguistic phenomena, one has tried to  
reconstruct the political and social history.'

b. Romanian (ibid.: ex. (90a))

\* În unele studii s-a încercat a reface, pe baza unor  
in certain essays SE-has tried to reconstruct based on some  
fenomene lingvistice, istoria politică și socială.  
phenomena linguistic history.the political and social

Further evidence for unifying passive and impersonal *se* in Romanian comes from *by*-phrases: intransitive verbs with impersonal *se* do sometimes allow *by*-phrases (on condition that the verb is agentive). Here are some examples attested on the Internet:

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<sup>2</sup>Note that (9b) becomes grammatical if *se* occurs on the lower verb too:

(i) (...) s-a încercat a se reface (...)  
SE-has tried to SE reconstruct

If the EA in *se*-passives is projected as a PRO<sub>arb</sub>, as proposed in §4-5 below, one may analyze the double use of *se* as reflecting agreement in 'impersonality' between PRO<sub>arb</sub> in the matrix and the controlled PRO; on a movement theory of control (see Hornstein 1999), this example can be analyzed as involving movement of PRO<sub>arb</sub> between positions characterized by the same Voice configuration, marked by *se* (see §6). In Spanish and Italian, *se* is not a voice marker, but a nominative clitic, representing the EA itself, therefore it does not appear on both verbs.

- (10) a. Să nu uităm că la acest moment *se vorbește de către*  
SBJV not forget.1PL that at this moment SE speaks by  
autorități de o nouă reorganizare administrativ-teritorială.  
authorities about a new reorganization administrative-territorial  
'Let's not forget that at this moment the authorities are talking about  
a new administrative and territorial reorganization.'  
(<http://www.verticalonline.ro/autoritatile-comuniste-si-reorganizarea-comunelor-in-1968-i>)
- b. Modul în care este primit sau i *se vorbește de către*  
manner.the in which is received.M or 3SG.DAT SE speaks by  
anumiți salariați ...  
certain employees  
'The manner in which certain employees receive him or talk to him...'  
([www.primariatantareni.ro/images/stories/ziar\\_ianuarie.pdf](http://www.primariatantareni.ro/images/stories/ziar_ianuarie.pdf))

A potential problem for the unification of passive and impersonal *se* in Romanian comes from the fact that impersonal *se* is allowed with verbs typically considered to be unaccusative:

- (11) a. De la această boală *se moare*.  
from this disease SE dies  
'People die from this disease.'
- b. Nu *se vine* îmbrăcat așa la lucru.  
not SE comes dressed so to work  
'One does not come to work dressed like that.'

There are two possible ways of handling this problem. One is to assume that intransitive verbs such as *cădea* 'fall', *veni* 'come', and *muri* 'die' are not necessarily unaccusative in Romanian, but may project an EA, which can be demoted by passivization (see Dobrovie-Sorin 1987; 1994), a view that is supported by the fact that the unaccusativity diagnostics are not very strong in Romanian – there is no auxiliary alternation and no *ne/en*-cliticization; resultative participles are the clearest test, but they may represent a formation dependent on the verb meaning (change of state) and not on the way its arguments are projected. Note, furthermore, that even a handful of transitive and unergative verbs can be used to build resultative participles: *nemâncat* 'un-eaten' = 'who hasn't eaten', *nedormit* 'unslept' = 'who hasn't slept', *nebăut* 'un-drunk' = 'who hasn't drunk'. Note also that in a system of argument structure such as Ramchand's (2008), where a single argument can occupy more than one thematic position, realizing a composite



role (e.g. Initiator + Undergoer, Undergoer + Resultee), we may assume that the subject of verbs such as *cădea* ‘fall’, *veni* ‘come’, and *muri* ‘die’ moves from an IA-position to SpecvP (or SpecInitP, in Ramchand’s terminology), which is the position targeted by demotion.

The other potential solution is to allow demotion to apply to the IA for those verbs that do not project an EA-thematic layer (vP). Bruening (2012), discussing passives of unaccusatives in Lithuanian and other languages, proposes that the passivizing head may select not only a VoiceP (= vP in Chomsky’s 1995, 2000 terminology) with an unsaturated selectional feature, but also a VP with an unsaturated selectional feature. In order to exclude demotion of arguments other than the deep object (e.g. PPs, oblique cases), this unsaturated feature must somehow be further specified – Bruening describes this as selection for +N (written [S:N]). If we consider oblique and PP complements to involve different specifications for this feature, Bruening’s procedure successfully accounts for the restriction of demotion to deep objects.

I do not intend to decide here between these two possible solutions. I would simply like to stress again that the demoted subject must be an argument of the V – see the exclusion of raising verbs such as *părea* ‘seem’ in (12) and the copula in (7b) and (8b) above – which clearly indicates that *se*-impersonals represent a Voice-type phenomenon (an operation on the argument structure of the V).

- (12) \* În această oglindă se pare tânăr.  
       in this     mirror SE seems young  
       Intended meaning: ‘People look young in this mirror.’

The fact that *se*-impersonals of seemingly unaccusative verbs represent the same passive construction as with unergatives is demonstrated by the fact that *by*-phrases are permitted:

- (13) proiectul de acord la care s-a ajuns de către cele 47 de  
       project.the of agreement to which SE-has arrived by the 47 of  
       state membre ale Consiliului Europei  
       states member GEN Council.the.GEN Europe.the.GEN  
       ‘the draft agreement reached by the 47 member states of the Council of  
       Europe’  
       ([http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-  
       //EP//TEXT+REPORT+A7-2014-0153+0+DOC+XML+V0//RO](http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+REPORT+A7-2014-0153+0+DOC+XML+V0//RO))

Only verbs that are lexically marked by *se* – inchoatives, inherent reflexives – do not allow an impersonal *se*-construction – thus, (14a) does not have an impersonal reading; moreover, two co-occurring *se*’s as in (14b) are excluded:

- (14) a. Se sperie de întuneric. / Se grăbește.  
 SE frightens of darkness SE hurries  
 = ‘He/she is frightened by darkness. / He/she hurries.’  
 ≠ ‘People are frightened by darkness. / People hurry.’
- b. \* Se se sperie / grăbește.  
 SE SE frightens hurries  
 Intended meaning: ‘People are frightened by darkness. / People hurry.’

Depending on the general analysis of *se*-verbs, this may be explained either as a morphological ban on co-occurring *se*'s, or as the result of the fact that there is a single *se* marker, which, depending on other properties of the configuration in which it is inserted, yields the inchoative, reflexive or passive reading (see §6 for further suggestions).

To conclude, *se*-impersonals in Romanian belong to the general class of *se*-passives, which are based on the demotion of the ‘subject’ (EA, + deep object of unaccusatives). Unlike participial passives, *se*-passives do not require the existence of a nominal IA (see (3) above and (15)):

- (15) {S-a propus / \*A fost propus} ca votul să fie  
 SE-has proposed has been proposed that voting.the SBJV be.SBJV.3  
 secret.  
 secret  
 ‘It was proposed that the voting should be secret.’

We may thus say that *se*-passives are chiefly used as an impersonalization strategy, in order to demote the EA, whereas participial passives are also used to promote the IA. Impersonal passives are also attested in other languages (Icelandic, German, etc.).

### 3 A Person Constraint on the subject of *se*-passives in Romanian

It is known that *se*-passives are only possible in the 3<sup>rd</sup> person, across Romance languages. This also holds for Romanian:

- (16) (Dobrovie-Sorin 2017: ex. (124c,e,f))
- a. \* Sunt prietenul tău. Nu mă invit țipându-se la mine.  
 am friend.the your not me invite.1SG shouting.SE at me  
 ‘I am your friend. I’m not invited in a yelling way.’

- b. \* În ultima vreme te examinezi prea des la școală.  
 in latest.the time you.ACC see.2SG too often in school  
 \*for the meaning: ‘Lately you have been getting examined too much in school.’
- c. \* În ultima vreme ne invităm și noi la petreceri.  
 in latest.the time we.ACC invite.1PL too we.NOM at parties  
 \* for the meaning: ‘Lately we too have been getting invited to parties.’

But there are further constraints on the subjects of *se*-passives. Cornilescu (1998) noticed that not only +Participant pronouns, but also 3<sup>rd</sup> person pronouns and proper names are excluded. She noticed that these are the very same DPs that require the prepositional object marker (*pe*) when they function as direct objects – see, in (17), pronouns, proper nouns, as well as certain specific definite DPs, mostly containing a possessor (see 17c–d):

- (17) a. La noi întotdeauna se întâmpină {musafirii / \*Ion / \*el} la gară.  
 at us always SE welcome.3 guests.the / Ion / he at station  
 ‘In our family/department/..., guests/\*Ion/\*he are/is always welcomed at the station.’ (Cornilescu 1998: ex. (16))
- a’. Am întâmpinat musafirii / \*Ion / \*el.  
 have.1 welcomed guests.the / Ion / he  
 ‘We welcomed the guests / \*Ion / \*him.’
- a’’. L-am întâmpinat pe Ion / pe el.  
 him-have.1 welcomed DOM Ion / DOM he  
 ‘We welcomed Ion / him.’
- b. Ieri s-au adus {prizonierii / mulți prizonieri /  
 yesterday SE-have.3PL brought prisoners.the / many prisoners /  
 prizonieri / \*ei} la tribunal / \*s-a adus {Ion / el} la tribunal.  
 prisoners / they to court / se-has brought Ion / he to court  
 ‘Yesterday {the prisoners / many prisoners / \*they} were brought to the court / {\*Ion/\*he} was brought to the court.’ (ibid.: ex. (17))
- b’. Au adus prizonierii / mulți prizonieri / prizonieri / \*ei  
 have.3PL brought prisoners.the / many prisoners / prisoners / they  
 / \*Ion / \*el la tribunal.  
 / Ion / he to court  
 ‘They brought the prisoners / many prisoners / prisoners / \*them /  
 \*Ion / \*him to the court.’

- b''. I-au adus pe ei / L-au adus pe Ion  
 them-have.3PL brought DOM they / him-have.3PL brought DOM Ion  
 / pe el.  
 / DOM he  
 'They brought them/Ion/him.'
- c. \*S-a adus mama lui.  
 SE-has brought mother.the his  
 'His mother was brought.'
- c'. \*Am adus mama lui.  
 have.1 brought mother.the his
- c''. \*Am adus-o pe mama lui.  
 have.1 brought-her(CL) DOM mother.the his  
 'I brought his mother.'
- d. Am convocat profesorii / \*(L-)am convocat \*(pe)  
 have.1 summoned teachers.the CL.MS.ACC-have.1 summoned (DOM)  
 profesorul tău.  
 teacher.the your  
 'We summoned the teachers / \*your teacher.'
- d'. S-au convocat profesorii / \*S-a convocat  
 SE-have.3PL summoned teachers.the / SE-has summoned  
 profesorul tău.  
 teacher.the your  
 'The teachers were summoned / \*Your teacher was summoned.'

The correlation discovered by Cornilescu must be further refined in view of examples such as (18), where we see that animate indefinite pronouns, which also require prepositional object marking, may occur as subjects of *se*-passives:

- (18) a. Se va aduce cineva cu experiență.  
 SE will.3SG bring somebody with expertise  
 'Somebody with good expertise will be brought.'
- b. Aduc \*(pe) cineva cu experiență.  
 bring.3PL (DOM) somebody with expertise

- c. Se ştia                      de mult timp că se va              aresta cineva  
 SE KNOW.IMPF.3SG for much time that SE will.3SG arrest somebody  
 de la vârful.  
 from top  
 'It had been known for a long time that somebody from the top would  
 be arrested.' (www.gsp.ro/..., online comment)

The difference between animate indefinite pronouns and the DPs in (17) is that for the latter, the differential object marking is realized not only by the preposition, but also by clitic doubling, whereas animate indefinite pronouns do not take clitic doubling (see 18b). We thus arrive at the following empirical generalization:

- (19) The DPs which cannot be subjects of *se*-passives = those DPs that have to be marked by the prepositional object marking accompanied by clitic doubling when they function as DOs.

1<sup>st</sup> and 2<sup>nd</sup> person pronouns always require doubling and *pe*-marking when functioning as direct objects, thus being covered by (19):

- (20) a. \*Aduce mine  
 brings me.ACC(STRONG)  
 '(S)he brings/is bringing me.'
- b. Mă              aduce pe mine  
 me.ACC.CL brings DOM me.ACC(STRONG)  
 '(S)he brings/is bringing me.'

Differential object marking in Romanian is dependent on multiple factors (see Dobrovie-Sorin 1994; Cornilescu 2000; Mardale 2008; Tigău 2010; 2014; a.o.): animacy, specificity, pronominal character, and inflectional properties. Clitic doubling is correlated with definiteness and specificity (see Marchis Moreno & Alexiadou 2013): specific and definite DPs are clitic-doubled (i) when they are *pe*-marked or (ii) when they are preverbal (irrespective of whether they are topicalized or focus-fronted). Non-specific pronouns such as *cineva* 'somebody', *nimeni* 'nobody', *cine* 'who' are *pe*-marked by virtue of being pronominal and animate, but they are not clitic-doubled, as they are not specific.

Now, I would like to propose that the DPs characterized by (19) – the requirement for clitic doubling and *pe*-marking when functioning as direct objects, and the impossibility of being subjects (IAs) in *se*-passives – differ from the other nominals in bearing a Person feature:

- (21) a. DPs that require clitic-doubling + *pe*-marking in DO position are +Person.  
b. +Person DPs cannot be subjects of *se*-passives.

[Person] can be + or –Participant. 3<sup>rd</sup> person nominals (using traditional terms) can be either DPs bearing [Person = –Participant] or DPs lacking [Person].

Cornilescu (1998) gives a different interpretation of the generalization, based on denotational type: she proposes that the DPs that require *pe*-marking and cannot be subjects of *se*-passives are DPs that cannot have a property denotation. She argues that animate subjects of *se*-passives must have a property denotation because they must stay in the IA-position, where they undergo semantic incorporation. However, we do find definite DPs as subjects of *se*-passives – see *profesorii* ‘the teachers’ in (17d’), *musafirii* ‘the guests’ in (17a), and *prizonierii* ‘the prisoners’ in (17b) – which clearly cannot be interpreted as pseudo-incorporated property-denoting nominals.

Treating the constraint on subjects of *se*-passives as a Person constraint, as in (21), allows for an explanation in terms of case licensing of IAs via Agree (to be developed in the next sub-section). As for the requirement of clitic-doubling, on the assumption that object licensing involves Agree with  $v^*$ , the clitic can be seen as the manifestation of rich agreement on  $v^*$ , where rich agreement includes Person (for the view of Romance object clitics as probes in  $v^*$ , see Roberts 2010).

The two sides of the generalization in (19) are instantiations of the following broader cross-linguistic generalization:

- (22) DPs that are high on a Person/Animacy/Definiteness hierarchy  
i. are banned in certain structural case environments;  
ii. require distinctive marking when functioning as direct objects.

Both types of phenomena have been treated in terms of differential licensing of +Person DPs in various studies – see, for (i), Sigurðsson (2004; 2011; 2012); Sigurðsson & Holmberg (2008), on Icelandic low nominatives with quirky subjects, and Rezac (2011) on various instances of Person-Case constraints. Regarding (ii), see van der Wal (2015) on differential object marking in Bantu.

A general account of splits among 3<sup>rd</sup> person nominals along the animacy + definiteness scale as presence/absence of [Person] has been proposed by Richards (2008).

## 4 An intervention-based account of the Person constraint

Discussing other instances of Person constraints (PCC and related phenomena), Rezac (2011) proposes the following general explanation, which I will adopt:

- (23) a. A DP must match in all of its (relevant)  $\varphi$ -features with its case licenser (assuming case licensing via Agree; see Chomsky 2000; 2001).  
 b. In PC environments, Person matching is impossible, whereas Number matching is possible.<sup>3</sup>  
 c.  $a+b \rightarrow$  the DPs bearing [Person] are ruled out in these environments.

(23a) is a standard assumption in Minimalism. What needs an explanation is (23b): why is Person matching impossible in certain environments? Using the same Chomskyan framework, Rezac (2011) proposes an intervention-based account: assuming that subject licensing is performed by T, failure of Person matching is due to the existence of a closer goal for T's Person probe; i.e. an element that c-commands IA and is c-commanded by T (an *intervener*), and bears [Person] – see  $\alpha$  in (24):

- (24)  $\left[ \underset{\text{X}}{\text{T}_{[\text{uPerson}, \text{uNumber}]} \left[ \dots \underset{\text{X}}{\alpha_{+\text{Person}}} \left[ \dots \text{IA}_{+\text{Person} + \text{Number}} \dots \right] \right] \right]$

For the selective licensing of IAs, depending on +/- Person, it is crucial that this element  $\alpha$  lacks Number, so that it does not block Number agreement. A DP that does not bear Person can undergo full feature matching with T, in spite of the existence of  $\alpha$ , so it complies with the licensing condition in (23a). Given that in Romanian the so-called 'impersonal *se*' is an instance of passive *se* (see §2, where I summed up Dobrovie-Sorin's (1998) arguments), one may wonder how verb agreement is realized in this configuration. As I have not found any evidence for stipulating a null cognate IA in these configurations (as Dobrovie-Sorin 1998 does) – see especially the use of impersonal *se* in unaccusatives in (11) and (13) above – I propose that number agreement fails to apply if no suitable goal is found, without causing a crash of the derivation, and the 3<sup>rd</sup> person singular of the verb represents a default form. For arguments that failure of agreement does not lead to a crash of the derivation, see Preminger (2014). Note that the same

<sup>3</sup>The relevance of Person can be seen not only in PCC effects, but also in the licensing of subjects of raising predicates with experiencer arguments: as shown by Anagnostopoulou (2003; 2005) and Marchis Moreno & Alexiadou (2013), the Person feature of the dative experiencer creates defective intervention effects in Greek and Romance languages, which can be removed via cliticization.

default form is to be assumed for examples such as (15), where the IA is a finite clause, which, as such, lacks  $\varphi$ -features.

One may also envisage the possibility of relating the difference in case licensing between +Person and -Person DPs to a stronger constraint on Agree involving Person, rather than to a particular type of intervener. Such a constraint has been proposed by Baker (2008). Based on extensive crosslinguistic data, Baker postulates a special condition on Person agreement as a universal principle (called the “structural condition on Person Agreement” – SCOPA): the controller (goal) must merge with a projection of the agreeing head (target/probe); in other words, Person agreement requires Spec-Head or Comp-Head configurations<sup>4</sup>. Within this system, one might explain the ban on +Person IAs of *se*-passives by the fact that they cannot raise to SpecTP. But, although there is some evidence that IAs of *se*-passives in other Romance languages, and possibly also in Romanian, do not occur in a non-topical preverbal subject position (see §7 below, ex. (71), and Raposo & Uriagereka 1996; Cornilescu 1998; Dobrovie-Sorin 2006), there is no evidence that +Person subjects in Romanian *need* to occupy SpecTP. As is well known (see Dobrovie-Sorin 1987; 1994; Cornilescu 1997; Alboiu 2002), any type of subject can occur in the postverbal thematic position in Romanian, the preference for pre- or postverbal positions depending on information structure and stylistic factors – see examples of +Person subjects (personal pronouns, proper names) in postverbal position in a presentational (thetic) context (25a), as a narrow focus (25b) or as part of the ‘comment’ in sentences with a non-subject topic (25c):

- (25) a. Deodată ați sunat voi la ușă.  
suddenly have.2PL rung you.PL at door  
‘All of a sudden you rang the doorbell.’
- b. Vei vorbi TU cu directorul.  
will.2SG talk you with manager.the  
‘YOU will talk to the manager.’
- c. Ideea o formulase deja Roberts într-un articol celebru.  
idea.the it had.expressed already Roberts in an article famous  
‘Roberts had already expressed the idea in a famous article / The idea had already been expressed by Roberts in a famous article.’

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<sup>4</sup>Baker’s exact formulation reads as follows: “A functional category F can bear the features +1 or +2 if and only if a projection of F merges with a phrase that has that feature, and F is taken as the label of the resulting phrase” (Baker 2008: 52).



Under Baker's theory, one should assume a doubling preverbal *pro* (carrying the Person feature of the subject) for all these examples, but this does not account for the fact that the postverbal placement is precisely used in order to increase the match between the syntactic structure and the information-structural interpretation: as both the thematic and the information-structural interpretation of the subject are achieved in the postverbal position in examples such as (25), a doubling *pro* would not be justified by any interface effect. Therefore, I think Romanian, as well as other null-subject SV/VS-languages, are potentially problematic for Baker's SCOPA; other problems come from complementizer agreement.<sup>5</sup>

Even if we embrace Baker's framework, we still need to explain why IAs cannot raise to SpecTP in *se*-passives. I assume that the explanation would still resort to some sort of intervention; i.e. to a configuration of the type in (24).

An intervener-based account is also suggested by the fact that we are dealing with a passive configuration. The obvious candidate for the intervener is the element that saturates the external role. I thus adopt the following proposal, which derives the ban on +Person subjects under the assumptions in (23) above:

- (26) The element that saturates the EA in *se*-passives bears a [Person] feature (non-participant).

This element can be conceived of either as a null arbitrary pronoun (see, on the implicit EA of passives in general, Collins 2005; Landau 2010; and on Romance *se*-passives, MacDonald 2017; a.o.) or as the passivizing head itself, under analyses in which EA existential binding is realized by a verbal functional head or verbal morphology (see Baker et al. 1989; Bruening 2012; a.o.).

As both *se*-passives (SePass) and participial passives ('regular' passives or 'copular' passives,<sup>6</sup> henceforth PartPass) rely on EA demotion, we have to explain why intervention is only found with SePass:

- (27) Romanian

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<sup>5</sup>Baker (2008) recognizes the problem of complementizer agreement (with the embedded subject in West Germanic varieties, and with the matrix subject in some Niger-Congo languages – Lokaa, Kinande); the solution he proposes is that SpecCP is occupied by Person operators, but there is no independent evidence for the existence of such operators in any of the situations where complementizer agreement occurs.

<sup>6</sup>I don't use the term 'copular passive', because the passive syntax comes entirely from the participle – it can be found in attributive contexts and non-copular small clause contexts, and *be* is not a passive auxiliary; Romanian, in which auxiliaries are clitics, clearly shows this (the *be* which appears in 'copular passives' is not a clitic, but a regular full verb).

- a. \* În ultima vreme ne invităm și noi la petreceri.  
 in latest.the time we.ACC invite.1PL too we.NOM at parties  
 \*for the meaning: ‘Lately we too have been getting invited to parties.’
- b. În ultima vreme suntem invitați și noi la petreceri.  
 in latest.the time are.1PL invited also we at parties  
 ‘Lately we too have been getting invited to parties.’
- c. \* S-a adus Ion la judecată.  
 SE-has brought Ion to judgment
- d. A fost adus Ion la judecată.  
 has been brought Ion to judgment  
 ‘Ion has been brought to trial.’

There are several possibilities we have to investigate:

- (i) EA is projected in SePass (and bears a Person feature) but not in PartPass;
- (ii) EA is projected in both types of passive, but only in SePass does it bear a Person feature;
- (iii) EA +Person is projected in both types of passives, but only intervenes in SePass, because in PartPass IA first raises to a higher position, either by itself, to the Spec of the passivizing participial head, or as part of the whole VP, as proposed by Collins (2005), who dubs this operation ‘smuggling’;
- (iv) EA is not projected in a thematic position, but is existentially bound by a passivizing head, and it is this head itself that bears the intervening Person feature in SePass, but not in PartPass.

I will show that an account in terms of (iii) faces empirical problems. On the other hand, the idea that the element that saturates the EA bears a Person feature in SePass but not in PartPass is supported by the well-known generalization that the EA of *se*-passives is restricted to animates (Burzio 1994; Cornilescu 1998; Dobrovie-Sorin 2017; Zribi-Hertz 2008, a.o.):

- (28) Romanian  
 Orașul {a fost distrus / \*s-a distrus} de (către) cutremur.  
 city.the has been destroyed SE-has destroyed by earthquake  
 ‘The city was destroyed by the earthquake.’

We have seen, in §3, that the differences in case/agreement properties of DPs depending on animacy can be described in terms of a difference between +Person and absence of Person. Pursuing this line of thought, we may interpret the restriction of EA in *SePass* to humans as the effect of the presence of a Person feature on the element that saturates the EA.

In order to further clarify the structure of the two types of passives and the nature of the intervener, we need to address the issue of *by*-phrases. As we have seen in §2, not only *PartPass*, but also *SePass* allow *by*-phrases in Romanian (see examples (2c-d), (10), (13)).<sup>7</sup> The DP introduced by the agentive preposition (Romanian *de către/de* ‘by’) is an obvious candidate for what has been called, in (26), ‘the element that saturates the EA’. However, there is no evidence that *by*-phrases in *SePass* occupy a different position than in *PartPass*. In both configurations, when the subject remains postverbal, *by*-phrases follow it in the unmarked order:

- (29) a. S-au formulat plângeri de către autoritatea  
SE-have.3PL expressed complaints by authority.the  
contractantă.  
contracting  
‘Complaints have been expressed by the contracting authority.’  
([www.cnsr.ro/wp-content/uploads/bo/2014/BO2014\\_0290.pdf](http://www.cnsr.ro/wp-content/uploads/bo/2014/BO2014_0290.pdf))
- a’. Au fost formulate plângeri de către autoritatea  
have been expressed.FPL complaints.F by authority.the  
contractantă.  
contracting
- b. S-au propus numeroase ipoteze de către cercetători  
SE-have.3PL proposed many hypotheses by researchers  
din domenii foarte variate.  
from domains very varied  
‘Many hypotheses have been proposed by researchers from various domains.’ (<http://revistateologica.ro/vechi/articol.php?r=79&a=4952>)
- b’. Au fost propuse numeroase ipoteze de către  
have been proposed.FPL many hypotheses.F by  
cercetători din domenii foarte variate.  
researchers from domains very varied

<sup>7</sup>*By*-phrases in *se*-passives can also be found in Spanish (see MacDonald 2017) and some varieties of French (see Authier & Reed 1996; Zribi-Hertz 2008); they are generally more restricted than in regular (participial) passives.

If the *by*-phrase, or the DP introduced by *by*, had occupied the thematic EA position, higher than the IA, we would have expected it to occur after the IA in the unmarked order. Collins (2005) proposed that the DP introduced by *by* occupies the thematic EA position, the preposition spells out a head Voice and the VP, including the IA, raises to SpecVoice; this derives the order V-IA-EA. Collins argues that, due to VP-raising above the EA, the intervention effect of the EA is removed, and the IA can enter Agree with T (therefore he calls this operation ‘smuggling’):

(30) [VoiceP [VP V IA] [ [Voice0 *by*] [<sub>vP</sub> EA [<sub>v</sub> t<sub>VP</sub>]]]]

Note now that the order predicted by smuggling is found not only in PartPass (where there is no intervention), but also in SePass.

The same problem appears if we assume that IA escapes intervention of the EA in PartPass by raising as a DP, to the specifier of a head that c-commands EA.

Therefore, I would like to adopt the traditional analysis of *by*-phrases as adjuncts, in its updated version proposed by Bruening (2012), with some amendments which account for the fact that the intervener is still active in the presence of a *by*-phrase (see (31)).

(31) \* S-a propus el/Maria de către angajați.  
SE-has nominated he/Maria by employees

Intended meaning: ‘He/Maria was proposed by the employees.’

Bruening (2012) proposes that *by*-phrases are *selective* adjuncts: they attach to a VoiceP (corresponding to Chomsky’s *vP*) with an unsaturated argument slot, and saturate this argument. He assumes that passives involve a Pass head on top of a passive VoiceP – in terms of selection, Pass selects a Voice with an unsaturated selectional feature (in the following representation, ‘S’ stands for ‘selectional feature’):

(32) Pass[S:Voice(S:N)] (Bruening 2012: 22, ex. (84))

Furthermore, he proposes that adjuncts select their host themselves, but the label of the selectee projects (this is marked by the diacritic feature ‘a’ on the selectional feature). Under these assumptions, the restriction of *by*-phrases to verbal or deverbal configurations with demoted EAs can be represented by the following selectional rule:

(33) *by* [S:N, S<sub>a</sub>:Voice(S:N)] (Bruening 2012: 26, ex. (92))

*By* first selects a nominal projection, and the whole [*by*+DP] constituent, due to the second selectional feature of *by*, combines with a VoiceP with an unsaturated selectional feature.

For the Pass head, Bruening assumes a variable semantic contribution – it saturates the EA unless the EA has already been saturated (by the *by*-phrase):

$$(34) \quad \llbracket \text{Pass} \rrbracket = \lambda f_{\langle e, \text{st} \rangle} \lambda e. \exists x (f(x, e)) \text{ or } \lambda f_{\langle \text{st} \rangle} \lambda e. f(e) \text{ (cf. Bruening 2012: 25, ex. (91a))}$$

I follow the main lines of this account, with the following important amendment: in order to solve the problem of the ambiguity in the denotation of Pass, I propose that the *by*-phrase specifies (identifies) the EA but leaves it unsaturated, as represented in (35):

$$(35) \quad \llbracket \text{by} \rrbracket = \lambda x \lambda f_{\langle e, \text{st} \rangle} \lambda y \lambda e. (x=y \wedge f(x, e))$$

The existential binding of the EA always applies at a higher level, PassP, irrespective of whether a *by*-P is present in the complement of Pass or not. Thus, Pass always makes a semantic contribution, which is the first line of (34):

$$(36) \quad \llbracket \text{Pass} \rrbracket = \lambda f_{\langle e, \text{st} \rangle} \lambda e. \exists x (f(x, e))$$

Bruening does not adopt this rule in order to prevent *by*-phrases from combining with actives. But there are other ways in which we can prevent *by*-phrases from combining with actives. One is to specify *by* as selecting a *passive*  $v$  (using the label  $v$  for Bruening's Voice with an unsaturated EA):

$$(37) \quad \textit{by} \text{ [S:N, } S_a: v_{\text{pass}} \text{]}$$

Alternatively, if adjuncts are not allowed to attach below specifiers, it suffices that *by*-phrases select  $v$ ; since their denotation (see (35)) requires a constituent with an unsaturated e-type argument, only  $v$ P's that introduce an EA in semantics, but not in syntax will be allowed: if  $v$  is unergative/transitive, it will introduce a specifier below the adjunct, so the *by*-phrase will not be able to combine with a phrase with an unsaturated e-type argument.

What is important for our discussion is that the level where the EA is saturated is higher than the level where *by*-phrases are attached, and EA saturation is independent of *by*-phrases. This solves the issue raised by the absence of contrasts regarding *by*-phrases between PartPass and SePass, exemplified in (29).

Now, we can also imagine the saturating element as a null pronoun in SpecPass, rather than the Pass head itself. In this case, the Pass head would not contribute directly to interpretation, but rather indirectly, by taking a null arbitrary pronoun as a specifier:

- (38) Pass [S:v<sub>non-act</sub>, S: PRO<sub>arb</sub>]  
 $[[\text{Pass}]] = \lambda f_{\langle e, st \rangle} \lambda x \lambda e. f(x, e)$

Under both alternatives, the distinguishing property of SePass would be the presence of a Person feature on the binder – either on Pass itself or on PRO<sub>arb</sub>. In case Pass itself saturates EA, the presence of a Person feature on Pass is justified by the +human restriction on the existentially bound variable:

- (39)  $[[\text{Pass}_{+3}]] = \lambda f_{\langle e, st \rangle} \lambda e. \exists x (\text{human}(x) \wedge f(x, e))$

Summing up, we have so far suggested two possible structures that may account for the intervention effect in SePass:

- (40) a.  $[_{\text{PassP}} \text{PRO}_{\text{arb}+\text{Person}} [_{\text{Pass}} [_{\text{vP}} \nu [_{\text{VP}} \text{V IA}]]]]$   
 b.  $[_{\text{PassP}} \text{Pass}_{+\text{Person}} [_{\text{vP}} \nu [_{\text{VP}} \text{V IA}]]]]$

As regards the type of null pronominal EA, I assume a null arbitrary pronoun that bears null Case<sup>8</sup> and is case-licensed in situ by Pass, hence the label PRO<sub>arb</sub>. I do not treat it as *pro*, as proposed by MacDonald (2017) for the EA of SePass in Spanish, because *pro* has nominative case, which means that in those configurations allowed by the Person Constraint, T would assign nominative twice, to two non-co-indexed DPs – both to the EA and to the IA – which is not compatible with the overall structural case system of Romanian.

In the next section, we will further elaborate on the structure of SePass in contrast with PartPass, looking at binding properties.

## 5 On the presence of a null EA in *se*-passives

In order to establish the existence and syntactic status of implicit arguments, various binding tests are usually employed.

When we compare SePass and PartPass, a difference emerges regarding binding of secondary predicates and the anaphor *sine* ‘(one)self’ by the EA, SePass allowing binding more easily than PartPass. However, the examples are not always fully acceptable with SePass, nor are they totally excluded with PartPass, as one would have hoped.

The following examples show the results of a questionnaire given to 10 native speakers, who marked the examples on a scale with four degrees of acceptability (\*, ??, ?, OK). The most acceptable examples have impersonal SePass – i.e., SePass

<sup>8</sup>On ‘null case’, see Chomsky & Lasnik (1993); Bošković (1995; 1997); Martin (2001).

based on intransitives – in generic deontic contexts (see also (11b)), in which case a direct comparison with PartPass is impossible, as PartPass cannot be built on intransitives.<sup>9</sup> With transitive bases, although the examples of SePass are not fully acceptable, we still find a contrast with PartPass:

- (41) a. %?? Scrisoarea pare a fi fost scrisă beat. (18%)  
 letter.the seems to have been written drunk.MSG  
 ‘The letter seems to have been written drunk.’
- a’. ?? Scrisoarea asta a fost scrisă beat. (18%)  
 letter.the this has been written drunk.MSG
- b. %?? Așa ceva nu se scrie beat. (56%)  
 such something not SE writes drunk.MSG  
 ‘Something like that should not be written drunk.’
- (42) a. %? Nu se acordă premii sie însuși / sieși. (80%)  
 not SE awards prizes self.DAT EMPH / 3REFL.DAT  
 ‘One does not award prizes to oneself.’
- b. ??/\* Nu sunt acordate premii sie însuși / sieși. (25%)  
 not are awarded prizes self.DAT EMPH / 3REFL.DAT  
 ‘\*Prizes are not awarded to himself.’
- c. %?? Cartea a fost de fapt scrisă despre sine. (60%)  
 book.the has been actually written about self  
 ‘The book has actually been written about oneself.’

Here are the examples of SePass with intransitives:

- (43) a. %? Nu se conduce beat. (83%)  
 not SE drives drunk.MSG  
 ‘One does not drive drunk.’
- b. %? Până la plajă se poate merge gol. (80%)  
 to beach SE can walk naked.MSG  
 ‘One can walk to the beach naked.’

<sup>9</sup>The only exception is in the complement of *trebui* ‘must’, a construction which I cannot address here:

- (i) Trebuie mers de dimineață.  
 must gone of morning  
 ‘One must go in the morning.’

- (44) Nu așa se vorbește / scrie despre sine. (100%)  
not so SE speaks / writes about self  
'One does (should) not speak/write like this about oneself.'

Control in *without*-clauses is very marginal with both types of passives, and control in purpose clauses is equally fine with both, but it is worth noting that Romanian adjunct infinitives allow a disjoined or overt subject, which reduces the relevance of these tests:

- (45) ?? Cărțile s-au vândut / au fost vândute fără a  
books.the.FPL SE-have sold / have been sold without to  
le citi.  
them.FPL read  
'(\*)The books were sold without reading them.' (21% *s-au vândut*, 31%  
*au fost vândute*)
- (46) Aceste haine se vând / sunt vândute pentru a ajuta săracii.  
these clothes SE sell.3PL / are sold for to help poor.the  
'These clothes are sold to help the poor.'

Another instance of binding where the EA of SePass is more active than the EA of PartPass was discovered by MacDonald (2017) for Spanish, and also applies to Romanian. In Romance languages, definite DP objects denoting body-parts can be interpreted as possessed by the subject:

- (47) a. Spanish (MacDonald 2017: ex. (15a))  
El estudiante levantó la mano.  
the student raised the hand
- b. Romanian  
Studentul a ridicat mâna.  
student.the has raised hand.the  
'The student raised his hand.'

This construction does not rely on a general interpretive property of implicit possessors, but rather on a syntactic binding relation, as shown by the fact that the body-part and the possessor must be in a local relation (see MacDonald 2017 for details):



- (48) Spanish (MacDonald 2017: ex. (15a))  
 Juan<sub>i</sub> dijo que María<sub>j</sub> había cerrado los ojos<sup>\*<sub>i/j</sub></sup>.  
 Juan said that María had closed the eyes  
 ‘Juan said that María had closed her/\*his eyes.’

MacDonald argues that the body-part DP can be an IA possessed by the implicit EA in SePass, but not in PartPass. (49a) has a passive *se*, as shown by plural agreement (recall that *se* in Spanish can also rely on an active configuration; see §2). The interpretation is ‘(some of) the people present raised their hands’; the EA is the inalienable possessor of the IA, and the verb is interpreted as involving controlled motion of the body part (the immediate effect of internal biological mechanisms). With a PartPass, such as in (49b), such an interpretation is excluded: the IA is not interpreted as a body-part of the EA; the sentence expresses a change in the position of somebody’s head as the result of the EA’s action (e.g. using his hands to push the head up).

- (49) a. Spanish (MacDonald 2017: ex. (21a))  
 El profesor hizo una pregunta. Se levantaron unas/las manos.  
 the professor made a question SE raised.3PL some/the hands  
 ‘The professor asked a question. Some of their/Their hands raised.’  
 b. Spanish (ibid.: ex. (23))  
 La cabeza fue levantada (por Juan).  
 the head was raised by Juan  
 = ‘The head was raised (by Juan).’  
 ≠ ‘Juan/somebody raised his head.’

This contrast is found in Romanian too (in (50), the continuation with a Part-Pass does not have the sensible interpretation ‘some people raised their hands’):

- (50) Romanian  
 Profesorul a mai pus o întrebare. De data aceasta, s-a ridicat  
 professor.the has still put a question of time.the this SE-has raised  
 mâna / #a fost ridicată mâna.  
 hand.the / has been raised hand.the  
 ‘The professor asked another question. This time, some (at least one person) raised their hands / #The hand was raised.’

In such cases, we are clearly not dealing with anticausative *se*. Note that the object *mâna* ‘the hand’ is singular, although the sentence is compatible with a situation in which the number of raised hands is more than one. This is due to the fact that the object is not referential, but contains a (possessor) variable bound by the null external argument (which may refer to one or more individuals). The possibility of a passive construal is further ascertained by compatibility with purpose clauses ((52) is modeled after MacDonald’s example (20a)):

- (51) S-a ridicat mâna doar pentru a-l mulțumi pe profesor.  
 SE-has raised hand.the only for to-him please DOM teacher  
 ‘Some raised their hands only to please the teacher.’
- (52) Aici, pentru a pune o întrebare se ridică mâna.  
 here for to put a question SE raises hand.the  
 ‘Here, in order to ask a question, one raises one’s hand.’

To conclude, various tests indicate that EA in SePass has a greater capacity for binding than in PartPass. This supports the view that the binder of the EA in SePass, the element bearing Person, is a  $PRO_{arb}$ , as represented in (40a), whereas for PartPass, the binder might be the functional head Pass itself, as proposed for passives in general by Bruening (see (36)). We may thus represent the two types of passives in Romanian as follows (on the position of the morpheme *se*, see §6):

- (53) a.  $[_{PassPartP} Pass_{Part} [_{vP} v [_{VP} V IA] (by-P)]]$   
 $[[Pass_{part}]] = \lambda f_{\langle e, st \rangle} \lambda e. \exists x (f(x, e))$
- b.  $[_{PassSeP} PRO_{arb} [_{Pass_{se}} [_{vP} v [_{VP} V IA] (by-P)]]]$   
 $[[Pass_{se}]] = \lambda f_{\langle e, st \rangle} \lambda x \lambda e. f(x, e)$

## 6 Note on the status of *se*

The idea that the projection of the EA in syntax distinguishes SePass from PartPass might find further support in morphology. PartPass has a dedicated passive inflection on the V,<sup>10</sup> whereas verbal forms with the clitic *se* are notoriously

<sup>10</sup>The passive participle in the masculine singular is formally identical with the past participle, but the two forms never occur in the same syntactic environment – the past participle is always selected by certain auxiliaries, which are T/Asp/Mood morphemes inside the verbal clitic cluster in Romanian (see Dobrovie-Sorin (1994) for details); the passive participle never occurs in this environment. Note also that the copula in the *be*+PassPart construction is not a clitic auxiliary in Romanian, but behaves as a full verb, supporting the treatment of periphrastic passives as regular copular constructions.

ambiguous between several interpretations – reflexive, reciprocal, anticausative, middle, and passive. We may thus assume that the saturation of the EA (by existential closure) is overtly signalled by the passive morphology in PartPass, this morphology spelling out the head Pass with the denotation in (36)/(53a). For SePass, on the other hand, assuming that *se* does not realize Pass, but is attached at the  $\nu$ P-level, the projection of a specifier would be necessary in order to make the Pass-level visible. Thus, the saturation of the EA is achieved via a null pronoun rather than the Pass head itself.

One could of course also envisage that *se* spells out the Pass head. But I believe that if we attempt to give, as far as possible, a unitary treatment of all the uses of *se*, it is more convenient to attach it at the  $\nu$ P-level.

The issue of a unitary treatment of all the uses of *se* is a complex and much-debated problem, which cannot be settled here (see Dobrovie-Sorin 2017 for an overview of the various proposals). I will confine myself to some tentative remarks.

Romanian *se* is ambiguous between an accusative reflexive/reciprocal clitic and a voice marker, the latter occurring in anticausatives, inherent/intransitive reflexives, inherent reciprocals, middles and passives. The accusative clitic status of *se* is clear when it doubles an object pronoun (which must, of course, be coreferent with the subject):

- (54) Maria<sub>i</sub> \*(se) admiră pe sine / pe ea<sub>i</sub>.  
 Maria SE admires DOM self.ACC / DOM her  
 ‘Maria admires herself.’

Even when it does not double a strong accusative pronoun, there is evidence that sometimes reflexive *se* is an object pronoun rather than a valency reduction marker; thus, (55) has not only the sloppy reading ‘Maria admires herself and the others do not admire themselves’, but also the strict reading ‘Maria admires herself and the others do not admire Maria’. The strict reading cannot be derived if there is a single argument and the predicate is reflexivized ( $\lambda x$ .admires( $x,x$ )). (55) thus involves what I would call a ‘transitive’ or ‘two-place’ reflexive.<sup>11</sup>

- (55) Doar Maria se admiră.  
 only Maria SE admires  
 ‘Only Maria admires herself.’

<sup>11</sup>On the use of the strict/sloppy reading test for reflexives, see Sells et al. (1987); Labelle (2008). For the treatment of *se*-reflexives as intransitive, one-place predicates derived by a reflexivization rule (or theta-bundling), see Reinhart (1996), Labelle (2008).

As a voice marker, *se* is associated with valency reduction, except in passives and symmetric verbs, and with accusative suspension for transitive verbs.

Reflexive *se* sometimes relies on an intransitive configuration, where the agent and patient theta-roles are assigned to a single argument. This typically obtains with motion verbs, which express actions that have an immediate result on the agent (e.g., with *se mișca* ‘SE move’, the agent’s action automatically involves the change of his motion state, whereas in *a mișca ceva* ‘to move something’, the effect of the agent’s action on the motion state of another entity is foregrounded) – hence the label ‘autocausative’:<sup>12</sup>

- (56) a. Maria s-a ridicat (\*pe sine) în picioare.  
Maria SE-has raised DOM self in feet  
‘Maria stood up.’  
b. Maria s-a grăbit (\*pe sine) să ajungă.  
Maria SE-has hurried DOM self SBJV arrives  
‘Maria hurried to be on time.’

Verbs that express actions usually performed on oneself, such as grooming verbs (*se spăla* ‘wash’, *se rade* ‘shave’, *se îmbrăca* ‘get dressed’, etc.), are also good candidates for one-place reflexives (cf. the intransitive use in English and the oddity of adding a strong anaphor – ??*Se rade pe sine* ‘He’s shaving himself’).

In a system that allows movement to thematic positions (see Hornstein 1999; Ramchand 2008), the bundling of the Initiator and Undergoer roles can be represented as movement of the IA to SpecvP, the thematic EA position (Alboiu et al. 2004 and Medová 2009, who cites a 1986 talk by Kayne for this idea; see also Ramchand 2008 for movement from SpecProc to SpecInit).

Anticausatives (or inchoatives) are characterized by the suppression of the Agent/Initiator role (see Schäfer 2008 for discussion). *v* may be taken to introduce a causing event, but it does not introduce any argument in the denotation (as opposed to passive *v*); the Cause may be expressed by a PP-adjunct:

- (57) Geamul s-a spart de la explozie.  
window.the SE-has broken from explosion  
‘The window broke from the explosion.’

Psych-verbs resemble inchoatives in that the IA becomes the subject, but two arguments continue to be projected, with the Stimulus being introduced as a PP:

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<sup>12</sup>See Geniušienė (1987).

- (58) Se sperie de câine / Câinele îl sperie.  
 SE frightens of dog dog.the him frightens  
 ‘He’s frightened of the dog / The dog frightens him.’

Based on its use as a reciprocal pronoun, *se* developed the function of marking inherent reciprocal verbs. Here we have a change in the argument pattern – as the same entities are in turn agents and patients, they are realized as with symmetric predicates, as S+ *with* or a plurality (see (59a), vs. the transitive reciprocal use in (59b)):

- (59) a. Ion se bate cu Andrei. / Ion și Andrei se bat.  
 Ion SE beats with Andrei Ion and Andrei REFL beat  
 ‘Ion is fighting Andrei / Ion and Andrei are fighting.’  
 b. Ion și Andrei se bat unul pe altul.  
 Ion and Andrei SE beat one DOM another  
 ‘Ion and Andrei are beating each other.’

The middle use also relies on the suppression of the Agent role, being a syntactic anticausative, but retaining an agent in the conceptual structure (see Schäfer 2008):

- (60) Cartea se vinde bine.  
 book.the SE sells well  
 ‘The book sells well.’

Verbs which necessarily take *se*, the so-called ‘inherent *se*-verbs’, can almost always be claimed to belong to one of the aforementioned types (e.g. *se însera* ‘to dusk’ – inchoative, *se învecina* ‘to border, neighbour’ – symmetric (inherent reciprocal), *se foi* ‘to scurry, to toss from side to side’ – autocausative (one-place reflexive)).

The argument structure operations signalled by the voice marker *se* mainly affect the EA, the argument introduced by *v*, and accusative licensing, which is also currently assigned to *v*: (i) the EA is suppressed (anticausatives, middles, psych-verbs), (ii) the EA and IA roles are unified, possibly by moving the IA (deep object) to the EA position (one-place reflexives) or (iii) the EA is introduced in the denotation but no DP is merged in SpecvP (no specifier is selected) (passives). Further operations on internal arguments are found in minor types – psych-verbs and inherent reciprocal verbs. Regarding case-licensing, all these varieties of *v* share the property of lacking accusative assignment (which is correlated with

the lack of an externally-merged Spec – ‘Burzio’s generalization’). Leaving aside unmarked unaccusatives (which might lack  $v$  completely), we find the following contrast between active  $v$  (labelled  $v^*$ ) and the  $v$  found in *se*-verbs:

- (61)  $v^*$ : + externally-merged Spec, (+ accusative)  
 $v_{SE}$ : -externally-merged Spec, - accusative

*Se* may thus be the spell-out of the common features shared by these varieties of  $v$ , represented in (61) (this partial unification can be implemented in Distributed Morphology, using the subset principle). The various uses of *se* are obtained by adding extra features to this common core (these extra features are not spelled out). As for the fact that *se* behaves exactly like pronominal clitics in terms of placement (it even undergoes clitic-climbing; e.g. *se poate sparge* ‘SE can break’ = ‘It can break’), I refer to Roberts’s (2010) account, which treats object clitics in general as probes in  $v$ , rather than moved pronouns, and makes use of a restricted version of excorporation to explain clitic-climbing.

To conclude, if *se* spells out features of  $v$ , the higher head Pass must be taken to be null, which might motivate the projection of a specifier with a Person feature in order to saturate the EA, as proposed in the previous section.

## 7 Intervention and further constraints on subjects of *se*-passives

Raposo & Uriagereka (1996) argue that in Portuguese, the subject (IA) of *se*-passives never occupies the dedicated preverbal subject position (when preverbal, it is in a topic or focus position). Some restrictions have also been noticed for French – Stéfanini (1962) and Ruwet (1972) claim that eventive passive *se*-verbs are only allowed with impersonal *il*+postverbal S (as opposed to habitual *se*-passives, which might in fact represent middles), but Zribi-Hertz (1982; 2008) found a series of counterexamples to this generalization. That subjects of SePass do not have access to the canonical subject position has also been argued for Romanian, by Cornilescu (1998). Because in Romanian it is difficult to identify a preverbal position dedicated to subjects, Cornilescu used other tests, namely subject-to-object raising from finite clauses and gerunds. The constraint is claimed to hold only for animate subjects.

Here are some examples. (62a) shows a construction without raising: the *se*-verb in the subordinate clause allows a passive interpretation alongside a reciprocal one (a reflexive interpretation is of course also possible, but unlikely due

to world knowledge). (62b-c) shows a construction in which a perception verb takes a direct object and an indicative complement clause, and the direct object is interpreted as the subject of the subordinate clause – Cornilescu calls it ‘subject-to-object raising’, but one might also treat it as an instance of control.<sup>13</sup> Irrespective of the exact analysis of this construction, what is important is that the *se*-verb here loses its passive interpretation:

- (62) a. Am văzut că se bat copiii în școli.  
 have.1 seen that SE beat.3PL children.the in schools  
 ‘I’ve seen that children {fight / are beaten} in schools.’ (reciprocal, passive)
- b. I-am văzut pe copii că se bat în școli.  
 CL.ACC-have.1 seen DOM children that SE beat.3PL in schools  
 ‘I saw children {fighting / \*being beaten} in schools.’ (reciprocal, \*passive)
- c. Pe cine ai văzut că se bat în școli?  
 DOM whom have.2SG seen that SE beat in schools  
 ‘Who did you see {fighting / \*being beaten} in schools?’ (reciprocal, \*passive) (Cornilescu 1998: ex. (24))

(63) shows the same contrast with gerunds following perception verbs: the gerund’s subject can be licensed in the gerund clause, postverbally, or in the matrix clause, by ECM (evidence for an ECM analysis can be found in Avram 2003); in the latter case, the passive reading of *se*-verbs is excluded:

- (63) a. Am văzut împușcându-se oameni nevinovați.  
 have.1 seen shooting-SE people innocent  
 ‘I saw innocent people being shot.’ (✓ passive)
- b. Pe cine ai văzut împușcându-se?  
 DOM whom have.2SG seen shooting-SE  
 ‘Who did you see shooting each other / shooting themselves/ \*being shot?’ (✓reciprocal/reflexive, \*passive) (Cornilescu 1998, ex. (26))
- (64) a. Am văzut pedepsindu-se copiii cu asprime.  
 have.1 seen punishing-SE children.the with harshness  
 ‘I saw the children being punished harshly.’ (✓ passive)

<sup>13</sup>For a detailed treatment, see Alboiu & Hill (2013; 2016), who argue for a particular type of raising (not performed for Case reasons, as in ECM, but triggered by an evidentiality feature on the matrix *v*).

- b. (I-)am văzut {pe copii / copiii} pedepsindu-se cu  
 (CL)-have.1 seen DOM children / children.the punishing-SE with  
 asprime.  
 harshness  
 ‘I saw the children {punishing themselves/each other /\*being  
 punished} harshly.’ (\*passive) (ibid.: ex. (29))

Within the analysis I have proposed, we may explain these facts as follows: although the intervener EA allows case licensing of the IA by a second Agree relation of T, presumably Number agreement, the intervener blocks case-related movement of the IA. A similar situation is found in Icelandic quirky subject constructions – the structurally case-marked Theme remains postverbal and is possible only in the third person; the higher argument, an inherently case-marked DP, which is the intervener for person agreement, raises to the canonical subject position:

- (65) a. \*Honum líkum við.  
 him.DAT like.1PL we.NOM  
 b. \*Honum líkið þið.  
 him.DAT like.1PL we.NOM  
 c. Honum líka þeir.  
 him.DAT like.3PL they.NOM  
 ‘He likes \*us/\*you/them.’  
 (Sigurðsson & Holmberg 2008: ex. (7))

For the construction in (62), with finite indicative clauses, in case we assume control, the impossibility of the passive reading can be accounted for as follows: control targets the highest argument, but the highest argument is a null arbitrary pronoun in SePass, which cannot be controlled by a DP such as *the children*. The fact that control targets the highest argument is confirmed by oblique experiencer constructions, in which the matrix object can be interpreted as the oblique experiencer (see Alboiu & Hill 2016):

- (66) a. L-am văzut pe Ion că i-a fost foame.  
 CL.ACC-have.1 seen DOM Ion that him.DAT-has been hunger  
 ‘I saw that Ion was hungry.’ (Alboiu & Hill 2016: ex. (31b))  
 b. Am văzut-o pe Maria că îi place jazzul.  
 have.1 seen-CL.ACC DOM Maria that her.DAT likes jazz.the  
 ‘I saw that Maria likes jazz.’



Note that my account does not predict any difference between animate and inanimate subjects of SePass regarding the contrasts in (62–64), contra Cornilescu (1998). Note first that the constructions with *că* ‘that’-clauses are not fully acceptable with inanimate objects in general; the test of *cum* ‘how’-clauses, used by Cornilescu, is irrelevant because such clauses do not require that the direct object of the matrix verb be interpreted as their subject:

- (67) Am văzut-o pe Maria cum o băteau.  
 have.1 seen-CL.ACC DOM Maria how her were.beating.3PL  
 ‘I saw Maria being beaten by them.’

More problematic are the examples with gerunds, illustrated in (68), where the pronominal demonstrative (which allows *pe*-marking with inanimates) refers to shirts and buildings, respectively:

- (68) a. Le-am văzut pe astea vânzându-se destul de repede.  
 CL.ACC-have.1 seen DOM these selling-SE enough of quickly  
 ‘I saw these (shirts) being sold quite quickly.’ (Cornilescu 1998: ex. (33))
- b. Pe astea le-am văzut dărâmându-se chiar eu.  
 DOM these CL.ACC-have.1 seen pulling.down-SE even I  
 ‘I myself saw these (buildings) being pulled down.’ (ibid.: ex. (37))

A possible account is that (68a) in fact represents a middle construction (i.e., without a projected EA; for more on middles, see the Appendix) and (68b) an anticausative, receiving an agentive interpretation contextually, due to world knowledge. I indeed believe that an overt *by*-phrase in (68) is not acceptable (but further empirical research is necessary on this point):

- (69) ?? Pe astea le-am văzut dărâmându-se de către primărie.  
 DOM these CL.ACC-have.1 seen pulling.down-SE by city.hall  
 ‘I saw these (buildings) being pulled down by the city hall.’

Regarding preverbal subjects, although admittedly they are hard to distinguish from topics, there are contexts where a nominal can be claimed to occur preverbally due to its subject status, rather than topicality or another information-structural feature (see Giurgea 2017). Thus, consider all-new (out-of-the-blue) environments, where the subject is an indefinite that is totally new – i.e. neither previously mentioned, nor partitive or otherwise context-linked – and furthermore is not generic (thus, it cannot qualify as a topic, according to the conditions

on indefinite topics established by Erteschik-Shir 2007, which appear to hold for Romanian). We can see in (70a) that, especially if there are other constituents following the V, the subject can be preverbal in this context; (70b-c) show that if the same indefinite is an oblique or direct object argument, the preverbal position is not allowed; (70d) shows that this indefinite cannot undergo long-distance topicalization, even if it is a subject.

(70) [Context: all-new, beginning of a news report]

- a. O barcă plină cu arme de contrabandă a acostat azi lângă  
a boat full of weapons of smuggling has landed today near  
Constanța.  
Constanța  
'A boat full of smuggled weapons has landed today near Constanța.'
- b. # Cu o barcă plină de arme de contrabandă au sosit  
with a boat full of weapons of smuggling have arrived  
mai mulți turci la Constanța.  
several Turks to Constanța  
'Several Turks arrived in Constanța with a boat full of smuggled  
weapons.'
- c. # O barcă plină de arme de contrabandă a oprit-o  
a boat full of weapons of smuggling has stopped-CL.ACC  
paza de coastă la Constanța.  
guard.the of coast at Constanța  
'The coast guard arrested a boat full of smuggled weapons in  
Constanța.'
- d. # O barcă plină de arme de contrabandă s-a anunțat că  
a boat full of weapons of smuggling SE-has announced that  
a acostat astăzi lângă Constanța.  
has landed today near Constanța  
'It has been reported that a boat full of smuggled weapons has  
landed today near Constanța.'

Notice now that in this very same context, the subject of SePass is not felicitous in preverbal positions, whereas the subject of PartPass, like the subject in (70a), is allowed:

- (71) O barcă plină cu arme de contrabandă {a fost găsită / #s-a găsit}  
 a boat full of weapons of smuggling has been found SE-has found  
 azi lângă Constanța.  
 today near Constanța  
 ‘A boat full of smuggled weapons has been found today near Constanța.’

This contrast supports the proposal that the EA is projected as a null pronominal in *SePass*. As the preverbal position is not necessary for case assignment in Romanian, we can assume that in contexts such as (70a), where no constituent inherently qualifies as a topic, there is the option of raising to the preverbal position *the closest (highest) argument* (see Giurgea 2017), presumably due to a [D]-feature of the relevant probe.

## 8 Conclusions

*Se*-passives in Romanian are a construction in which the DP that agrees with the verb does not have full subject properties (see §7) and is subject to a general formal constraint – it cannot be a DP that needs differential object marking + clitic doubling when occurring as a direct object. This constraint can be included in the family of Person constraints if we assume that 3<sup>rd</sup> person animate specific DPs have a [Person] feature (specified as -Participant), whereas other non-participant DPs lack a Person feature completely. These facts can be explained by the existence of an EA syntactically projected as a null arbitrary PRO in *se*-passives; as it bears a Person feature, this element intervenes in the case licensing of +Person IAs. We have seen that *by*-phrases are possible in *se*-passives, and they do not represent the intervener. Therefore, we adopted an analysis of *by*-phrases along the lines of Bruening (2012), as adjuncts attached to a *vP* with an unsaturated argument, below the level where the EA is saturated. This led to the conclusion that the null EA of *se*-passives is projected as the Spec of a Pass head above the *vP*. We further proposed that in participial passives the passivizing head itself existentially binds the EA. The projection of a specifier in order to saturate this argument position was related to the fact that *se*-passives do not have a dedicated morphology (unlike participial passives): the element *se* also characterizes other Voice configurations (one-place reflexive, anticausative, inherent reciprocal). Therefore, we suggested that *se* is generated at the *vP*-level and does not spell out Pass.

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## Appendix: Apparent exceptions to the Person constraint rely on middle *SE*

Perceptual verbs seem to provide counterexamples to the Person constraint discussed in this article, allowing even +Person subjects, including 1<sup>st</sup> and 2<sup>nd</sup> person pronouns, in sentences with a modal or iterative interpretation:

- (72) a. Ne auzim bine în această sală.  
us hear.1PL well in this hall  
'One can hear us well in this hall.'
- b. Ion și Maria, acolo unde stau, se văd de departe.  
Ion and Maria there where stay.3PL SE see.3PL from far  
'Ion and Maria, where they are standing, can be seen from afar.'
- (73) a. În ultima vreme te vezi prea des la televizor.  
in latest.the time you.ACC see.2SG too often on TV  
'Lately you have been seen (can be seen) too much on TV.'  
(Dobrovie-Sorin 2017: 134)
- b. În ultima vreme mă văd și eu la televizor.  
in latest.the time me.ACC see.1SG also I on TV  
'Lately I've also been seen on TV / I can also be seen on TV.'

I will argue that these examples are instances of *middle*, rather than passive *se*. Middles are conceptually passive, but syntactically anticausative, in the sense that there is no evidence for a syntactically active EA (see Schäfer 2008). Middles are used to express generalizations about the IA – the sentence is about the propensity of the subject to act as a Theme in the relevant event type, e.g. English *These books sell well*. We find this type of interpretation in the examples (72)-(73): none of the examples is about an episodic event. Even if no modal is present, the reading is one of circumstantial possibility, as shown by the translations.

The tests of purpose clauses and *by*-phrases show that there is no syntactically active EA:

- (74) Ne auzim bine în această sală ( \*pentru a reține fiecare cuvânt /  
us hear.1PL well in this hall for to remember every word  
\*de către oricine).  
by anybody
- (75) \* Mă văd și eu la televizor de multă lume / de către cei care  
me see.1SG also I on TV by many people / by those who  
se uită după ora 12 / pentru a afla despre bolile de oase.  
watch after 12 o'clock for to learn about diseases.the of bones

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## Chapter 6

# Subject-verb agreement with Genitive of Quantification in Polish *co* and *który* object relative clauses

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This paper examines subject-verb agreement in Polish object relative clauses (RCs) of two types, namely *co* and *który* relatives, in which the modified head noun (HN) is a Genitive of Quantification phrase (GoQ). When it functions as a subject, this phrase forces default agreement on the verbal predicate. However, whenever it occupies the subject of a RC position, the agreement may vary between default and full agreement, depending on the type of the RC and the grammatical gender of the HN. This study compares subject-verb agreement with GoQ in subject relatives (examined in Łęska 2016) with the patterns found in object RCs, based on the results of a survey of acceptability judgements for *co* and *który* object RCs. The results revealed an asymmetry between subject and object RCs in the possibility of default agreement, indicating that the Case attraction analysis of Polish RCs should be further restricted to apply only to the former.

## 1 Polish *co* and *który*-relatives

### 1.1 Introduction

This section is a brief overview of previous research on Polish RCs regarding their distribution, case mismatches between the head noun and the relative operator, and asymmetries in the derivation of *co* and *który*-RCs.

### 1.2 The distribution of *co* and *który* relative markers

The two types of RCs under investigation are introduced by different relative markers, namely the relative pronoun *który* and the complementizer *co*. The for-



mer is a D-linked relative pronoun which requires a nominal restriction and is used to relativize full nominal heads in so-called ‘headed relatives’ (Citko 2004). According to Citko, headed relatives can be introduced only by the relative pronoun *który*, which can relativize both animate and inanimate heads. The agreement between the pronoun and the relative clause head is in gender and number (but not case), as in (1):

- (1) a. Mężczyzna, **którego** spotkałem wczoraj, jest lekarzem.  
man.NOM.MSG który.ACC.MSG I.met yesterday is doctor  
‘A man who I met yesterday is a doctor.’  
b. Znalazłam książki, **które** wczoraj zgubiłeś.  
I.found books.ACC.FPL który.ACC.FPL yesterday you.lost  
‘I found the books which you lost yesterday.’

However, Polish headed relatives can also be introduced by the uninflected relative marker *co*. Although this relativization strategy is limited to spoken language, relatives with the uninflected *co* are considered fully grammatical (Buttler et al. 1971). Generally, in non-standard Polish, the marker *co* can occur in the same context as the relative pronoun *który* (example (2)), except for non-restrictive RCs, for which only *który* can be used, as can be seen in (3), illustrating an appositive RC (Borsley 1981; 1984).

- (2) a. Mężczyzna, **co** spotkałem go wczoraj, jest lekarzem.  
man.NOM.MSG COMP I.met him yesterday is doctor  
‘A man who I met yesterday is a doctor.’  
b. Znalazłam książki, **co** wczoraj je zgubiłeś.  
I.found books.ACC.FPL COMP yesterday them you.lost  
‘I found the books which you lost yesterday.’  
(3) Adam, \***co/którego** znam od lat, mieszka teraz w Anglii.  
Adam COMP/who.ACC I.know from years lives now in England  
‘Adam, whom I have known for years, lives in England right now.’

When it comes to agreement, *co* in headed relatives does not agree in phi-features or case with the head noun. This observation has been used to argue that *co* in this type of RC has complementizer status. Compare the light headed relative in (4a) to the headed relative in (4b) (Citko 2004).

- (4) a. To jest coś, **czego/\*co** tutaj wczoraj nie było.  
 this is something.NOM what.GEN/\*COMP here yesterday not was  
 ‘This is something that was not here yesterday.’
- b. To jest ta książka, **co** jej/\***czego** tutaj wczoraj nie było.  
 this is this book COMP her/\*what.GEN here yesterday not was  
 ‘This is the book that was not here yesterday.’

As opposed to light headed relatives, in which *co* inflects for case and is therefore considered to be a relative pronoun, headed relatives, in which *co* remains uninflected and a resumptive pronoun is used to mark the relativization site, are considered to be introduced by a complementizer. Thus, despite the fact that the form of the uninflected relative marker *co* is homophonous with the nominative/accusative form of the relative pronoun *co*, there is some evidence in support of the complementizer status of *co* in headed RCs. According to Bondaruk (1995), the relative marker *co* can be used in the same context as the complementizer *żeby* in purpose clauses, as in (5a). As can be seen in (5b), *co* followed by the particle *by* can replace the complementizer *żeby*, although sentences like this are mainly restricted to dialectal use (Bondaruk 1995: 35).

- (5) a. Kupił pióro, **żeby** nim pisać.  
 he.bought pen in.order.to with.it.INS write
- b. Kupił pióro, **co** by nim pisać.  
 he.bought pen COMP in.order.to with.it.INS write  
 ‘He bought a pen to write with.’

Homophony between *wh*-pronouns and complementizers is common cross-linguistically, since the former are often a source for the development of the latter (Citko 2004: 108). According to Minlos (2012), the main diachronic source of this invariable lexeme in Slavic relative constructions was an inflected pronoun functioning as either an interrogative, an indefinite, or a relative pronoun. This lexeme stems from Common Slavic \**čbto* (Russian *что*, BCS – Bosnian / Croatian / Serbian *što*) or \**čbso* (Czech, Polish *co*, Slovak *čo*). Table 1 below shows the inflectional paradigms of the Polish relative pronouns *co* and *który*. As for other language families, a detailed account of the asymmetries between relative operators and complementizers is offered in Bacskai-Atkari (2016) for Uralic (Hungarian) and Germanic languages. Diachronic evidence presented in Bacskai-Atkari (2016) indicates that the Hungarian declarative complementizer *hogy* ‘COMP’ developed via the relative cycle from an operator, which could function as either an interrogative or relative operator as well as a complementizer, into a lower C<sup>0</sup> head which was then reinterpreted as a higher C<sup>0</sup> head.

Table 1: Case inflection on the relative markers *który* and *co*. Plural gender distinction: virile (masculine personal), non-virile (masc. non-personal, feminine, neuter).

Case	<i>który</i>					<i>co</i>
	Singular			Plural		
	Masc.	Fem.	Neut.	Virile	Non-virile	
Nom./Voc.	który	która	które	którzy	które	co
Acc.	którego	którą	które	których	które	co
Gen.	którego	której	którego	których		czego
Dat.	któremu	której	któremu	którym		czemu
Loc.	którym	której	którym	których		czym
Inst.	którym	którą	którym	którymi		czym

### 1.3 Case mismatches and resumption

Polish *który*-relatives show a mismatch between the cases assigned to the external and the internal head, regardless of the position occupied by the two heads, as can be seen in (6). The head noun *tę kobietę* ‘this woman’ is assigned accusative case in the matrix clause, being a direct object of the verb *spotkałem* ‘I-met’, whereas the relative pronoun in the embedded clause bears nominative case, occupying the subject position of the relative clause. Example (6b) shows the opposite situation, in which the external head is a nominative subject and the internal head is an object bearing accusative case. This observation has been used to argue against the raising analysis of *który*-relatives (Borsley 1997), since one chain can be assigned only one Case (Chomsky 1982).<sup>1</sup>

- (6) a. Spotkałem tą kobietę, która przyszła do ciebie  
 I.met this.ACC woman.ACC who.NOM came to you  
 wczoraj.  
 yesterday  
 ‘I met the woman who came to you yesterday.’

<sup>1</sup>The advocates of the raising analysis, however, assume that the Case features of the relative D<sup>0</sup> heads are checked and erased by the time the noun head gets to the SpecCP position, thus allowing the same noun head to be assigned Case by the matrix D<sup>0</sup> head (Kayne 1994; Bianchi 2000; Citko 2004).

- b. Ta kobieta, którą Jan lubi, przyszła do mnie wczoraj.  
 this.NOM woman.NOM who.ACC Jan likes came to me yesterday  
 ‘The woman who John likes came to me yesterday.’
- c. Kobieta, o której mówisz, przyszła do mnie wczoraj.  
 woman.NOM about who.LOC you.speak came to me yesterday  
 ‘The woman you speak about came to me yesterday.’

As opposed to *który*-relatives, in which the relativization site is always realized as a gap, *co*-relatives can either use the bare strategy or the resumption strategy. Since the complementizer *co* is not marked for case by the predicate of the relative clause, the relativization site is occupied by a resumptive pronoun which reflects this case marking. Such relative clauses are analysed as being derived via External Merge of the resumptive pronoun, which is bound by a null operator merged in SpecCP (Borer 1984; Chomsky 1977; Lavine 2003; McCloskey 1990; 2002; Merchant 2004; Safir 1986; Shlonsky 1992). This analysis, however, does not account for the bare strategy in which no resumptive pronoun is used. Generally, the resumptive pronoun is obligatory whenever the head noun is the direct or indirect object, whereas it is impossible with subject head nouns, as in (7):

- (7) a. mężczyzna, **co** (\*on) biegnie  
 man.NOM that he.NOM runs  
 ‘the man that is running’
- b. mężczyzna, **co** \*(go) Jan widzi  
 man.NOM that him.ACC Jan sees  
 ‘the man that John sees’
- c. mężczyzna, **co** \*(mu) Jan pokazuje książkę  
 man.NOM that him.DAT Jan shows book  
 ‘the man that John is showing him the book’

However, research on resumption strategies in Slavic *što*-relatives shows that it is possible to drop the resumptive pronoun in a broader set of contexts. This observation has been made for Croatian *što*-relatives in Gračanin-Yuksek (2013: 29) and can also be extended to Polish examples. As can be seen in (8a) and (9a), the obligatory resumptive pronouns *ga* and *go* ‘him’ are marked for accusative case within the relative clause, whereas the subject is marked for nominative, assigned by T<sup>0</sup> of the main clause. In these cases, the resumptive pronouns are obligatory.

In (8b) and (9b), on the other hand, both the resumptive pronoun and the relativized object are marked for accusative by the predicates of the embedded and the main clause, respectively. As a result, the pronoun can be absent, which is confirmed by the grammaticality of these two examples (all Croatian examples used in this and the following sections are from Gračanin-Yuksek 2013).

(8) Croatian

- a. Čovjek [ što sam \*(ga) video] voli Ivu.  
man.NOM that AUX him.ACC seen loves Iva  
'The man that I saw loves Iva.'
- b. Upoznao sam čovjeka [ što (ga) Iva obožava].  
met AUX man.ACC that him.ACC Iva adores  
'I met the man that Iva adores.'

(9) Polish

- a. Mężczyzna, [ co \*(go) widziałem], kocha Marię.  
man.NOM that him.ACC saw loves Mary  
'The man that I saw loves Mary.'
- b. Widziałem mężczyznę, [ co (go) Maria kocha].  
I.saw man.ACC that him.ACC Mary loves  
'I saw the man that Mary loves.'

The resumptive pronoun marked for accusative case is also optional when the relativized subject has a syncretic NOM/ACC form, as can be seen in Croatian (10) and Polish (11):

- (10) Dijete [ što sam (ga) vidio] voli Ivu.  
child.NOM that AUX him.ACC saw loves Iva  
'The child that I saw loves Iva.'
- (11) Dziecko, [ co (je) widziałem wczoraj], kocha Marię.  
child.NOM that him.ACC I.saw yesterday loves Mary  
'The child that I saw yesterday loves Mary.'

The examples in (10) and (11), as opposed to the examples in (8a) and (9a), involve a neuter subject *dijete/dziecko* 'child', the form of which is ambiguous between nominative and accusative. The fact that if this noun was assigned case by the predicate of the relative clause, it would appear in the same form, makes



it possible to realize the relativization site as a gap. Therefore, it could be posited that it is the morphological form of the head noun, and not the formal identity of case assigned by the main and the embedded predicate, which makes the resumptive pronoun optional. This correlation was formalized as Morphological Case Matching in Gračanin-Yukseš (2013: 30), the definition of which is given in (12) below:

(12) Morphological Case Matching

In a *što*-RC, an RP may be omitted if the head of the RC bears the same morphological case that it would bear if it were case marked by the element that case-marks the RP.

Therefore, case marking on both the external and internal head may be the key issue in the analysis of resumption strategies in *co*-relatives. The next section compares the structures of these two types of RCs and their derivation.

#### 1.4 The structure and derivation of *co*- and *który*-RCs

The two types of RCs discussed here, being introduced by two different relative markers, have usually been analysed as having different structures. The asymmetry between these two types of relatives in Polish and Russian was extensively discussed in Szczegielniak (2005; 2006). In his analysis, he proposes that the head noun in *co* relative clauses not only can but must reconstruct to a position inside the relative clause, whereas the head noun in *który* relative clauses cannot. Some support for reconstruction in Polish, as well as Russian, *co*-relatives comes from examples of idiom splitting. Because only this type of relative allows for reconstruction of the head noun, it can split up idiom chunks, except when the resumption strategy is used; compare (13a-c) from Szczegielniak (2006: 377). A similar observation has been made for Serbian relatives (Mitrović 2012).

- (13) a. ?? słów, **których** on nie rzucił na wiatr  
 words which.GEN he not throw on wind
- b. słów, **co** on nie rzucił na wiatr  
 words that he.NOM not throw on wind
- c. ?? słów, **co** on **je** nie rzucił na wiatr  
 words that he.NOM them.ACC not throw on wind  
 ‘empty promises that he did not make’

Yet, another asymmetry between *co*- and *który*-relatives can be observed in appositive relative clauses, which are analysed as being separate from the head

noun (Chierchia & McConnell-Ginet 1990). The fact that *co*-relatives do not allow an appositive reading suggests the presence of head noun reconstruction. Again, when the resumption strategy is used, *co*-relatives pattern with *który*-relatives, as demonstrated in (14) from Szczegielniak (2006: 378):

- (14) a. \* Maria, **co** Marek pocałował, poszła do domu.  
Mary.NOM that Mark kissed went to home  
b. Maria, **którą** Marek pocałował, poszła do domu.  
Mary.NOM who.ACC Mark kissed went to home  
c. Maria, **co ją** Marek pocałował, poszła do domu.  
Mary.NOM that her.ACC Mark kissed went to home  
'Mary, who Mark kissed, went home.'

The above-mentioned arguments point to obligatory reconstruction in *co*-relatives with no resumptive pronouns, suggesting the movement of the head noun out of the relative (Áfarli 1994; Bhatt 2002; Bianchi 1999; Brame 1968; de Vries 2002; Hornstein 2000; Kayne 1994; Safir 1999; Schachter 1973; Vergnaud 1974; Zwart 2000). However, some evidence from binding effects points to the contrary. As was noticed in Gračanin-Yuksek (2013) for Croatian *što*-relatives, and as can also be observed in Polish *co*-relatives, a possessive anaphor contained in the head noun cannot be bound by the subject of the relative clause, as shown in (15). The absence of reconstruction can also be seen in (16), where the possessive pronoun in the head noun can corefer with an element in the relative clause, but not with one in the matrix clause (Croatian examples from Gračanin-Yuksek 2013).

- (15) a. Croatian  
Jan<sub>i</sub> voli svakog svog<sub>i/\*j</sub> psa **što** (ga) je Iva<sub>j</sub> dovela \_\_\_\_  
Jan loves every self's dog.ACC that him.ACC AUX Iva brought  
na izložbu.  
on exhibition  
b. Polish  
Jan<sub>i</sub> kocha każdego swojego<sub>i/\*j</sub> psa **co** (go) Iwona<sub>j</sub> zabrała  
Jan loves every self's dog.ACC that him.ACC Iwona brought  
\_\_\_\_ na wystawę.  
on exhibition  
'Jan<sub>i</sub> loves every one of his<sub>i/\*j</sub> dogs that Iva/Iwona<sub>j</sub> brought to the exhibition.'

## (16) a. Croatian

Jan<sub>i</sub> voli svakog njegovog<sub>j/k/\*i</sub> psa što (ga) je Vid<sub>j</sub>  
 Jan loves every his dog.ACC that him.ACC AUX Vid  
 doveo \_\_\_ na izložbu.  
 brought on exhibition

## b. Polish

Jan<sub>i</sub> kocha każdego jego<sub>j/k/\*i</sub> psa, co (go) Adam<sub>j</sub> zabrał  
 Jan loves every his dog.ACC that him.ACC Adam brought  
 \_\_\_ na wystawę.  
 on exhibition

‘Jan<sub>i</sub> loves every one of his<sub>j/k/\*i</sub> dogs that Vid/Adam<sub>j</sub> brought to the exhibition.’

The lack of reconstruction of the head noun inside the relative, therefore, points to the matching analysis of *co*-relatives, which assumes that they contain both an external head to which the relative is adjoined and an internal one merged in the position of relativization (Bhatt 2002; Sauerland 2002; Hulsey & Sauerland 2006). After the movement of the internal head to SpecCP of the relative clause, it undergoes deletion under identity with the external head (by a process called *relative deletion*; Sauerland 2002). In order to further examine the structure of Polish *co*- and *który*-RCs, I will investigate subject-verb agreement patterns in RCs with Genitive of Quantification head nouns. GoQ phrases, when in subject position, induce obligatory default agreement on the matrix clause predicate. The aim of my study is to check whether default agreement on the verbal predicate inside the RC can also be triggered by a GoQ head noun, which would reveal the properties of agreement between the external head and the predicate inside the RC.

## 2 Genitive of Quantification as a head noun

### 2.1 Introduction

This section aims at describing the possible patterns of subject-verb agreement with Genitive of Quantification as a relativized head noun in object and subject positions, and examining how they can account for the structure of Polish *co*- and *który*-relative clauses. Based on agreement patterns, it will be shown that there is an agreement relation established between the external head noun and the relative operator that allows for Case from the HN to be optionally transmitted

to the relative. This mechanism, however, applies only when the two match in morphological case and are probed by the  $T^0$  of the matrix clause and the RC respectively. The availability of different agreement patterns inside *co-* and *który-*RCs also suggests that they cannot be derived via raising of the internal head, which would yield only default agreement on the RC predicate, contrary to fact.

## 2.2 The Genitive of Quantification phenomenon

The Genitive of Quantification phenomenon has been described to a large extent for Slavic languages in Bošković (2006); Franks (1994; 2002); Przepiórkowski (2004); Rutkowski (2002); and Willim (2003), to name but a few. In Polish, genitive case marking is forced on a noun which is modified by a higher numeral or a lower virile numeral, as well as by certain quantifiers such as *wiele* ‘many’, *kilka* ‘a few’, *para* ‘a couple of’, etc. Such numeral phrases do not induce subject-verb agreement in main clauses, as can be seen in (17), in which the verb obligatorily appears in the 3SG neuter form, regardless of the grammatical gender of the noun.

- (17) a. Siedmiu mężczyzn weszło/\*weszli do domu.  
seven.ACC men.GEN.VIR entered.3NSG/3PL.VIR into house  
‘Seven men entered the house.’  
b. Siedem kobiet weszło/\*weszły do domu.  
seven.ACC women.GEN.NVIR entered.3NSG/\*3PL.NVIR into house  
‘Seven women entered the house.’

The analysis of Polish GoQ structures proposed in Witkoś & Dziubała-Szrejbrowska (2016) follows the idea that probing for phi-features is possible for T only when nominative case is being checked (Bošković 2006). Additionally, they assume that high numerals in Polish are either accusative or caseless, which prevents  $T^0$  from probing for phi-features whenever they modify subject nominals. As a result, T defaults to 3sg neuter. This assumption is necessary to account for default agreement with GoQ subjects in Polish, which, unlike with Russian GoQ, is obligatory in all contexts. Nevertheless, these agreement patterns are different when the GoQ phrase is a relativized head noun, a situation which is described in the following two sections. It will be shown that default agreement on the predicate inside the RC can be induced by GoQ head nouns only when these are subjects of main clauses and are relativized by *co-* and (non-virile) *który-*RCs.

### 2.3 Agreement with object GoQ head nouns of *co* and *który* RCs

The aim of this and the following section is to investigate the asymmetry between object and subject *co*- and *który*-RCs in Polish with respect to agreement between a GoQ head noun and the verbal predicate within the RC, starting with object relatives. In order to examine the possible subject-verb agreement patterns within Polish *co* and *który* relative clauses in which the head noun is an object of the main clause, a survey was conducted measuring acceptability judgements by Polish native speakers. The survey employed a 7-point Likert scale ranging from 1 (totally unacceptable) to 7 (totally acceptable) and was completed by 110 students (103 women, 7 men,  $M_{\text{age}} = 21.68$ ,  $SD = 1.94$ ), of whom 107 were students or graduate students of higher education institutions in Poland (including universities in Warsaw, Poznań, Tricity, Łódź, and Lublin). The questionnaire consisted of 132 sentences, 60 of which were filler sentences. It involved RCs modifying Genitive of Quantification direct and indirect objects. In particular, the relativized subject head noun was used as the direct object marked for accusative case (18a) and the indirect object marked for oblique case, realized either by a preposition (18b) or simply a case suffix (18c). The same conditions were used for both *co*-relatives with either virile (masculine personal) or non-virile (feminine, neuter, masculine impersonal) nouns and *który*-relatives with non-virile nouns.<sup>2</sup> All these types were further divided into default agreement (3sg, neuter) and full agreement (in person, number, and gender) options.

- (18) a. Poznałem siedem kobiet, **które**  
 I.met seven.ACC women.GEN.NVIR who.NOM/ACC  
 weszły/? weszło do domu.  
 entered.3PL.NVIR/3NSG into house  
 ‘I met seven women who entered the house.’
- b. Rozmawiałem z siedmioma kobietami, **które**  
 I.talked with seven.INS women.INS.NVIR who.NOM/ACC  
 weszły/? weszło do domu.  
 entered.3PL.NVIR/3NSG into house  
 ‘I talked to seven women who entered the house.’

<sup>2</sup>The reason why *który*-relatives with virile head nouns were not examined is that they do not allow optionality between full and default agreement at all, as opposed to the non-virile relative pronoun in the subject position. This could be attributed to the lack of case syncretism of nominative and accusative case forms of the virile relative operator, which is explained in §2.4.

- c. Przyglądałem się siedmiu kobietom, **które**  
I.watched REFL seven.DAT women.DAT.NVIR who.NOM/ACC  
weszły/?? weszło do domu.  
entered.3PL.NVIR/3NSG into house  
'I was looking at seven women who entered the house.'

As can be observed, the GoQ phrase in (18a) displays a heterogeneous pattern in which the quantifier is accusative whereas the noun complement is genitive. The examples in (18b-c), on the other hand, show a homogeneous pattern of GoQ in which both the quantifier and the noun complement appear in an oblique case form. The reason for using these two patterns is to test whether case-marking on the quantifier (accusative vs. oblique) has any bearing on subject-verb agreement with the RC predicate.

Let us first consider the results for *który*-relatives, presented in Figure 1 below. As can be observed, neither of the relativized object head nouns can induce default agreement on the verbal predicate of the RC. There is a significant difference in acceptability judgements between full agreement and default agreement options. The results are as follows: accusative GoQ (default agr:  $M = 2.56$ ,  $SE = 0.13$ ; full agr:  $M = 6.52$ ,  $SE = 0.06$ ), GoQ marked for oblique case realized as a preposition (default agr:  $M = 2.34$ ,  $SE = 0.17$ ; full agr:  $M = 5.95$ ,  $SE = 0.24$ ), GoQ marked for oblique case without preposition (default agr:  $M = 2.36$ ,  $SE = 0.09$ ; full agr:  $M = 5.57$ ,  $SE = 0.38$ ).

When it comes to *co*-relatives, it also appears that optionality in agreement is impossible when the head noun occupies the main clause object position. The results for all responses are as follows: accusative GoQ object (default agr:  $M = 1.98$ ,  $SE = 0.13$ ; full agr:  $M = 2.55$ ,  $SE = 0.11$ ), GoQ marked for oblique case realized as a preposition (default agr:  $M = 1.84$ ,  $SE = 0.08$ ; full agr:  $M = 2.59$ ,  $SE = 0.16$ ), GoQ marked for oblique case without preposition (default agr:  $M = 1.81$ ,  $SE = 0.06$ ; full agr:  $M = 2.43$ ,  $SE = 0.11$ ).<sup>3</sup>

Due to the speaker variation regarding the acceptability of *co*-relatives, it seems necessary to look separately at the individual responses of the participants who accept *co*-relatives in general. Therefore, these responses were selected, of which the mean rating for *co*-relatives was more than 4 ( $n = 10$ , which constitutes only 9% of all the responses). The results presented in Figure 3 below clearly

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<sup>3</sup>It is important to note that the use of invariable *co* as a relative marker is not the primary relativization strategy in Polish and may be considered totally unacceptable by some speakers, as can be seen in the diagram in Figure 2 presenting the results of the questionnaire. Furthermore, this strategy is limited to spoken language, which may have influenced the judgements of written sentences used in the questionnaire.

6 Subject-verb agreement with Genitive of Quantification

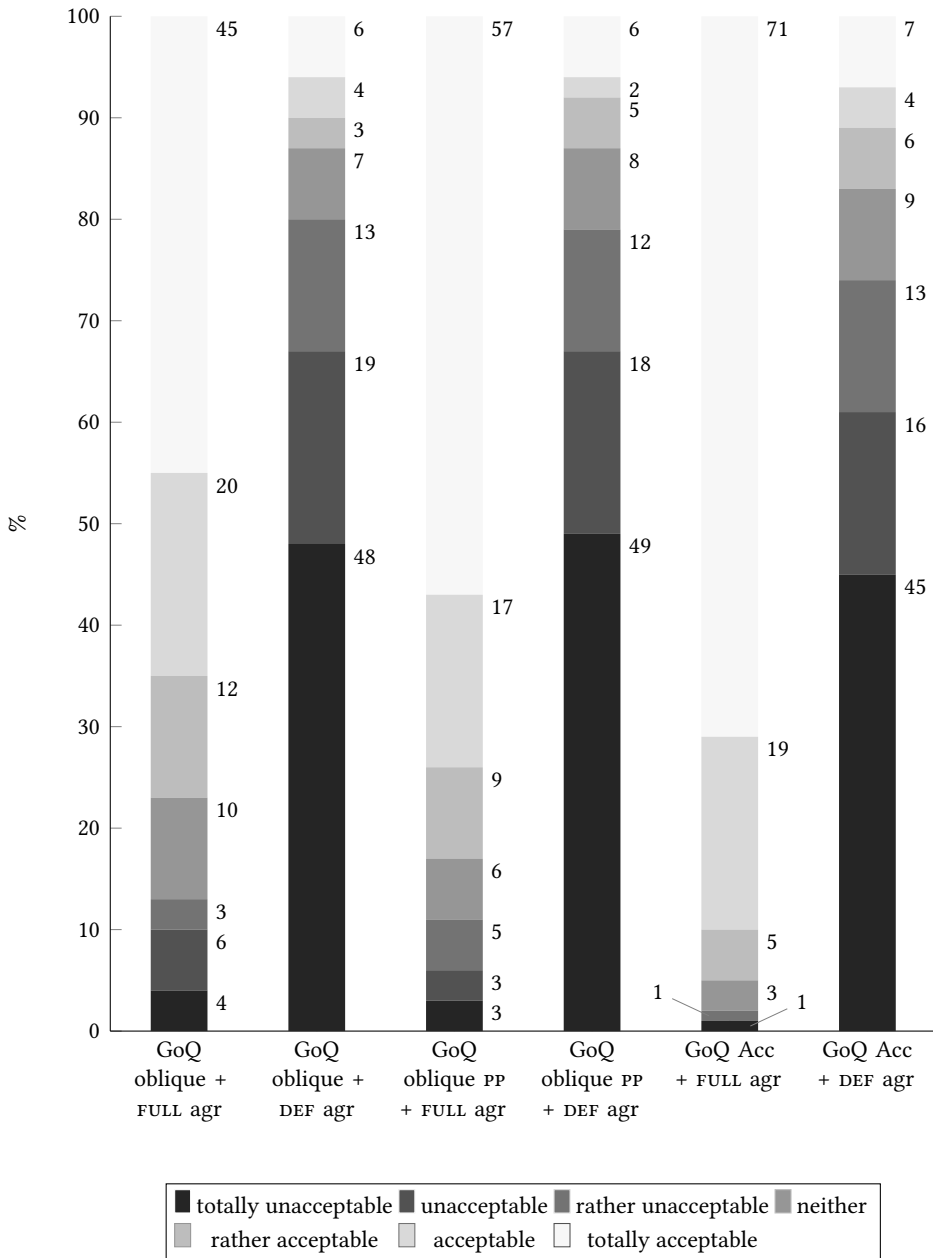


Figure 1: Acceptability judgements for *który*-relatives with non-virile head nouns modified by GoQ in main clause object position (accusative GoQ, oblique prepositional phrase (PP) GoQ, and oblique GoQ without preposition : default vs. full agreement).

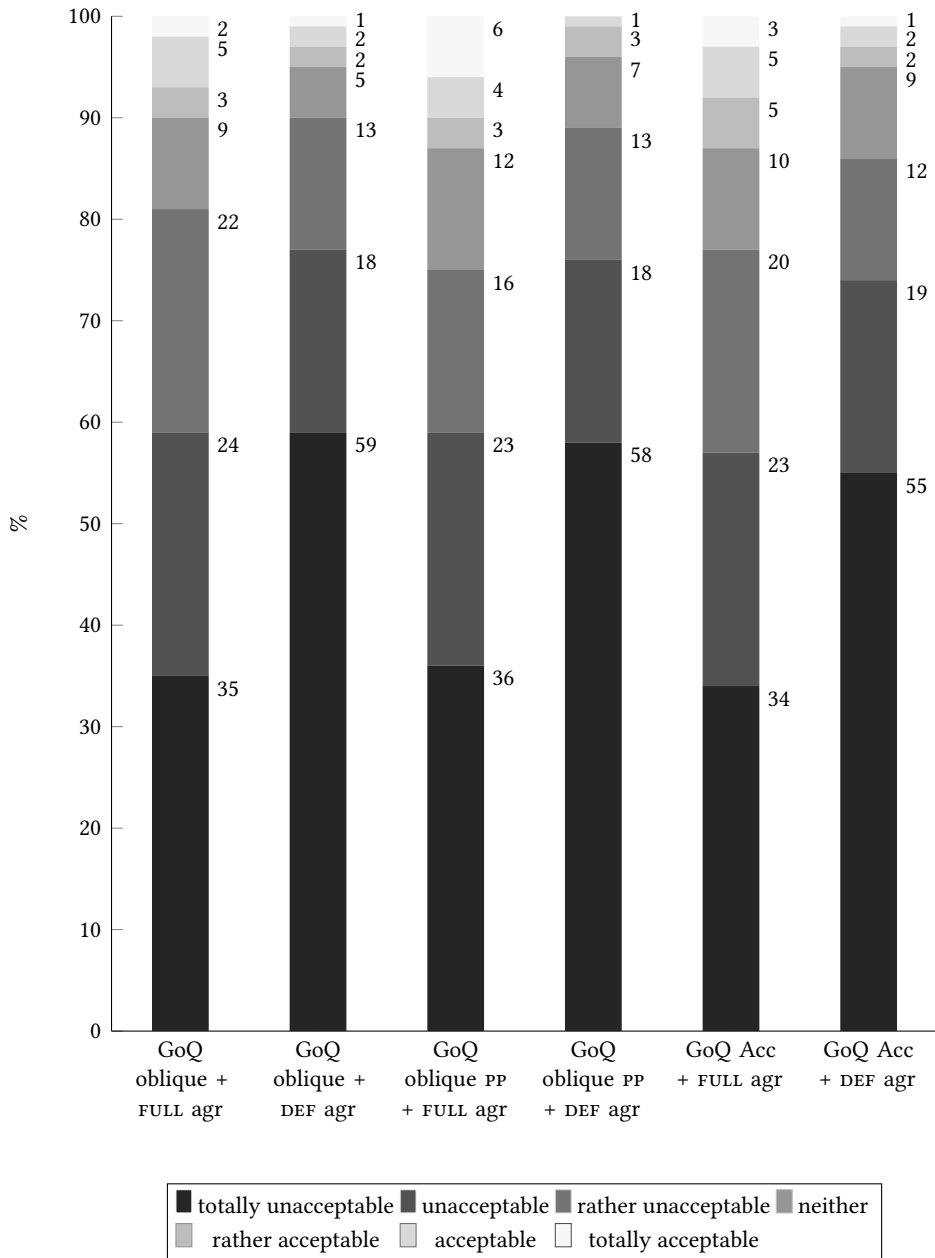


Figure 2: Acceptability judgements for *co*-relatives with virile and non-virile head nouns modified by GoQ in main clause object position (Accusative GoQ, oblique prepositional phrase (PP) GoQ, and oblique GoQ without preposition : default vs. full agreement).



show that there is a significant difference in acceptability between default and full agreement in *co*-relatives with both virile and non-virile head nouns.

Additionally, a two way ANOVA test was applied, which showed a significant main effect of relative clause type (6 types: 3 types of *co*-relatives and 3 types of *który*-relatives) ( $F(5,72) = 90.442$ ,  $p = 0.000$ ) and a significant main effect of agreement (full vs. default) ( $F(1,72) = 484.176$ ,  $p = 0.000$ ).

Altogether, these results clearly demonstrate that default agreement with the GoQ in object relatives, either *który*- (19a) or *co*-relatives (19b), is banned.

- (19) a. Poznałem siedem kobiet, **które**  
 I.met seven.ACC women.GEN.NVIR who.NOM/ACC  
 weszły/? weszło do domu.  
 entered.3PL.NVIR/3NSG into house
- b. Poznałem siedem kobiet, **co** weszły/? weszło  
 I.met seven.ACC women.GEN.NVIR COMP entered.3PL.NVIR/3NSG  
 do domu.  
 into house  
 ‘I met seven women who entered the house.’

Despite the statistical difference in acceptability between *który*- and *co*-relatives, the main effect of agreement indicates that both these types of RCs show a strong preference for full agreement on the verb. Let us now turn to subject RCs, in which these patterns are quite different and more complex.

## 2.4 Agreement with subject GoQ head nouns of *co*- and *który*-RCs.

The study reported in Łęska (2016) shows that when a numeral (GoQ) subject head noun is relativized, the relativization site also being the subject position, agreement with the verbal predicate inside the RC can be either default or full agreement.<sup>4</sup> These two agreement options, however, depend on the grammatical gender of the head noun in combination with the RC type. In that study, *co*- and *który*-relatives were examined, the former with virile and non-virile, and the latter with non-virile GoQ head nouns. For each condition, two agreement options were compared, namely default vs. full agreement. As regards *który*-relatives, default agreement with the verbal predicate within the relative is possible only with non-virile subjects, in which case full agreement is still preferred. Virile subjects, on the other hand, allow only full agreement, as can be seen in (20).

<sup>4</sup>The Genitive of Quantification used in the study involved numeral phrases only.

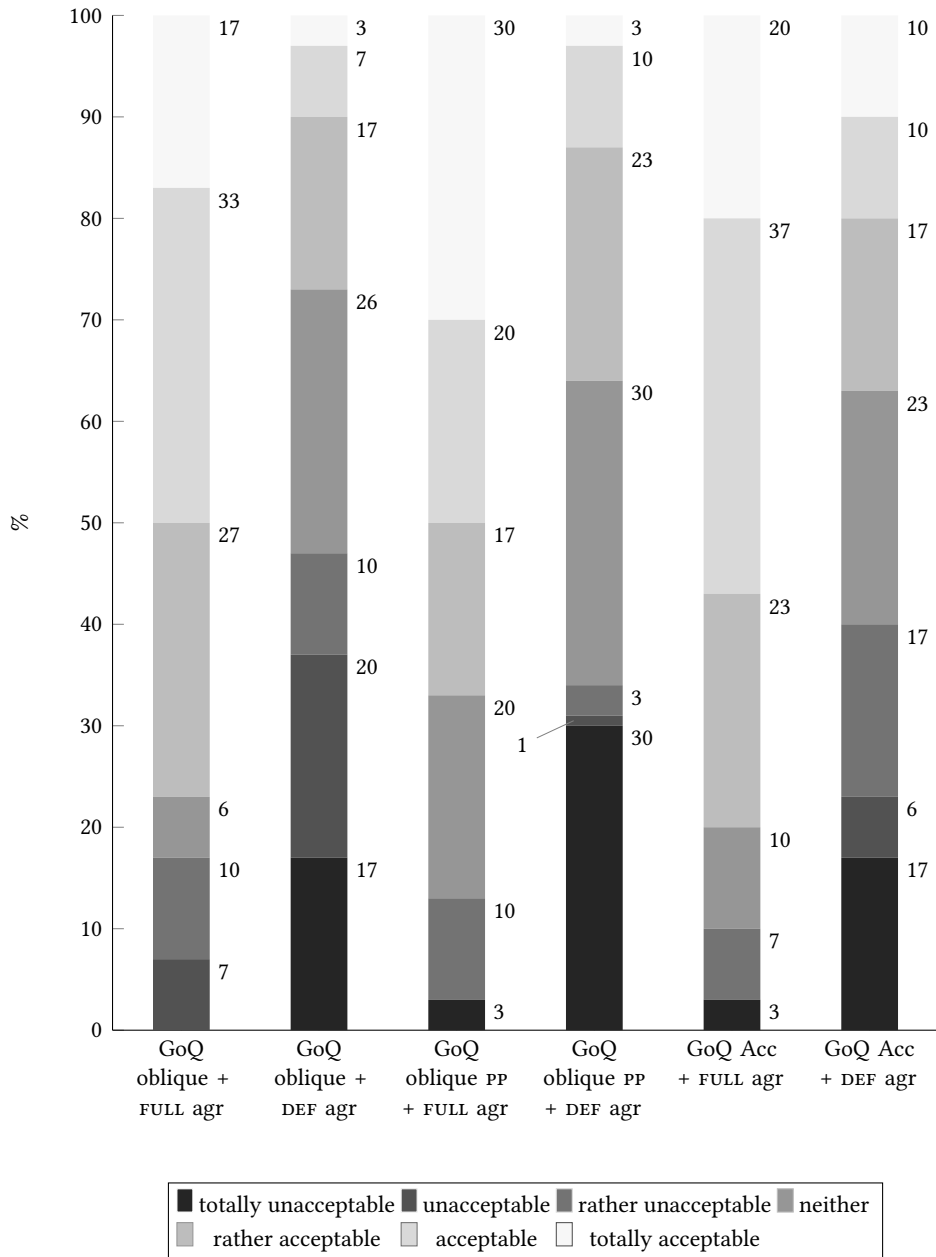


Figure 3: Acceptability judgements of participants who accept *co*-relatives in general: full vs. default agreement.

- (20) a. Siedmiu mężczyzn, którzy weszli/\*weszło do domu,  
 seven.ACC men.GEN.VIR who.NOM entered.3PL.VIR/\*3NSG into house  
 okradło nas.  
 robbed.3NSG us  
 ‘Seven men who entered the house robbed us.’
- b. Siedem kobiet, które weszły/%weszło  
 seven.ACC women.GEN.NVIR who.NOM/ACC entered.3PL.NVIR/3NSG  
 do domu, okradło nas.  
 into house robbed.3NSG us  
 ‘Seven women who entered the house robbed us.’

When it comes to *co*-relatives, the asymmetry between virile and non-virile head nouns disappears. Thus, default and full agreement are equally possible regardless of the grammatical gender of the head noun, with a preference for full agreement, as shown in (21).

- (21) a. Siedmiu mężczyzn, co weszli/%weszło do domu,  
 seven.ACC men.GEN COMP entered.3PL.VIR/3NSG into house  
 okradło nas.  
 robbed.3NSG us
- b. Siedem kobiet, co weszły/%weszło do domu,  
 seven.ACC women.GEN COMP entered.3PL.NVIR/3NSG into house  
 okradło nas.  
 robbed.3NSG us

The asymmetry between the two types of RCs is attributed to the differing properties of the relative markers *co* and *który*. In contrast to the relative pronoun *który*, the invariable relative marker *co* does not share number and gender features with the subject nominal and it does not inflect for case. In this configuration, which involves subject relativization, no resumptive pronoun is present in a *co*-relative, and the relativization site is realized as a gap. Since the relative operator is null, no agreement in phi-features with the head noun can be observed. In *który*-relatives, on the other hand, the relative pronoun must agree in phi-features with the head noun, which indicates that feature sharing between the two has taken place. Crucially, the two relative pronouns *którzy*.NOM-VIR in (17a) and *które*.NOM/ACC-NON-VIR in (17b) differ not only in gender, but also in case marking. To observe case agreement between the relative pronoun and the GoQ phrase, it is possible to use it as an interrogative pronoun in *wh*-questions.

As can be seen in (22), the pronoun agrees in phi-features, number, and case with the subject noun. Example (23) shows that the case form of the pronoun must be compatible with the case form of the higher numeral.

- (22) a. **Którzy** mężczyźni przyszli wczoraj?  
which.NOM men.NOM came.3PL.VIR yesterday  
b. **Które** kobiety przyszły wczoraj?  
which.NOM/ACC women.NOM came.3PL.NVIR yesterday
- (23) a. **Których/\*którzy** pięciu mężczyzn przyszło wczoraj?  
which.ACC/GEN//\*NOM five.ACC men.GEN came.3NSG yesterday  
b. **Których/które** pięć kobiet przyszło wczoraj?  
which.GEN//NOM/ACC five.ACC women.GEN came.3NSG yesterday

Since the nominal is modified by the numeral, the nominative form of a **virile** *wh*-pronoun is incompatible with the numeral phrase and, instead, the accusative/genitive form is used, as in (23a). In the case of a **non-virile** *wh*-pronoun, both nominative/accusative and genitive forms are grammatical, as in (23b). This indicates that the case marking on the *wh*-pronoun is accusative rather than nominative for both virile and non-virile pronouns when they modify accusative-marked higher numerals. This difference is crucial for the analysis of subject-verb agreement patterns inside *który*-relatives, where subject-verb agreement options depend on the gender feature of the head noun, namely virile vs. non-virile. Note that this feature alone does not influence verbal agreement in main clauses, in which both virile and non-virile quantified subjects force default agreement – see (17) above. Therefore, the reason for the differences in agreement patterns in RCs cannot be the gender of the head noun itself, but must rather be the fact that the non-virile head noun will appear with the non-virile *wh*-pronoun *które*, which has a syncretic nominative/accusative form, unlike the virile *wh*-pronoun *którzy*, which is nominative. This correlation between case syncretism of *wh*-pronouns and subject-verb agreement in RCs will be captured in terms of a Case attraction analysis in the next section.

## 2.5 The Case attraction analysis

### 2.5.1 Introduction

As proposed in Łęska (2016), a possible explanation for the subject-verb agreement patterns discussed above could come from the phenomenon of Case attraction, whereby the relative operator appears with the case morphology of the

external head, as opposed to the case governed by the internal case probe of the RC. Case attraction is attested in a number of languages, such as Persian (Aghaei 2006), Latin (Bianchi 1999), Ancient Greek (Bianchi 1999), Old and Middle High German (Pittner 1995), and German (Bader & Bayer 2006). According to Bader & Bayer (2006), the head NP and the relative operator share number and person features, but the feature sharing is erroneously extended to Case features, resulting in case attraction effects. This mechanism is generally optional and is only possible when the matrix case probe is more oblique than the case probe of the relative, in line with the following Case hierarchy from Pittner (1995: 200–202); see also Grosu (1994: 122): GEN > DAT > ACC > NOM (Georgi & Salzmänn (2014): 349). Another account of Case attraction is provided in Bianchi (1999) along the lines of the raising analysis of RCs. According to Bianchi (1999), after movement to SpecCP, the relative HN together with its modifiers is governed by the external D<sup>0</sup>, which provides it with Case. Thus, assuming that the checked Case can be optionally erased, as proposed in Chomsky (1995: 279–282), the HN can receive another Case under government (Bianchi 1999: 95). Therefore, Case attraction, as in Latin (24) or Ancient Greek (25) (examples cited in Bianchi 1999: 94–95), can be taken as evidence for this hypothesis.

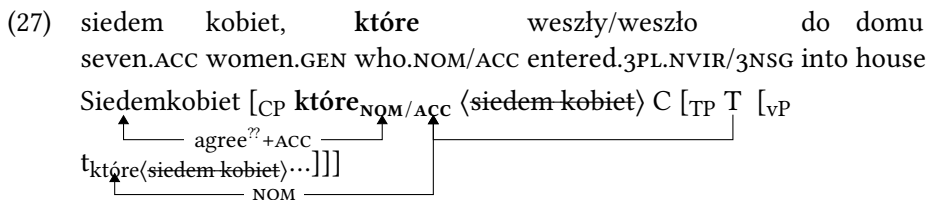
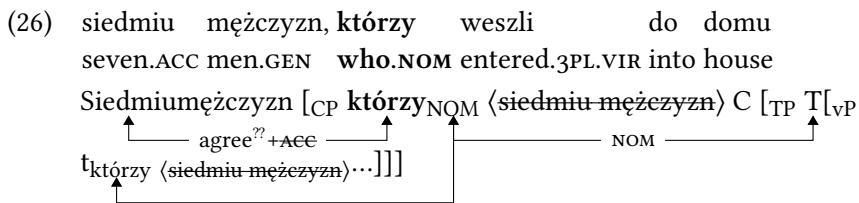
- (24) Latin  
 notante iudice quo nosti ACC → ABL  
 judging.ABL judge.ABL who.ABL (you) know  
 ‘judging the judge whom you know’
- (25) Ancient Greek  
 ἄνδρες ἄξιοι της ἐλευθερίας ἣς κέκτησθε ACC → GEN  
 men worthy the.GEN freedom.GEN which.GEN you.possess  
 ‘men worthy of the freedom that you enjoy’

In what follows, I will account for the asymmetries between *co* and *który* relatives, as well as between the subject and object relatives described in the previous sections. To this end, I will implement a Case attraction mechanism making use of some additional assumptions.

### 2.5.2 Case attraction in subject relative clauses

As suggested in Łęska (2016), the derivation of Polish *który*-subject relatives along the lines of the Case attraction analysis could proceed in the following steps. 1) In both virile (26) and non-virile (27), the relative pronoun undergoes

Agree with the T probe, checking structural Nominative Case, and then moves to SpecCP. 2) Next, the external head QP is Merged, bearing Accusative Case, which blocks the Agree relation with the *matrix* T probe, resulting in default agreement on the *matrix* verbal predicate. Assuming that default agreement is a result of exceptional non-Nominative marking on the subject QP, the same non-Nominative marking on the relative operator should be the source for default agreement within the RC. 3) Thus, when the head QP enters into an agreement relation (or feature sharing; Bader & Bayer 2006) with the relative pronoun in order to check phi-features, the Accusative Case feature of the HN, or, more specifically, of the higher numeral, is optionally transmitted onto the non-virile relative pronoun, as in (27), but not the virile one, as in (26). This is due to the fact that the former, but not the latter, is syncretic for nominative and accusative, as will be explained in more detail in §2.5.4 (diagrams in (26) and (27) from Łęska 2016: 129).



Some evidence for (case) feature sharing, or more generally, communication between the external HN and the relative operator, comes from case matching effects in resumption (28).

(28) Polish

- a. Mężczyzna, [ **co** \*(go) widziałem ], kocha Marię  
 man.NOM that him.ACC I.saw loves Mary  
 ‘The man that I saw loves Mary.’
- b. Widziałem mężczyznę, [ **co** (go) Maria kocha ].  
 I.saw man.ACC that him.ACC Mary loves  
 ‘I saw the man that Mary loves.’

In (28a), the resumptive pronoun is obligatory, since it is an accusative object whereas the HN is nominative. However, when the same accusative object is inside a RC which modifies an accusative object HN, resumption is optional. This brings up the question of how the choice between the resumption and gap strategies is made before the external HN is merged and before case matching between the two takes place, the answer to which is outside the scope of the present paper.

Case transmission in step 3 seems to be possible due to the syncretism of the accusative and nominative forms of the non-virile pronoun, which matches in case marking with the accusative form of the higher numeral in the HN, and therefore Case transmission necessarily applies only in this context. Case transmission could be implemented by the Case stacking mechanism (Vogel 2001), which will be explained in more detail in the next sections. 4) Finally, after Accusative Case is stacked onto the relative operator/pronoun, the verbal predicate inside the RC is realised in the default form. This would indicate that the Case checking established in step 1 should be suppressed until step 3; that is, probing for Case in a RC should be delayed. Then, if Case attraction takes place, default agreement is observed due to the accusative-marked subject relative operator. If it does not take place, the nominative-marked subject relative operator induces full agreement on the verb. This solution faces some problems which are discussed in §2.5.4.

### 2.5.3 Case attraction in object relative clauses

The same process of case transmission does not occur with the object RCs examined in this paper, not even in the case of accusative objects in which the GoQ displays the heterogeneous pattern with an accusative quantifier and a genitive noun complement, as in (29). Therefore, case matching between the head noun and the relative pronoun is not enough to enable Case transmission between the HN and the relative operator.

- (29) Poznałem *siedem kobiet* **które**  
 I.met.+ACC seven.ACC women.GEN.NVIR who.NOM/ACC  
*weszły/??weszło* do domu.  
 entered.3PL.NVIR/3NSG into house  
 Poznałem *siedem kobiet* [<sub>CP</sub> **które**<sub>NOM/ACC</sub> (*siedem kobiet*) C [<sub>TP</sub> T [<sub>VP</sub>  
 ↑<sub>agree??+ACC</sub> ↑<sub>NOM</sub>  
 t<sub>które</sub>(*siedem kobiet*) ... ]]]

Although the lack of Case attraction between an oblique GoQ head noun and a subject relative operator/pronoun is expected, since the quantifier is no longer

marked for accusative case (see 18b–c above), the absence of this mechanism is surprising with accusative object head nouns. With oblique GoQ, oblique case transmitted onto the relative pronoun would make the pronoun incompatible with the subject-internal GoQ head, resulting in, for example, \**którym.DAT siedem.ACC kobiet.GEN* ‘which (seven women)’. With accusative GoQ, on the other hand, application of the same mechanism would not yield incompatibility of forms, yet Case transmission is not observed. One possible explanation for this effect could be that, since it is the inherent Accusative Case of the quantifier that forces default agreement, structural Accusative Case assigned to the object HN inside the matrix clause prevents Case transmission of the inherent Accusative Case from the quantifier to the relative pronoun.

#### 2.5.4 Case attraction and Case stacking

A mechanism that could be at work for subject relatives in contexts which allow Case transmission (as suggested in Łęska 2016) is Case stacking (Vogel 2001).<sup>5</sup> Case stacking has been reported in e.g. Lardil ((30) from Richards 2013, cited in Manzini et al. this volume). In (30), the DP *marunngan-ku* ‘boy-GEN-INS’ is inflected for two cases, being the possessor of the instrumental nominal *maarnku* ‘spear-INS’. Furthermore, not only case suffixes, but also phi-feature inflection can be stacked, as the following example from Punjabi shows ((31) from Manzini et al. 2015: 316).

(30) Lardil

Ngada latha karnjin-i marun-ngan-ku maarn-ku  
 I spear wallaby-ACC boy-GEN-INS spear-INS  
 ‘I speared the wallaby with the boy’s spear.’

(31) Punjabi (Manzini et al. 2015: 316)

muŋd- e- d- i/-iā kita:b / kitabb-a  
 boy -MSG- GEN- FSG/-FPL book.ABS.FSG / book-ABS.FPL  
 ‘the book/the books of the boy’

In Punjabi, masculine singular nouns followed by a postposition are sensitive to the direct/oblique case distinction as far as phi-feature inflection is concerned. Thus, the inflection on the noun *muŋd-* ‘boy’ is as follows: the suffix *-e* stands for

<sup>5</sup>One of the problems with the Case stacking analysis is, however, that it is not clear how the relative pronoun can still be active to undergo any Case-agreement relation with the external head after being Case checked with the probe within the RC (Georgi & Salzmann 2014: 352).



masculine (oblique), next to it we find the genitive suffix *d-*, and, on top of that, the noun inflects for the phi-features of the head noun (*i/-iā*). However, since the subject-verb agreement patterns in Polish RCs depend strongly on the presence or absence of Accusative Case on the HN, as was argued for GoQ structures in Bošković (2006) and Witkoś & Dziubała-Szrejbrowska 2016 (see §2.2), Case stacking will be of more interest for the present analysis.

Trying to apply Case attraction and Case stacking to RC structures, Łęska (2016) states that whenever Case attraction is possible and the Case of the external head noun is stacked on the relative pronoun, the second/transmitted Case is realized on the pronoun; that is, Accusative. As the evidence from Case attraction languages shows, this mechanism is only possible when the Case on the external head is more oblique than the Case checked on the internal head/relative operator. As a result, the relative operator is marked for the more oblique case. Assuming Case feature decomposition (Assmann 2013; Georgi & Salzmann 2014), this could be executed in the following way: when the two sets of features are stacked, they fuse into the Case which constitutes a superset of features; i.e. is more oblique (for fusion of Case features under stacking, see Assmann et al. 2014).

Additionally, it seems that the morphological case form of the relative pronoun determines the accessibility of Case attraction in Polish. Whereas the non-virile pronoun has a syncretic nominative/accusative form, the nominative form of the virile pronoun is not syncretic, being incompatible with the relativized numeral phrase, as was seen in (23). A similar analysis of inverse (Case) attraction was adapted for Croatian *što*-relatives in Gračanin-Yuksek (2013), which is based on morphological case forms, as opposed to abstract Case features. Thus, it is the matching of the morphological case forms of the internal and external heads, and not the abstract Case checked by them, that enables dropping of the resumptive pronoun within *što*-relatives (see §1.3). Likewise, syncretism of case forms can rescue the derivation of Polish free relatives (Assmann 2014). As can be seen in (32a-b), Polish free relatives require strict case matching. Nevertheless, when the morphological form of the relative pronoun is syncretic, matching the Case features of both probes, the sentence is grammatical (32c) (Assmann 2014: 3).

- (32) a. Jan lubi **kogokolwiek** Maria lubi.  
John likes.ACC whoever.ACC Maria likes.ACC
- b. Jan ufa **\*komukolwiek/\*kogokolwiek** wpuścił do domu.  
John trusts.DAT whoever.DAT/whoever.ACC let.ACC to home  
'John trusts whoever he let into the house.'

- c. Jan unika **kogokolwiek** wczoraj obraził.  
 John avoids.GEN whoever.ACC/GEN yesterday offended.ACC  
 ‘John avoids whoever he offended yesterday.’

Therefore, the conclusion can be drawn that Case attraction in Polish *który*-relatives is possible only if the morphological form of the relative pronoun is compatible with the case marking on the external head noun, which in this case is accusative GoQ.

In Polish subject *co*-relatives, the relativization site is realized as a gap due to the lack of subject resumption. Since the null operator does not have any morphological form, the relative operator for both virile and non-virile head nouns can undergo Case attraction (Łęska 2016). Yet this mechanism applies only to subject GoQ head nouns ((33) from Łęska 2016: 131), as opposed to object head nouns (34), which patterns with the observation made for *który*-relatives. Therefore, it could be concluded that default agreement with the predicate of the RC is not possible with object GoQ head nouns in general, following from the assumption that the Accusative Case of the quantifier on the external head noun can be transmitted only from subject GoQ.

- (33) siedmiu mężczyzn, **co** weszli/weszło do domu  
 seven.ACC men.GEN COMP entered.3PL.VIR/3NSG into house  
 Siedmiu mężczyzn [CP Op<sub>NOM</sub>⟨siedmiu mężczyzn⟩ **co** [TP T<sub>[VP</sub>]]  
 ↑ agree?? +ACC ↑ NOM ↑  
 t<sub>Op</sub> -(siedmiu mężczyzn)⋯]]
- (34) Spotkałem siedmiu mężczyzn, **co** weszli/\*weszło do domu.  
 I.met seven.ACC men.GEN COMP entered.3PL.VIR/3NSG into house  
 Spotkałem siedmiu mężczyzn [CP Op<sub>NOM</sub>⟨siedmiu mężczyzn⟩ **co** [TP T<sub>[VP</sub>]]  
 ↑ agree?? +ACC ↑ NOM ↑  
 t<sub>Op</sub> -(siedmiu mężczyzn)⋯]]

All in all, if Case attraction constitutes an attractive explanation for the agreement facts discussed here, it must be structurally restricted for Polish relatives so that it does not overgenerate. Since accusative GoQ in *object position* cannot induce default agreement, as the present study has revealed, Case attraction and Case stacking must be further restricted by the structural position of the head noun, such that only a subject HN can transmit Accusative Case onto the subject relative pronoun. This can be explained by the fact that an object GoQ phrase is marked for structural Accusative and, thus, transmission of inherent Accusative

Case from the higher numeral in the HN is blocked. That is, for Case attraction to be possible, both the relative operator and the external head need to be probed by the same type of probe, namely the internal and external  $T^0$ . This, on the other hand, would make Case attraction undetectable in all other environments, limiting it to the situation in which a non-nominative subject of the matrix clause undergoes subject relativization. In fact, Case attraction is not otherwise observed with Polish relatives.

Importantly, if the same kind of feature sharing involving Accusative Case took place between the internal, and not external, head noun and the relative pronoun/operator, default agreement would be observed for both types of RC modifying any object QP, which, as this study has shown, is impossible. One problem mentioned in Łęska (2016) with regard to this analysis involves the point in the derivation at which subject-verb agreement is established. Since Case attraction occurs after the movement of the relative operator to SpecCP, for default agreement to be possible, the agreement relation needs to be suppressed and established after the mechanism of Case attraction applies, which requires lookahead and goes against the Earliness Principle (Pesetsky 1989). Yet another solution applying the Case attraction mechanism could be to stipulate that the Case value of the relative pronoun is overwritten at PF (Bianchi 2000: 68–69; Spyropoulos 2011) or that Case values in general are assigned at PF (Alexiadou & Varlokosta 2007; Assmann 2014). As a consequence, however, default verbal agreement would also be the result of a post-syntactic operation. This and other issues could be resolved after closer examination of case matching restrictions and resumption strategies in Polish relatives, which would constitute interesting topics for future research.

### 3 Conclusion

The subject-verb agreement patterns found in Polish *co*- and *który*-relatives modifying subject head nouns suggest that movement of the head noun out of the RC in Polish should not be involved in the derivation of these structures, since they both allow optionality of agreement in certain contexts. The only asymmetry arises with respect to the context in which such optionality may occur. That is, whereas subject *co*-relatives allow either full or default agreement regardless of the grammatical gender of their head nouns, subject *który*-relatives show the same pattern only when the case forms of the relative pronoun and the numeral head noun are compatible, which is the case with non-virile nominals. The asymmetry between Polish virile and non-virile head nouns can be attributed

to the accusative-nominative syncretism, which is uniformly found among the non-virile relative pronoun *który* and higher numerals. Because its morphological case form is always compatible with the numeral case form, the Accusative Case feature of the external numeral phrase can be erroneously extended to the relative pronoun (or null operator), resulting in default agreement on the verbal predicate within the relative. This, however, is impossible for numeral phrases containing virile nouns, due to the unambiguously nominative form of the virile relative pronoun. The same optionality in agreement is not available for object GoQ head nouns in either *co-* or *który-*relatives and regardless of the grammatical gender of the head noun. This result suggests that Case attraction can apply only when the external head noun is an accusative-marked GoQ subject.

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## Chapter 7

# A person split analysis of the progressive forms in Barese

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This paper explores the distribution of progressive aspect in some varieties of the Barese (dialect of Apulia). In many of these varieties the progressive is expressed through an aspectual inflected construction (in the terms of Manzini & Savoia 2005): it is formed from an inflected stative verb *stɛ* (=‘to stay’), a connecting element *a* (=‘to’) and the present indicative of the lexical verb, which agrees in person and number with the matrix verb. The multiple agreement configuration, as in pseudo-coordinations (Jaeggli & Hyams 1993) is not interpreted as a coordination of two events occurring at the same time, but as a single complex event, with V1 having scope over V2, an interpretation that is usually realized with a non-finite form of V2 to represent an aspectual semantic value. In the same variety, however, we can find a parallel construction to express the progressive in which the embedded lexical verb is not inflected. The 1<sup>st</sup> and 2<sup>nd</sup> persons plural are not found in the aspectual inflected constructions, but allow only the infinitival counterpart. Differences in the pattern of the morphological derivation of the 1<sup>st</sup> and 2<sup>nd</sup> persons plural are quite common across Romance languages (Manzini & Savoia 2005; 2011): I will argue that they in fact involve a more complex referentiality than other persons (as in Bobaljik 2008).

## 1 The progressive inflected and non-inflected constructions in Barese

In some varieties of Barese, the progressive is expressed through an aspectual inflected construction (in the terms of Manzini & Savoia 2005): an inflected stative verb *stɛ* (=‘to stay’), a connecting element *a* (=‘to’) and the present indicative of the lexical verb, which agrees in person and number with the matrix verb. This



progressive construction contains a multiple agreement configuration involving an inflected auxiliary and a finite complement introduced by *a*, as in finite control constructions of the Balkan type.<sup>1</sup> The example in (1) shows the progressive aspectual construction in the variety spoken in Conversano (Apulia):

- (1) *Stek a fatsə u pən.*  
stay.1SG to do.1SG the bread  
'I am making the bread.'

In the same variety, we can find a parallel construction to express the progressive in which the embedded lexical verb is not inflected. In (2), the embedded verb *fɛ* ('to do') is infinitival:

- (2) *Stek a fɛ u pən.*  
stay.1SG to do.INF the bread  
'I am making the bread.'

In Conversanese, the aspectual inflected construction is not found with the 1<sup>st</sup> and 2<sup>nd</sup> persons plural, as shown in (3): only the construction with an embedded infinitival lexical verb is available to express the progressive, as in (4):<sup>2</sup>

- (3) *Nojə<sub>j</sub>/voʊ<sub>k</sub> stɛmə<sub>j</sub>/stɛtə<sub>k</sub> a \*man'dzɛmə<sub>j</sub>/\*man'dzɛtə<sub>k</sub>.*  
we/you stay.1PL/2PL to eat.1PL/2PL

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<sup>1</sup>The phenomenon of finite control in the Balkan languages (and in Hebrew and many Southern Italian varieties) involves the appearance of inflected subjunctive complements which exhibit Obligatory Control (Landau 2004, among others): finite complements in these languages cover pretty much the entire spectrum of obligatory control or raising predicates (for an overview, see Ledgeway 2015; Manzini et al. 2017). The verbs embedding *a* complements, such as the ones we are describing, are a much more restricted set than the obligatory control/raising verbs in Balkan languages. The Apulian varieties under analysis, for example, include 'go' and 'be/stay' aspectual periphrases; we will concentrate on the 'stay' periphrases (for an analysis of the differences in aspectual finite constructions across southern Italian varieties, see Manzini et al. 2017).

<sup>2</sup>Similar patterns are found in the varieties from the same area (i.e. in the south-east of Bari, in A: Mola di Bari, Rutigliano, Castellana, Turi). Throughout the paper we will refer mainly to the variety of Conversano, but we will also sketch some relevant differences between the variety of Conversano and some other varieties of the same group in §2.

- (4) Nojə/vov 'stemə/'stetə a man'dʒɛ.  
 we/you stay.1PL/2PL to eat.INF  
 'We/you are eating.'

Both types of structure share a locative derivation: the majority of progressive forms crosslinguistically, in fact, are derived from expressions involving locative elements (Bybee et al. 1994; Mateu & Amadas 1999; Laka 2006). The two parallel constructions differ in the aspect of the denoted event. On the one hand, the construction with the embedded inflected verb, (1), denotes an event identification between the auxiliary and the lexical verb and seems to work like a restructuring or serial verb construction. On the other hand, the construction with the embedded infinitive, (2), involves a frequentative reading which is not found with genuine progressive constructions (Chierchia 1995) and seems to pattern with aspectual control verbs. The 1<sup>st</sup> and 2<sup>nd</sup> persons plural are not found in the aspectual inflected construction in (3), but allow only the infinitival counterpart (4). Differences in the pattern of the morphological derivation of the 1<sup>st</sup> and 2<sup>nd</sup> persons plural is quite common across Romance languages (Manzini & Savoia 2005; 2011): they involve, in fact, a more complex referentiality than other persons (Bobaljik 2008); they are not mere plurals of the discourse participants, but may refer to other referents not directly involved in the discourse (event participants). In a lexical parametrization analysis (Manzini & Savoia 2011), languages involve a parametric distinction for plural and singular: plural persons do not show a pattern of parametric distinction between discourse (1<sup>st</sup> and 2<sup>nd</sup>) and event participants (3<sup>rd</sup>) found with singular persons.

In §2, the distribution of the pattern of inflection across the different varieties is described: the insights of previous accounts are also listed. §3 introduces the analysis of the progressive as a locative/unaccusative construction (in the terms of Mateu & Amadas 1999). §4 presents a syntactic analysis of the phenomenon. In §5, the aspectual differences between the two progressive patterns are described. §6 is devoted to some reflections on the person split pattern found in the progressive constructions in Conversanese. §7 resumes the insight and the main concerns of the present analysis.

## 2 The distribution of aspectual inflected constructions

### 2.1 Introduction

Various studies have focused on periphrastic verbal constructions in some Southern Italian varieties that involve two inflected verbs.<sup>3</sup> The main characteristic of these constructions is that a matrix aspectual auxiliary inflected for number and person selects a lexical verb that is also inflected. The lexical embedded verb may or may not be introduced by a preposition. The auxiliary loses its lexical meaning and the complex VP is interpreted as a single predicate, the embedded lexical verb being the one that gives the referential meaning to the event denoted by the complex VP. For example, in (5) the subject *Ma'ri* is not 'staying' and then eating, but just eating:

- (5) Conversano, Apulia  
Ma'ri ste a mandʒ.  
Maria stay.3SG to eat.3SG  
'Maria is eating.'

Similar patterns are found in different Southern Italian varieties. Ledgeway (1997) refers to imperative structures in Neapolitan that involve two inflected verbs as asyndetic constructions. A fully inflected verb is embedded under another fully inflected matrix verb, as in (6). There is no preposition introducing the embedded element. In his terms, these constructions define a family of coordinative constructions grammaticalized into subordination. These imperative constructions are paratactic in the sense that "...they contain as many assertions as there are clauses [...]" (Ledgeway 1997: 231); in (6), in fact, there are two assertions (7), whereas the progressive construction in Conversanese contains only one assertion ranging over the entire construction.

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<sup>3</sup>As suggested by an anonymous reviewer, this construction apparently shares the derivation of hyper-raising constructions (Harford Perez 1985; Martins & Nunes 2005; Nunes 2008; Zeller 2006), but there are few elements that allow us to take them as non-hyper raising constructions. In this paper we are dealing mainly with the auxiliary *stare* (= 'stay') in the progressive constructions, which is not a raising predicate. Furthermore, in many Southern Italian varieties these constructions are also found with motion verbs (*go, come*) or modal auxiliaries (*want*) (Manzini & Savoia 2005; Di Caro & Giusti 2015; Manzini et al. 2017; Cardinaletti & Giusti to appear), but no genuine raising predicate is involved. The subject is base-generated (and case-assigned) under the T of the matrix verb. One more contrast with hyper-raising constructions is that no expletive counterpart of the sentences is available in the languages under analysis (or any version with embedded subjects). These constructions share more similarities with finite control constructions found in Balkan languages (Landau 2004; 2013; Manzini 2000) and in Southern Italian varieties (Manzini & Savoia 2005; Ledgeway 2015).

(6) Va spanne 'epanne nfuse.  
 go.IMP.2SG hang.out.IMP.2SG the.clothes wet  
 'Go and hang out the washing.' (Ledgeway 1997: 230)

(7) a. Va!  
 'Go!'  
 b. Spanne epanne nfuse!  
 'Hang out the washing!' (Ledgeway 1997: 231)

Most Sicilian dialects make use of a construction with a functional verb (usually of motion), followed by the linking element *a* and an inflected verb. Cardinaletti & Giusti (2001; 2003) label these structures Inflected Constructions.<sup>4</sup> They are “..similar to what is generally known as “Serial Verb Construction” in other language families (cf. Aikhenvald & Dixon 2006), in which the two verbs (V1 and V2) share the same inflection for Tense and person [...]” (Di Caro & Giusti 2015: 392). The examples in (8) from the dialect spoken in Delia (Caltanissetta) are considered by Di Caro & Giusti (2015) as monoclausal constructions with a functional verb, in opposition to their infinitival counterparts (9), which are the only option in standard Italian (10) and are biclausal constructions:

(8) La sira mi veni a ccunta du cosi.  
 the evening.to.me(CL) come.3SG to tell.3SG two things  
 'He comes to tell me some stories at night.'

(9) La sira mi veni a ccuntari du cosi.  
 the evening.to.me(CL) come.3SG to tell.INF two things

(10) La sera mi viene a raccontare / \*racconta delle storie.  
 the evening.to.me(CL) come.3SG to tell.INF / tell.3SG some stories  
 'He comes to tell me some stories at night.' (Di Caro & Giusti 2015)

In the present analysis, both the inflected and the infinitival constructions will be analyzed, following the intuition of Manzini & Savoia (2005: 1:688), as biclausal structures: while the inflected construction involves event identification (§3 and §4), the infinitival counterparts do not. The differences in the aspectual reading (see §4) of the two types of progressive construction in Conversanese will confirm this analysis.

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<sup>4</sup>In the terms of Cruschina (2013), these are Doubly Inflected Constructions.

Manzini & Savoia (2005: I:688–689) propose an event identification analysis for all the aspectual constructions with finite verbs found in Apulian, Calabrian and Sicilian varieties. These aspectual constructions are found with different matrix verbs: progressive (*stay*) in (11), motion verbs (*go, come*) in (12), and modals (*want, will, must*) in (13).

- (11) Taranto, Apulia  
Stək a bbeivə.  
stay.1SG to drink.1SG  
'I am drinking.'
- (12) a. Minervino Murge, Apulia  
Væ u cæmə.  
go.2SG him(CL) call.2SG  
'You go to call him.'
- b. Modica, Sicily  
Vaju a mmaɲtʃu.  
go.1SG to eat.1SG  
'I go to eat.'
- c. Umbriatico, Calabria  
U vaju cəmu.  
him go.1SG call.1SG  
'I go to call him.'
- (13) a. Brindisi, Apulia  
Ti vɔffu a vveʃu.  
you.ACC(CL) want.1SG to see.1SG  
'I want to see you.'
- b. Mesagne, Apulia  
Vɔffu mmaɲɟu.  
want.1SG eat.1SG  
'I want to eat.'

In the present work we will be dealing mainly with the progressive constructions involving the auxiliary *stay*, but the assumptions of the present analysis can also be applied to the other aspectual constructions with inflected verbs.

## 2.2 The progressive aspectual constructions with finite verbs in the Apulian varieties

In the Southern Apulian variety of Conversano, the present continuous progressive is expressed through an aspectual inflected construction involving the inflected stative verb *ste* (= ‘to stay’), a connecting element *a* (= ‘to’) and the present indicative of the lexical verb, which agrees in person and number with the matrix verb. In Table 1, the paradigm of inflection for the present indicative is presented. The same pattern of inflection is not found in past tenses or the imperative. The inflection is also not found on embedded verbs in the case of the 1<sup>st</sup> and 2<sup>nd</sup> persons plural.<sup>5</sup>

Table 1: Progressive for the verb *ma'ndʒε* (= to eat) in the variety of Conversano

Indicative present	Auxiliary <i>stay</i>	Prep.	Lexical Verb
1SG	stek	a	mandʒə
2SG	ste	a	mandʒə
3SG	ste	a	mandʒə
1PL	stem	a	*mandʒemə
2PL	stet	a	*mandʒetə
3PL	stan	a	'mandʒənə

In the same area, there are varieties, such as those of Putignano (Table 2) and Martina Franca (Table 3) (Manzini & Savoia 2005: I:689–690), where specialized forms are found in the inflection for the auxiliary *stay* (2SG, 3SG, 1PL, 2PL), which differs from the inflected forms of the lexical verb *stay*. With 1<sup>st</sup> SG and 3<sup>rd</sup> PL the inflected forms of the auxiliary coincide with those of the lexical counterpart *stay*.

In both the variety of Putignano and that of Martina Franca (Tables 2 and 3), when the forms of the auxiliary coincide with the forms of the lexical *stay*, the embedded predicate is introduced by the preposition *a* (see 1<sup>st</sup> SG and 3<sup>rd</sup> plural for Putignano and 3<sup>rd</sup> plural for Martina Franca). Along this line of analysis, there is the variety of Mesagne where the auxiliary ‘stay’ shares only its root

<sup>5</sup>Other varieties have the very same paradigm with respect to the lack of an aspectual infinitive construction for the 1st and 2nd persons plural and with past tenses and imperatives: the varieties of Castellana, Turi, Rutigliano, Mola and Polignano. These towns are also in the south-eastern part of Bari.

Table 2: Progressive for the verb *ffɔ* (= to make) in the variety of Putignano

Indicative present	Auxiliary <i>stay</i>	Prep.	Lexical Verb
1SG	<b>stok</b>	a	ffatsə
2SG	ste	∅	ffafə
3SG	ste	∅	ffafə
1PL	sta	∅	ffaʃeimə
2PL	sta	∅	ffaʃeitə
3PL	<b>ston</b>	a	ʻffaʃənə

Table 3: Progressive for the verb *ccɛ'mɛ* (= to call) in the variety of Martina Franca

Indicative present	Auxiliary <i>stay</i>	Prep.	Lexical Verb
1SG	<b>stɔ</b>	∅	ccɛmə
2SG	stɛ	∅	ccɛmə
3SG	stɛ	∅	ccɛmə
1PL	stɛ	∅	ccame:mə
2PL	stɛ	∅	ccame:tə
3PL	<b>stɔnə</b>	a	ʻccɛmənə

with the lexical *stay*: a specialized inflection is found in the progressive construction which is different from the lexical use of the verb (Table 3), as noted by Manzini & Savoia (2005: I:691). Since the auxiliary has specialized forms, there is no preposition introducing the embedded verbs.

Apparently, in all the varieties in which there are specialized forms for the aspectual auxiliary, we do not find any restriction on the inflection of the embedded verb. So while in Conversanese (Table 1) there are no specialized forms for the auxiliary, and with 1<sup>st</sup> pl and 2<sup>nd</sup> pl we do not find the full inflected embedded verb, in the other varieties, when the aspectual auxiliary has specialized forms, the embedded verb is always inflected. While this generalization seems to hold for the Apulian varieties under analysis (Tables 1–3), it is not attested in all varieties (including those from Sicily, Calabria and Salento) described by Manzini et al. (2017). Following these authors, we assume that different micro-parameters cluster together across varieties, such as the presence/absence of the preposition *a* and the inflectional morphology on the specialized forms of the auxiliary. In



Table 4: Progressive for the verb *ffari* (= to make) in the variety of Mesagne

Indicative present	Auxiliary <i>stɛ</i>	Prep.	Lexical Verb
1SG	sta	∅	ffatsu
2SG	sta	∅	ffatji
3SG	sta	∅	ffatji
1PL	sta	∅	ffatjimu
2PL	sta	∅	ffatjiti
3PL	sta	∅	ffannu

the majority of varieties, Manzini et al. found that only one verb shows the complete inflectional paradigm, either the auxiliary or the embedded verb; a huge number of dialects have inflections on the embedded verb – with the possibility of partial phi-feature inflection on the matrix verb (as in the reduced forms of the specialized auxiliary in the cases of Putignano in Table 2 and Martina Franca in Table 3). Thus, the parametric variation seems to be linked mainly to where the inflection appears: on the auxiliary, on the embedded verb or on both.<sup>6</sup>

In many varieties, Manzini et al. (2017) do not find a 1<sup>st</sup> and 2<sup>nd</sup> person plural split for finite/non-finite embedding; rather, the splits involve different persons or the number feature alone (singular vs. plural).<sup>7</sup> With regard to our data, the 1<sup>st</sup> and 2<sup>nd</sup> person plural split found in the distribution of the progressive aspectual inflected construction in Conversanese is linked to a general pattern found across Romance varieties, according to which 1<sup>st</sup> and 2<sup>nd</sup> persons plural show different inflectional patterns (Manzini & Savoia 2005; 2007; 2011) because they are more referentially complex; we will return to this topic in §6.

In sum, this general pattern of aspectual inflection is quite widespread in the Southern varieties. These constructions may vary in the aspectual auxiliary that participates in these derivations (progressive, modal, motion verb) and in the tense (present, past) and mood (imperative, indicative) in which they are found.

<sup>6</sup>Following the data of Manzini et al. (2017), we can find only two varieties in which both the matrix auxiliary and the embedded verb show the full inflectional paradigm (with no specialized forms for the auxiliary): the Apulian variety of Torre S. Susanna and the Sicilian variety of Modica. Nevertheless, there is a single example of the matrix verb bearing the full inflectional specifications to the exclusion of the embedded verb, namely Carmiano (Apulia). For a detailed analysis of the micro-parametric variation in aspectual inflected constructions, see Manzini et al. (2017).

<sup>7</sup>In the variety of Camporeale (Manzini et al. 2017: 38).

Furthermore, the appearance of agreement morphology on V1 and V2 is subject to microparametric variation. Within the spectrum of variation, some varieties, such as that of Conversano, show a person split/person split for 1<sup>st</sup> and 2<sup>nd</sup> persons plural, for which the inflected construction is not available. However, all these progressive aspectual inflected constructions share locative properties (for example, the second verb introduced by the preposition *a*). In the next section, a crosslinguistic analysis of the locative-like system of the progressive will be presented in order to provide a background for the syntactic proposal in §4.

### 3 The progressives as locative unaccusative constructions

In the typological literature, progressives have been claimed to involve locative constructions. This fits with a very widespread characteristic of human language: progressive is often realized in syntax in the form of a locative predication. The pervasiveness of this grammatical isomorphism between progressive and spatial location was clearly documented in the typological overview undertaken by Bybee et al. (1994). The progressive involving a locative construction can be distinguished in terms of how the locative relation is expressed: either by a preposition or an auxiliary.

Languages like Italian and Spanish may encode the progressive through the use of the auxiliary ‘stay’: *stare* (in Italian) in (14) and *estar* in Spanish (15). The same auxiliary is found with locative expressions and with stage-level predicates, as in the Spanish examples (16) and (17).

- (14) Italian  
Gianni sta mangiando.  
‘Gianni is eating.’
- (15) Spanish  
Juan está estudiando.  
‘Juan is studying.’
- (16) Spanish (locative construction)  
Juan está en la habitación.  
‘Juan is in the room.’
- (17) Spanish (stage-level predicate)  
Juan está cansado.  
‘Juan is tired.’



the locative construction involving the auxiliary and/or the locative preposition.<sup>8</sup> The second assumption is strictly linked to the first assumption: the process of unaccusativization is implied by the fact that the subject of a progressive structure enters in a central coincidence relation with the event denoted by the lexical verb (i.e. its lexical aspect or aktionsart). The central coincidence relation is the location within the locative structure: it is one precise moment within the event.<sup>9</sup> For telic predicates, such as in (22), the event has a natural endpoint in the sense that John ‘finished’ building the house. In the progressive version (23), the subject *John* is centrally located within the temporal contour of the event of building the house, so he is represented in a moment in which the the process of building is not yet complete.<sup>10</sup>

(22) John built the house.

JOHN BUILT THE HOUSE

(23) John was building the house.

JOHN DID NOT BUILD THE HOUSE

In ergative languages like Basque, the single argument (‘subject’) of an intransitive verb behaves like the object of a transitive verb and is marked with the absolutive case, and it differs from the agent (‘subject’) of a transitive verb, which is marked with the ergative case. Laka (2006) argues that progressive structures in Basque are homomorphic with locative/unaccusative structures, which results

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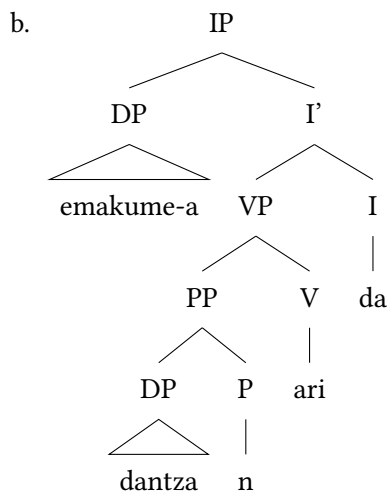
<sup>8</sup>In this respect, Manzini et al. (2017) do not use the term “unaccusativization” in the same way as Mateu & Amadas (1999). The change in the semantics of the embedded verbs is linked to the instantiation of a part/whole relation between the event (denoted by the embedded predicate) and the auxiliary: the embedded predicate is the event whose internal aspect represents the *whole*, while the auxiliary represents the time of utterance and it is the part of the event which is stressed by the progressive form (for a discussion of this semantic proposal, see Higginbotham 2009 and Landman 1992). I will be using the term “unaccusativization” just to refer to this event type change, as was also the case in the original framework of Mateu & Amadas (1999); see Footnote 9 in this respect.

<sup>9</sup>Mateu & Amadas (1999) argues that there is a syntactically relevant semantic structure, which can be represented in a tree structure (cf. Bouchard 1995 for the same proposal). In their lexical-conceptual structure (LCS), the argument structure of the verbs (including locative constructions) can be viewed as a spatial relation in the sense that it purely relates elements to our cognitive space: Figure (i.e. the subject) and Ground (the locative complement), to use Talmy’s (1985) terminology. On this approach, the timeframe of an event is also represented through a spatial relation.

<sup>10</sup>For an analysis of how languages encode the central coincidence relation or terminal coincidence relation first introduced by Hale & Keyser (1993), see Mateu (2002) and Ramchand (2001).

from the fact that the progressive auxiliary *ari* involves a biclausal syntactic structure (26). The main verb *ari* ‘to be engaged’ takes a locative PP (‘in something’) expressed through the locative suffix, as in the intransitive structures in (24, 26): the PP can take a nominal complement (24b) or a VP (26b).

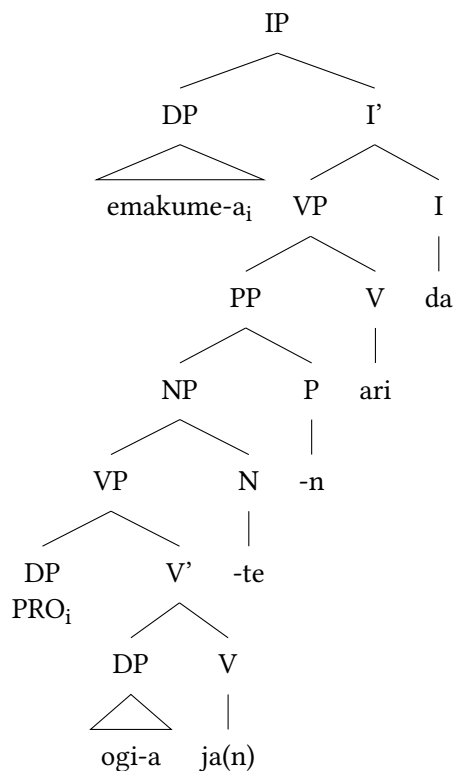
- (24) a. Emakume-a danza-n ari da.  
 woman-DET(ABS) dance-LOC engaged is  
 ‘The woman is engaged in dance.’ (‘The woman is dancing.’) (Laka 2006)



With transitive verbs, Laka (2006) points out that there is a contrast between canonical transitive sentences, in which the subject receives ergative case (25), and their progressive equivalents, in which the subject and the nominalized clause *ogia jaten* (26) receive absolutive case (zero marked).

- (25) Emakume-a-k ogi-a jaten du.  
 woman-DET-ERG bread-DET eating has  
 ‘The woman eats (the) bread.’
- (26) a. Emakume-a ogi-a ja-te-n ari da.  
 woman-DET(ABS) bread-DET eat-NOM-LOC engaged is  
 ‘The woman is (engaged in) eating the bread.’

b. (Laka 2006)



These data concerning overt case marking in Basque confirm that progressive structures imply an unaccusativization of the event: when the progressive auxiliary is expressed, the subject is marked with absolutive case, as in all intransitive (unaccusative) structures. Furthermore, the presence of a PP as a complement of the auxiliary supports the crosslinguistic generalization that progressives are unaccusative locative constructions. The next section is devoted to the analysis of the progressive constructions in Conversanese as locative constructions.

## 4 A syntactic analysis of the progressive inflected constructions

### 4.1 Introduction

The main progressive construction in Conversanese, which we introduced in §1 and §2 and is repeated here in (27), is formed from an inflected stative verb *ste*

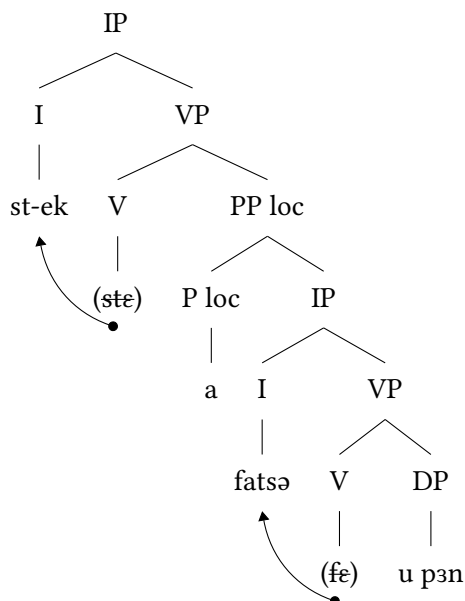
(=‘to stay’), a locative preposition *a* and an inflected lexical verb. It patterns with the unaccusative locative construction (28) formed from a stative auxiliary and a locative phrase.

(27) Stek a fatsə u pɜn.  
 stay.1SG to do.1SG the bread  
 ‘I am making the bread.’

(28) Stek a kɜsə.  
 stay.1SG at home  
 ‘I am at home.’

The main difference between the two sentences is that in (28) the complement of the preposition is an NP: the subject is in a spatial relation with the NP *’kɜsə* (=‘home’). In (27), the subject is centrally located within the timeframe denoted by the telic event of making the bread. The progressive involves a PP that introduces an IP. We propose for (27) the derivation suggested by Manzini & Savoia (2005): the aspectual inflected construction involves a connecting preposition which is selected by the aspectual auxiliary (29).

(29) Stek a fatsə u pɜn.  
 ‘I am making the bread.’



The sentence in (29) is a biclausal structure, since both the auxiliary and the embedded verb show overt present indicative morphology. These constructions can be considered biclausal if we follow one of the diagnostics proposed to account for the biclausality of present perfect (for English, Chomsky 1957; 1981; 1995; for Romance languages, Kayne 1993; Manzini & Savoia 2005; 2007; 2011): that is, the optionality of clitic placement in Romance languages (Manzini & Savoia 2011). The progressive in Conversanese shows long-distance clitic placement (30): the clitic climbs to a proclitic position before the auxiliary, as in the “restructuring” present perfect constructions in the sense of Rizzi (1982). However, there are also varieties in which the clitic is found not only in a long-distance configuration, but also as a proclitic on the embedded verb, as in the the following examples of the aspectual inflected construction from Minervino Murge (31), Montemilone (32), Mesagne (33) and Alliste (34). The examples from Mesagne (33) show that optionality of clitic placement is found within the same variety (33a vs. 33b). The optionality of clitic placement across and within varieties in Romance shows that the parameter is independent of the monoclausal vs. biclausal status of the construction involved. In this respect, long-distance clitic placement cannot be taken as proof of monoclausality (see Manzini & Savoia 2011; Manzini et al. 2017 for discussion).

- (30) Conversano, Apulia  
U stek a (\*u) mandʒə  
it(CL) stay.1SG at it(CL) eat.1SG  
'I am eating it.'
- (31) Minervino Murge, Apulia (Manzini & Savoia 2005)  
Væ u cæmə.  
go.2SG him(CL) call.2SG  
'You go to call him.'
- (32) Montemilone, Basilicata (Manzini & Savoia 2005)  
Va/vinə u camə  
go/come him call.2SG  
'You go to call him.'
- (33) a. Mesagne, Apulia (Manzini & Savoia 2005)  
Vɔffu lu vefu.  
want.1SG it see.1SG  
'I want to see it.'



b. Lu sta ffattsu.  
it(CL) stay do.1SG

(34) Alliste (Manzini & Savoia 2005)

fta llu tferku  
stay(AUX) (1SG)him/it search  
'I am searching for him/it.'

As pointed out in Laka (2006) for the Basque progressive auxiliary *ari*, the verb *stɛ* coincides with the lexical verb 'stay': the same form of the verb is used for both locative/progressive constructions and for sentences involving other PPs, (35). In varieties where the progressive auxiliary differs from the lexical *stay*, such as in Putignano, we have the progressive forms without the connecting preposition, (36), and the lexical *stay* with a preposition, (37).<sup>11</sup>

(35) Conversano, Apulia

Stɛm kə la makənə.  
stay.1PL with the car  
'We are by car.'

(36) Putignano, Apulia

Sta ffafeimə.  
stay(AUX) (1PL)do(.1PL)  
'We are doing.'

(37) Putignano, Apulia

a. Stam aə la məkənə.  
stay.1PL with the car

'We are by car.'

b. Stam a kəsə.  
stay.1PL at home

'We are at home.'

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<sup>11</sup>This pattern found in the variety of Putignano is quite stable, anyway it is not found in other varieties such as that of Martina Franca, in which both the lexical and the progressive forms of *stay* coincide. In other varieties, the presence of a specialized progressive form does not always imply the absence of the connecting locative element (see Manzini et al. 2017). Further analysis is needed in these varieties to understand the relevance of the pattern found in the variety of Putignano.

These biclausal progressive constructions, as Manzini & Savoia (2005) suggest, involve event identification between the two inflected verbs, contrary to the asyndetic constructions of the imperative in Neapolitan (Ledgeway 1997), where each verb represents an assertion (see the examples in 6-7). Event Identification is defined by Kratzer (1996) as a recursive operation involving the external argument and the aspectual reading that is applied to the event denoted by the embedded lexical VP.<sup>12</sup> It relates the external argument, introduced by a *v* head or by aspectual heads, to the predicate via an identification of the event variable of the embedded predication. The overt effect of Event Identification is the agreement morphology on both the auxiliary and the embedded verb. Roughly, Event Identification allows us to add further aspectual information to the event described by the verb. Only if the two predicates have compatible aktionsarten may event identification take place. With respect to the constructions discussed here, the progressive auxiliary allows for event identification, following Vendler's (1967) classification, with activities and accomplishments, but not with achievements or states.

- (38) a. Activity  
Stec a mandʒə.  
stay.1SG to eat.1SG  
'I am eating.'
- b. Accomplishment  
Stek a fatsə la k3sə.  
stay.1SG to build.1SG the house  
'I am building the house.'

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<sup>12</sup>In Kratzer (1996), the lexical root (embedded verb) contains information about the internal argument, but the external argument is introduced by a hierarchically superior functional head *v*. This was initially posited by Kratzer as a mechanism for joining the external argument onto a verb using Voice. Event identifying Voice and the verbal event adds the condition that the verb has an Agent. Event Identification takes one function of type  $\langle e, \langle s, t \rangle \rangle$  (a function from individuals to functions from events to truth values) and another function of type  $\langle s, t \rangle$  (a function from events to truth values) and returns a function of type  $\langle e, \langle s, t \rangle \rangle$ . In other words, Event Identification combines two predicates of events by abstracting over both of their event arguments. The insight of Kratzer's (1996) Event Identification is that it is a recursive operation that allows an *n*-clausal syntactic structure to be mapped onto a mono-eventive semantic representation. Although T is usually assumed to close off the event variable introduced by V and *v*, successive event identifications with higher functional heads allow for different aspectual interpretations. In the cases discussed here, the recursive use of Event Identification allows us to add (through a second recursive operation after the introduction of the external argument) further aspectual information about the event denoted by the embedded lexical verb.

- c. State  
 #Stek a satfə.  
 stay.1SG at know.1SG  
 ‘I am knowing.’
- d. # Achievement  
 Stek a canəskə u ‘sennəkə.  
 stay.1SG at know.1SG the mayor

The structure in (29) cannot be accounted for in terms of a serial verb construction if we follow Baker’s (1989) analysis, for which the serial verbs must share the same object. However, as Cruschina (2013) suggests, we can consider these aspectual inflected constructions as serial verb constructions if we adopt a less rigid definition of serial verbs, such as that of Aikhenvald & Dixon (2006: 12): “Prototypical serial verb constructions share at least one argument. Serial verb constructions with no shared arguments are comparatively rare, but not non-existent.” The aspectual progressive constructions under discussion share the same subject, which is also marked on the overt morphology of both verbs.

The presence of the connecting element *a* should also support an analysis of the aspectual inflected constructions as non-serial-verb constructions.<sup>13</sup> Nevertheless, in the varieties of Putignano, Martina Franca and Mesagne, we do not find such a connecting element (see Tables 2, 3, 4). With regard to such “unstable” connecting elements found with serial verbs, Aikhenvald & Dixon (2006) admits that serial verb constructions “may include a special marker which distinguishes a SVC from other types of constructions but does not mark any dependency relations between the components” (Aikhenvald & Dixon 2006: 20). So in the case of the locative progressive inflected structure in (29), we can call it a serial verb construction since the two verbs are inflected and the connecting locative preposition is a special marker of the instantiation of a central coincidence relation (not a dependency relation) between the two verbs: the output is a unique event. In contrast, the progressive locative construction with the embedded uninflected verb has a different structure and distribution: it does not imply event identification and it is not a serial verb construction, since the embedded verb is an infinitival complement which is in a dependency relation with the matrix auxiliary.

<sup>13</sup>Two hypotheses are found in the literature regarding the origins of *a*: (i) it comes from the Latin preposition *ad*; and (ii) it derives from the Latin coordinating conjunction *ac* used in spoken and late Latin (cf. Rohlfs 1969: §§710,761). Although in other southern Italian varieties there are cases in which the *a* is used both as a locative preposition and a conjunction, in the present analysis we analyze the *a* as a locative preposition (given the locative nature of the progressive). Further evidence comes from the aspectual non-inflected construction in (39).

## 4.2 The progressive ‘uninflected’ constructions

In Conversanese, there is a parallel progressive construction that we introduced in §1 and §2 and is repeated here in (39). It is formed from an inflected stative verb *stɛ* (=‘to stay’), the locative preposition *a* and an uninflected lexical verb (infinitive). It differs from the aspectual inflected construction mainly in its syntactic structure and aspectual entailment.

- (39) *Stek a fɛ u pɜn.*  
stay.1SG to do.INF the bread  
‘I am making the bread.’

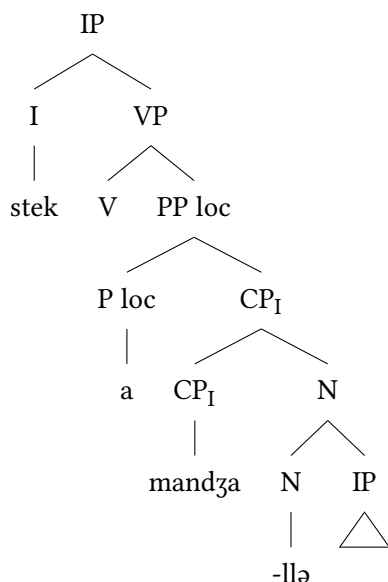
Like the aspectual inflected progressive (30), it allows only long-distance clitic placement, (40). But since the embedded verb is an infinitive, it allows enclitics, (41), which are not possible with the finite verbs in the inflected aspectual counterpart.

- (40) *U stek a (\*u) man’dzɛ.*  
it(CL) stay.1SG at it(CL) eat.INF  
‘I am eating it.’
- (41) *Stek a mandʒa-llə.*  
stay at eat.INF-ACC(CL)  
‘I am eating it.’

As for the locative structures in (28) and the aspectual inflected constructions in (27), we have a locative construction where the aspectual auxiliary selects a locative PP, but in (39) the PP introduces an infinitive that is a full indefinite CP<sub>I</sub> in the terms of Manzini & Savoia (2003): “The domain, labelled C<sub>I</sub>, to suggest Indefiniteness, is identified with the ‘indefinite’ modality lexicalized by infinitivals” (Manzini & Savoia 2003: 97). The infinitival verb raises to a CP<sub>I</sub> position and the accusative enclitic is embedded in a nominal position before the the inflectional domain, as in (42).

(42) Stek a mandʒa-llə.

'I am eating it.'



The structure in (42) is a locative structure: the subject is located in a position within the indefinite event expressed by the embedded infinitival verb. While in (29) we have been saying that the subject is centrally located within the event denoted by the embedded lexical verb, in (42) the subject is located (not centrally) within the event. In fact, we also find this type of progressive construction with states (43) and achievements (44) that were banned for the aspectual inflected construction. In (43) and (44) the interpretation of the sentence is inchoative: the subject is located in the starting point of the event denoted by the embedded verb.

(43) State

Stek a sa'pe.

stay.1SG at know.INF

'I am realizing it.' (= 'I am starting to know.')

(44) Achievement

Stek a canəfə u 'sennəkə.

stay.1SG at know.INF the mayor

'I am getting in touch with the mayor.'

These constructions do not identify a unique event. Similarly to the asyndetic imperative constructions in Neapolitan (Ledgeway 1997) in (6) and (7), these constructions may be decomposed into two subevents: the auxiliary denotes both a truly locative and a progressive periphrasis.<sup>14</sup> Due to the indefiniteness of the infinitival verb in CP<sub>I</sub>, the subject is controlled by the matrix subject.<sup>15</sup> This is confirmed by the presence of the accusative enclitic, (41-42). No special forms are found for the matrix auxiliary with the uninflected construction (compare the specialized matrix auxiliary for the inflected construction in the varieties of Putignano, Martina Franca and Mesagne) and the connecting element can never be omitted. Nevertheless, the aspectual infinitive constructions with the verb *stay* are still interpreted as progressive constructions: they are the sole progressive forms available for 1<sup>st</sup> and 2<sup>nd</sup> persons plural (§5) and they mark an ambiguous progressive form. The next section is devoted to sketching the aspectual differences between the inflected and non-inflected aspectual progressive constructions.

## 5 Aspectual analysis of the inflected and non-inflected progressive constructions

Both inflected and uninflected aspectual progressive constructions are interpreted as truly progressive: in both cases the event entails an ongoing reading (as in Arosio 2011 among others).<sup>16</sup> In other words, the event does not have an entailment of termination. So, for example, telic events with a natural endpoint, such as ‘eat the bread’, are interpreted as unfinished both in inflected (45) and non-inflected constructions (46).

### (45) Inflected construction

Stek a mandʒə u paninə.  
stay.1SG to eat.1SG the sandwich

‘I am eating the bread.’

I HAVE NOT EATEN THE BREAD

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<sup>14</sup>They do differ from the asyndetic constructions of Ledgeway (1997), since there is a connecting element between the two verbs and they cannot be interpreted as truly paratactic constructions.

<sup>15</sup>For the purposes of the present work, the CPI has to be interpreted merely as tenseless, in the sense that it lacks independent tense specification and thus agrees in tense with the matrix auxiliary. However, for a complete analysis of the CPI, see Manzini & Savoia (2005; 2007; 2011).

<sup>16</sup>We refer all over the present paper to the progressive uninflected constructions as opposed to the inflected ones: we want to stress simply on the fact that the embedded predicate is not inflected.

- (46) Uninflected construction  
 Stek a man'dʒɛ u pəninə.  
 stay.1SG to eat.INF the sandwich  
 'I am eating the sandwich.'  
 I HAVE NOT EATEN THE BREAD

They differ from simple present forms, since they are not found with habitual constructions, as shown in (47): in (47a) the temporal modifier 'every year' is found with the present tense, while we cannot find this 'habitual' temporal modifier with inflected (47b) and uninflected (47c) progressives.

- (47) a. Tottə i annə vek o mɛr.  
 all the years go.1SG to.the sea  
 'Every year I go to the sea.'
- b. #Tottə i annə stek a vekə o mɛr.  
 all the years stay.1SG to go.1SG to.the sea  
 '#Every year I am going to the sea.'
- c. #Tottə i annə stek a ʃfi o mɛr.  
 all the years stay.1SG to go.INF to.the sea  
 '#Every year I am going to the sea.'

A major difference is found between the aspectual interpretations of the two constructions. This is linked to the episodic value of progressives: Chierchia (1995), among others, suggests that while individual-level predicates express properties of individuals that are permanent or tendentially stable, progressives and stage-level predicates, by contrast, attribute transitional and episodic properties to individuals. Frequentative adverbs roughly indicate the repetition of the same action, and thus are mainly incompatible with progressive episodic operators. We might expect, then, that neither inflected nor uninflected constructions can be found with frequentative adverbs, but this is not the case: uninflected progressives can be found with frequentative adverbs.

In both type of constructions, the morpheme *a* is the only element that can intervene between the two verbs. Adverbs like *sembə* (= 'always'), which encodes frequentative aspectual properties (Cinque 1999), cannot be found between the functional and the lexical verb, but are only allowed after the complex predicate with both type of constructions, (48) and (49). Furthermore, with the 'uninflected' construction in (49) we can also find the frequentative adverb between the matrix auxiliary and the locative PP, while it is ruled out in the inflected construction in (48).

(48) Inflected embedded verb

Mari: stɜ        (\*sembə) a (\*sembə) mandʒə (sembə).  
Maria stay.3SG (always) to (always) eat.3SG (always)  
'Maria is always eating.'

(49) Inflected embedded verb

Mari: stɜ        (sembə) a (\*sembə) man'dʒɛ (sembə).  
Maria stay.3SG (always) to (always) eat.INF (always)  
'Maria is always eating.'

Cardinaletti & Giusti (2003), in their analysis of aspectual inflected constructions with motion verbs in Sicilian, take the different distribution of frequentative adverbs as proof that the inflected version is monoclausal while the uninflected one is biclausal. Our proposal, on the contrary, is that both types of progressives are biclausal. The presence of the frequentative temporal quantifier with the uninflected construction is linked to the indefinite CP<sub>1</sub> selected by the locative preposition. The subject of the embedded verb in CP<sub>1</sub> must receive a variable/operator interpretation, since no person and number morphology is found on it as in the control constructions. The subject of the matrix auxiliary is just located within the event denoted by the embedded verb, but it is not in a central coincidence relation with the embedded predicate. The frequentative adverbial modifier can bind the variable introduced by the embedded infinitival verb in (49) and allow a frequentative interpretation of the progressive locative construction.<sup>17</sup> The double inflection of (48), on the other hand, marks the fact that event identification has taken place and the fact that the subject is centrally located within the event denoted by the embedded predicate: no temporal and aspectual binding is possible, since both the auxiliary and the embedded verb show the same inflectional morphology. Nevertheless, besides these minor aspectual differences, both types of constructions still imply a progressive reading: the 'uninflected' construction, in fact, is the only progressive form found with the 1<sup>st</sup> and 2<sup>nd</sup> persons plural. The next section is devoted to analysing the distribution of the aspectual constructions inflected for person and number.

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<sup>17</sup>Since the embedded verb is tenseless and aspectless, an adverb can work as an operator that binds it, intervening, as a modifier, in the aspectual relation instantiated between the matrix aspectual auxiliary and the embedded verb: the embedded verb, in fact, has no overt morphology marking its inherent aspect, so its aspect can be more easily modified/marked by an (extra) adverbial item.



## 6 Person split in the progressive aspectual inflected constructions

The progressive aspectual inflected construction is not found with 1<sup>st</sup> and 2<sup>nd</sup> persons plural. As we mentioned in §1, (3-4), repeated here as (50-51), the 1<sup>st</sup> and 2<sup>nd</sup> persons plural do not allow the progressive constructions involving the inflected embedded verb (50), but are only found in the construction involving an embedded infinitival verb, (51).

(50) Nojə/vov<sub>k</sub> stəmə<sub>j</sub>/stətə<sub>k</sub> a \*mandʒemə<sub>j</sub>/\*mandʒetə<sub>k</sub>.  
 we/you stay.1PL/2PL to eat.1PL/2PL  
 ‘We/you are eating.’

(51) Nojə/vov stəmə/stətə a man’dʒɛ.  
 we/you stay.1PL/2PL to eat.INF  
 ‘We/you are eating.’

Similar data are also found in other varieties. Cardinaletti & Giusti (2003) found a similar pattern in their analysis of the inflected constructions in the dialect of Marsala. Manzini & Savoia (2005) mention many other southern varieties (not only in Apulia) in which the aspectual inflected constructions are not found with 1<sup>st</sup> and 2<sup>nd</sup> persons plural, while the other persons allow it; (51) and (52) provide examples from the Sicilian varieties of Villadoro e Calascibetta.

(52) Villadoro  
 Jamo/jete a mmanɲɟari.  
 go.1PL/2PL to eat

(53) Calascibetta  
 Imu/iti a mmanɲɟari.  
 go.1PL/2PL to eat

Why do the 1<sup>st</sup> and 2<sup>nd</sup> persons plural not allow the *a*+inflected form construction? Is it worth talking of a person split/person split? Our answer is that the 1<sup>st</sup> and 2<sup>nd</sup> persons plural are referentially more complex than the other singular and plural (3<sup>rd</sup>) persons. Their complexity is linked to the fact that the 1<sup>st</sup> and 2<sup>nd</sup> persons plural are not merely plural versions of the 1<sup>st</sup> and 2<sup>nd</sup> persons singular. In this sense we are dealing with a person split/person split different from the one attested for the singular persons in auxiliary selection (Manzini & Savoia 2005; 2007; 2011).

Bobaljik (2008) proposes a two-valued binary feature system [ $\pm$ speaker] and [ $\pm$ hearer] to account for the personal pronominal system across languages.<sup>18</sup> The two-valued person feature system lacks a feature ‘third person’, which is then analyzed as [ $-$ speaker,  $-$ hearer]. For plural persons, Bobaljik (2008) argues, along the lines of Lyons (1968) and Benveniste (1966), that 1<sup>st</sup> and 2<sup>nd</sup> persons plural are not merely plurals of the singular 1<sup>st</sup> and 2<sup>nd</sup> persons: “We (‘first person plural’) does not normally stand in the same relationship to I (‘first person singular’) as boys, cows, etc., do to boy, cow, etc. The pronoun we is to be interpreted as ‘I, in addition to one or more other persons’... In other words, we is not ‘the plural of I’: rather, it includes a reference to ‘I’ and is plural” Lyons (1968: 277). So Bobaljik suggests that “[i]t is indeed meaningful to speak of a first person plural, but it is important to note that plural, for the first person, normally means an associative or group plural, rather than a multiplicity of individuals sharing the property [speaker]” (Bobaljik 2008: 209). The same is also true of the 2<sup>nd</sup> person plural, which is not merely the plural of singular *you*. So while the 1<sup>st</sup> person plural is not just a sum of [speaker], but is the sum of speaker plus others, the 2<sup>nd</sup> person plural is not just a sum of [hearer], but is the sum of hearer plus others. Furthermore, Bobaljik (2008) resumes this discussion by saying that while the 1<sup>st</sup> person plural is the sum of all persons, (54), the 2<sup>nd</sup> person plural is the sum of all persons excluding the [speaker].

(54) ‘we’ is 1st (+ 2nd) (+ 3rd)

(55) ‘you’ is 2nd (+3rd). (adapted from Bobaljik 2008)

Following similar considerations on the person system, Manzini & Savoia (2007; 2011) use a person splitperson split analysis to describe the patterns found in other constructions (i.e. auxiliary selection with present perfect) where the 1<sup>st</sup> and 2<sup>nd</sup> persons singular (discourse-anchored pronouns: [ $+$ speaker,  $+$ hearer]) and the 3<sup>rd</sup> person singular (event-anchored pronouns: [ $-$ speaker,  $-$ hearer]) show different morphosyntactic patterns. For the analysis of plural persons, Manzini & Savoia (2011) argue that “the 1st person plural does not necessarily denote a plurality of speakers (though it may), or the speaker and hearer only (though again it may); rather its denotation routinely involves one speaker and a certain number of other individuals that are being referred to together with the speaker. The same is true for the 2nd person singular, which does not necessarily (or

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<sup>18</sup>With varying choices of feature labels, a similar argument has been presented and defended in one form or another by Ingram (1978); Harley & Ritter (2002) and, in particular detail, Noyer (1997: Chapter 2).

normally) denote a plurality of hearers but simply refers to the hearer taken together with a certain number of other individuals ...Because of this referential structure of the so-called 1st and 2nd plural, it is reasonable to propose that even varieties that activate the person split/person split in the singular may not do so in the plural” (Manzini & Savoia 2011: 213). In a lexical parametrization approach (Manzini & Wexler 1987; Manzini & Savoia 2011), languages involve a parametric distinction for plural on the one hand and the discourse participants and event participants may not apply in the plural.

With respect to the constructions being discussed here, the person split/person split we found in the aspectual inflected progressive of Conversanese is not directly linked to the split involving discourse vs. event participants, but to the referential complexity of the 1<sup>st</sup> and 2<sup>nd</sup> persons plural. More precisely, we have been contending that the progressive aspectual inflected constructions are based on a locative structure where the subject of the matrix subject enters into a central coincidence relation within the event denoted by the embedded predicates (as in Mateu & Amadas 1999; Laka 2006). The 1<sup>st</sup> and 2<sup>nd</sup> persons plural may not enter into this derivation because the referential complexity of the plurality does not allow the instantiation of a central coincidence relation as tight as the one found in the aspectual inflected constructions with other persons, (29). The main idea is that the central coincidence relation entails a reading for which a referentially unique (easily identifiable) event participant is centrally located within the eventive structure. 1<sup>st</sup> and 2<sup>nd</sup> persons plural, however, cannot be centrally located due to their referential complexity, which does not allow the identification of a unique participant or group of participants. That is, only clearly identifiable referents can be centrally located in the aspectual progressive constructions, at least in Conversanese. The microparametric variation in the aspectual inflected constructions (see §2.2) shows that different dimensions may determine the finite/non-finite split (person and number features, reduced inflectional paradigms, *a/bare* embedding). Conversanese does not allow finite embedding, which encodes a central coincidence relation, for referentially unclear referents; this is an interpretative requirement which blocks the multiple agreement configurations for 1<sup>st</sup> and 2<sup>nd</sup> persons plural.<sup>19</sup> To express the progressive with the

<sup>19</sup>While some authors define agreement as a mere computational mechanism at work in syntax that may or may not involve a semantic counterpart (the case of default agreement, as in Preminger 2014), others claim that agreement always plays a role in semantic interpretation (Manzini & Savoia 2007; 2011). On this view, agreement does not involve a feature-checking operation, but in the terms of Manzini & Savoia (2007) it represents the sharing of referentially relevant properties that play a role in semantic interpretation. So, under our proposal double agreement represents a marked aspectual reading at the semantic interface, which is obtained through event identification.

1<sup>st</sup> and 2<sup>nd</sup> persons plural, the subject is ‘located’ within the event denoted by the embedded verb, but this locative relation is not a central coincidence relation (§4.1): the different aspectual flavors of the two constructions interact with the referential complexity of the 1<sup>st</sup> and 2<sup>nd</sup> plural persons.

## 7 Conclusions

In this paper, we have presented a preliminary analysis of the progressive form in a number of Apulian dialects, focusing on the variety of Conversano (Apulia). In Conversanese, two forms of the progressive are available. Both constructions are formed from an inflected stative verb, a connecting preposition and a lexical verb. The two constructions differ in the inflection found on the lexical verb selected by the preposition: one type of construction involves an inflected embedded verb, and we have defined this as the aspectual (progressive) inflected construction (following Manzini & Savoia 2005); the other type of construction involves an uninflected embedded lexical verb, and we have defined this as the aspectual uninflected construction.

Both types of structure share a locative derivation: the majority of progressive forms crosslinguistically, in fact, are derived from expressions involving stative auxiliaries and/or locative prepositions (Bybee et al. 1994, Mateu & Amadas 1999, Laka 2006). In (29) and (42) we proposed a biclausal syntactic derivation for both inflected and uninflected progressive constructions. The difference is that, while in the inflected construction the locative preposition selects a full IP, in the uninflected one the locative preposition selects an indefinite CP<sub>I</sub>. The distinction between the structures has been used to account for the different syntactic and aspectual properties of the two progressive constructions.

On the one hand, the aspectual inflected constructions: 1) denote an event identification between the auxiliary and the lexical verb; 2) seem to work like serial verb constructions; 3) allow long-distance clitic placement; and 4) locate the matrix subject of the inflected progressive centrally within the event denoted by the embedded verb. On the other hand, the aspectual uninflected progressive constructions: 1) may denote a frequentative aspectual reading; 2) seem to work like control constructions; 3) allow enclitic placement on the embedded infinitival verb; 4) locate the subject in a given position (although not in a central coincidence relation) within the event denoted by the embedded verb.

The 1<sup>st</sup> and 2<sup>nd</sup> persons plural are not found in the aspectual inflected constructions, but are only possible in the infinitival counterpart. Differences in the pattern of the morphological derivation of 1<sup>st</sup> and 2<sup>nd</sup> persons plural are quite

common (Manzini & Savoia 2005; 2011) across Romance languages: these persons are more complex than other persons (Bobaljik 2008) because they involve a complex reference to the discourse participants (as with 1<sup>st</sup> and 2<sup>nd</sup> singular), to the plurality of participants and to the event participants. However, further analysis is needed in order to account for the nature of this person split: for present purposes, the complexity of the referentiality seems to pattern with certain aspectual interpretations (such as the inchoative interpretation attributed to (43-44) when the embedded verb is infinitival) linked to the complex referentiality, such as the inclusion/exclusion of the subject(s) within the complex locative/progressive constructions, which involve an event identification/change. In a lexical parametrization analysis (Manzini & Savoia 2011), languages involve a parametric distinction for plural persons: the difference between discourse participants and event participants found in the singular (1<sup>st</sup> and 2<sup>nd</sup> singular person vs. 3<sup>rd</sup> person) may not apply in the plural, but different overlapping referents may influence the status of the plural persons and imply their overt morphological realization as a parametric choice across languages.

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## Chapter 8

# Suffixaufnahme, oblique case and Agree

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The present contribution focuses on a set of phenomena which are unified by the typological literature under the label of Suffixaufnahme. The theoretical focus of the contribution is the minimalist rule of Agree and the notion of case, specifically oblique case. We question the necessity of [interpretable] and [valued] features for the formulation of Agree. We suggest that more primitive syntactic notions underlie the descriptive label ‘oblique’, specifically that of an elementary relator with a part/whole content. Thus, the DP embedded under a genitive case/adposition is interpreted as a possessor/whole with respect to a local superordinate DP (the possessum/part). We argue that case/agreement stacking corresponds to the presence of a partial copy of this second argument within the phrasal projection of the relator. In §2 we apply this analysis to linkers, using Albanian as a case study; we then go on to case/agreement stacking in Punjabi (§3) and in the Australian languages (e.g. Lardil), which are often taken as the core instantiation of the phenomenon.

## 1 The core phenomena and the role of Agree

### 1.1 Case/agreement stacking and linkers

A core instance of what the typological literature labels Suffixaufnahme (Plank 1995) is case stacking. Lardil is cited by Richards (2013) as a case in point, as in (1). In (1), the DP *marun-ngan-ku* ‘boy-GEN-INSTR’ is inflected both for genitive



and for instrumental cases, reflecting its status as the possessor (GEN) of the instrumental nominal *maarnku* ‘spear-INSTR’. For Merchant (2006: 62), case stacking amounts to the fact that “a single DP may be the goal for multiple probes.” Richards (2013) in turn speaks of ‘concord’ as the process responsible for case stacking configurations, where concord is “a series of Agree operations” with the same c-commanding probe. Thus, stacking implies that the same probe can attract several goals.

- (1) Lardil, Pama-Nyungam (Richards 2013: 43)  
 Ngada latha karnjin-i marun-ngan-ku maarn-ku.  
 I spear wallaby-ACC boy-GEN-INSTR spear-INSTR  
 ‘I speared the wallaby with the boy’s spear.’

Plank (1995) points to a close similarity between case stacking and linkers – which have their own tradition of studies in the generative framework. The non-agreeing Persian *ezafe* is often at the center of discussions of linkers (den Dikken & Singhapreecha 2004; Larson & Yamakido 2008; Richards 2010). On the other hand, Franco et al. (2015) exemplify linkers with data from Albanian, where the pre-genitival linker varies according to the phi-features and also according to the case of the head DP. Agreement in phi-features is illustrated in (2a–2b), while (2c) illustrates agreement in case. Here and throughout we use data from the Geg (Northern Albanian) variety of Shkodër.

- (2) Shkodër, Geg Albanian (Manzini & Savoia 2011b: 105)
- a. libr-i i msus-εs  
 book-M.SG.NOM.DEF LKR.M.SG.NOM.DEF teacher-F.SG.OBL.DEF  
 ‘the book of the teacher’
- b. ka:m-a ε tʃɛn-it  
 paw-F.SG.NOM.DEF LKR.F.SG.NOM.DEF dog-M.SG.OBL.DEF  
 ‘the paw of the dog’
- c. para libr-it t msus-εs  
 before book-M.SG.OBL.DEF LKR.M.SG.OBL.DEF teacher-F.SG.OBL.DEF  
 ‘in front of the book of the teacher’

The examples of adnominal modification in (1–2) include essentially the same ingredients, though differently arranged. In (1) both genitive and instrumental are suffixed to the possessor. In (2) the possessor has a single genitive suffix and it is preceded by a head bearing a case agreeing with that of the possessum. As

it turns out, most of the generative theories of linkers do not extend to stacking. Theories of linkers are easily classified into a few major subtypes. Richards (2010) argues that the Persian *ezafe* is a PF device to ensure N-N identity avoidance (cf. Ghomeshi 1997). Stacked case could not be a means to the same end, since the instrumental N and the genitive N are adjacent in (1). Incidentally, this is an obvious demonstration of the lack of perceived unity between case stacking and linkers from the point of view of the same author, Norvin Richards. A second stream of theoretical literature (den Dikken & Singhapreecha 2004; Campos & Stavrou 2005) treats linkers as (the counterpart of) copulas in the DP domain. But it is hard to see how stacked case could fit into this definition. Larson & Yamakido's (2008) conclusion that linkers are to be explained in terms of case (cf. Samiiian 1994 on Persian) seems to hold some promise towards the unification of linkers with case stacking – except that these authors argue that linkers play a role as case assigners, allowing Ns, which do not normally license case, to be construed with DP complements and AP modifiers. On the other hand, a stacked case is a case being assigned on top of another.

This then leaves proposals (Philip 2012) that linkers should be understood as agreements, though represented by heads, rather than by agreement suffixes; if predication is involved, then linkers are subjects of predication (Franco et al. 2015), rather than copulas. Specifically, in Albanian (2) the linker agrees in case, as well as in phi-features, with the head of the possession construct, providing an obvious link with case stacking, described by Richards (2013) himself in term of 'concord'. Summarizing, we have on the one hand a typological similarity between case stacking in (1) and linkers in (2) and on the other hand a rough theoretical compatibility, at least for a particular subset of analyses of case stacking and linkers – treating both phenomena as connected to Agree.

Though stacking of suffixal material in Lardil (1) involves case, phi-features may also in principle be stacked. A clear example of this configuration is provided by Punjabi (Indo-Aryan). Punjabi Ns have phi-feature inflections sensitive to a direct/oblique case distinction in the masculine singular, followed by postpositions. In addition, possessor phrases in Punjabi require the phi-features of the head noun (the possessum) to be stacked on top of the genitive *d-* postposition. Thus, consider *munḍ-* 'boy' in (3), on which we find, from left to right, the oblique phi-feature inflection *-e*, the *d-* genitive postposition and finally a phi-feature inflection *-i/-ĩã* agreeing with the head noun. As we will see in §3, if the head noun is masculine, this outer inflection is also sensitive to the direct/oblique case distinction. At first sight, Punjabi (3) is essentially like Lardil (1), modulo the presence of stacked case in (1) and of stacked agreement in (3). It is also similar

to Albanian (2), modulo the fact that agreement with the head N is externalized by a head (the linker) in Albanian and by a postposition in Punjabi.

- (3) Punjabi (Manzini et al. 2015: 316)  
muŋd- e- d- i / -iã kita:b / kitabb-a  
boy- M.SG- GEN- F.SG / -F.PL book.ABS.F.SG / book-ABS.F.PL  
'the book/the books of the boy'

The interest of an inquiry into (1–3) from a theoretical perspective is represented in part by the potential implications for Agree, one of the core rules of Minimalist syntax. A quick survey of the formalizations proposed for both stacking and linkers in terms of Agree reveals some potential difficulties for this rule. Recall that Merchant's (2006) idea is that in case stacking the same set of interpretable nominal features are able to check more than one probe. For instance, in (1), 'boy' could check both a genitive case probe and an instrumental probe. In (3) then the agreement suffixes *-i/-iã* would have to be the result of checking some probe associated with the head noun 'book(s)', say an abstract D. Unfortunately they can't be, because 'boy' has its own interpretable set of features, which definitely cannot be made to agree with the equally interpretable, different features of 'book(s)'.<sup>1</sup> Next consider linkers. Suppose that the Albanian linker in (2) is an agreement head. Then, as discussed in particular by Philip (2012), we are forced to diverge from a standard tenet of Minimalism, namely that heads are contentive elements – since their deletion at LF under Full Interpretation would amount to the destruction of structure (contravening Inclusiveness; Chomsky 1995).

These problems may be taken to determine one of two logical outcomes. First, Suffixaufnahme cannot have any theoretical significance given that aligning it with Agree seems to involve difficulties for this rule. Alternatively, we will have to reconsider the formulations of Agree that are standardly used. In fact, the core context for Suffixaufnahme is adnominal modification – and we independently know that Minimalist Agree, developed by Chomsky (2000; 2001) for verb agreement, cannot straightforwardly be applied within DPs (Carstens 2001). In §1.2 we will argue for a retreat from rich current models of Agree to an impoverished model characterized by the absence of such constructs as multiple probes/goals or multiple directionality. In §2-3, we will address the evidence in (1–3) – shifting our theoretical focus to the nature of case, and specifically oblique case.

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<sup>1</sup>The empirical evidence points to the agreeing feature sets being associated with the postposition, construed as a syntactic head (§3.1). We could then deny that stacking is involved at all in languages like Punjabi – except that the formal (not merely functional) continuity between the various phenomena here briefly introduced can in our view be modelled by (the appropriate version of) Agree.

## 1.2 Minimal Agree

The basic statement of Agree is provided by Chomsky (2000: 122) as follows: “Matching is a relation that holds of a probe P and a goal G. Not every matching pair induces Agree. To do so, G must (at least) be in the domain D(P) of P and satisfy locality conditions. The simplest assumptions for the probe-goal system are shown in (4).

- (4) a. Matching is feature identity.  
 b. D(P) is the sister of P.  
 c. Locality reduces to closest c-command.

Thus, D(P) is the c-command domain of P, and a matching feature G is closest to P if there is no G' in D(P) matching P such that G is in D(G').”

In the statement of the conditions for Agree in (4), the absence of any mention of [interpretable]/[valued] features is rather striking, when compared to current Minimalist practice. In the text surrounding (4) we are told, on the other hand, that “the erasure of uninterpretable features of probe and goal is the operation we call Agree” (Chomsky 2000: 122). It is in Chomsky (2001) that the (un)interpretability asymmetry takes on a paramount role in the definition of Agree: “uninterpretable features ... constitute the probe [K] that seeks a matching goal – another collection of features – within the domain of ... K. What is the relation Match? The optimal candidate is identity; we therefore take Match to be Identity” (5). The latter is the definition of Agree adopted as the Minimalist standard.

Furthermore “the natural principle is that the uninterpretable features, and only these, enter the derivation without values, and are distinguished from interpretable features by virtue of this property” so that a further probe/goal asymmetry in terms of the property [valued] is superimposed on the original [interpretable] one. As far as we can tell the two are equivalent in Chomsky’s work, though in the subsequent literature, they are sometimes treated as independent features (Pesetsky & Torrego 2007), or [interpretable] is abandoned in favour of [valued] (Preminger 2014).

Now, life may be simpler without [interpretable]/[valued] features, as in (4), but as Chomsky (2001: 4) points out “the existence of these features is a question of fact: does L have these properties or not? If it does (as appears to be the case), we have to recognize the fact and seek to explain it.” In other words, the question is whether there is independent evidence for these features – or, to be more precise, for their negative value, given that we take it for granted that there are interpretable, valued features (e.g. 1P, plural, etc.).

For Chomsky (1995) the crucial empirical argument in favor of uninterpretability is that while verbs are routinely associated with singular or plural features, there is no sense in which the event they denote is singular or plural. However, Manzini & Savoia (2007: 21) argue “that the so-called agreement inflection of the verb is categorized exactly as a subject clitic; what is more, it bears a structural relation to the verb root which parallels that of a subject clitic (or any other subject) to the verb.” Therefore, Manzini & Savoia’s counterargument is that inflections can in fact be interpreted if construed as (EPP) arguments of the verb/event. As they emphasize, two different conceptions of the syntax-morphology interface are implied by the two views of the verb inflection. For Chomsky (1995) syntactic Merge takes entire words labelled by categories and sets of features. For Manzini & Savoia Merge takes morphemes as its input and single morphemes are visible to syntactic computation.<sup>2</sup>

Baker (2008: 4) is generally critical of “the Chomskyan tradition,” where “the (often tacit) state of the art has been simply to stipulate which feature slots are present but unvalued on a particular lexical item, thereby specifying explicitly its agreement potential (Chomsky 2000, Chomsky 2001).” As he notes, “the idea behind this is that the probe has certain predefined feature slots that need to receive a value from some other phrase in the structure that has specified values for those same features ... Instead, I am foregrounding the idea that all Fs are potential agreeers and they agree with whatever features they can find in their environment according to structural principles” (Baker 2008: 44).

Nevertheless, Baker’s concern is that “stipulating what unvalued features a given head has on a case-by-case basis does not capture the systematic differences in how verbs, adjectives, and nouns behave with respect to agreement” – they do not have to do with the notion of valuation itself. Thus he adopts the principle in (5), which, as he notes, is simply a rather more explicit version of what Chomsky assumes. However, (5) does not change the empirical picture. The question concerning the status of the verb inflection is still in the same terms posed by Manzini & Savoia (2007). If the verb inflection is a pronominal realization (or a pronominal copy) of the EPP argument, then it is referential and will carry interpretable/valued features.

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<sup>2</sup>Distributed Morphology (Halle & Marantz 1993) strikes a somewhat intermediate position, since it adopts the view that morphological structures are formed by Merger of morphemes, but at the same time it insulates Morphological Structure from syntax. Incidentally the notion of word can only be reconstructed in these frameworks as a derived notion, for instance through the notion of a word phase (Marantz 2007); the visibility of agreement morphology suggested in the text could mean that it sits in an edge position.

- (5) XP can have intrinsic  $\varphi$ -features (pre-specified values for person, number, and gender) only if XP has a referential index.

In fact, the transition from (4) to standard Minimalist Agree involves two steps. The first step involves introducing the [interpretable]/[valued] properties – and proposing that they pair up with phi-feature sets in the sentential domain as just discussed. The second step is that probes are uninterpretable/unvalued – though for Chomsky (2001) goals must also be ‘active’ (i.e. have an uninterpretable case feature). Most of the issues connected with Agree discussed in the Minimalist literature do not stem from any of the core properties in (4), namely identity, c-command and locality, nor do they interact with such properties – rather, they are connected with the [interpretable]/[valued] properties and the identification of probes with uninterpretable/unvalued feature sets.

First, pre-encoding of probes allows for both downward and upward Agree to be expressed (probe higher than goal or lower than goal; cf. Zeijlstra 2012); the two directions are not expressible in the absence of pre-encoding. Thus, consider  $\alpha$  and  $\beta$  such that  $\alpha$  c-commands  $\beta$ ; if there is no pre-encoding of probe/goal status on them, then it is logical to enforce the general direction of operations/relations defined by c-command, creating an ordered pair  $(\alpha, \beta)$ . However, only c-command orders the two elements, and independently of c-command the Agree relation is perfectly symmetric. In other words, not only is the original statement in (4) simpler than standard versions of Agree – it is also more restrictive, in the sense that it has less expressive power than a theory inclusive of [interpretable]/[valued] properties.

Similarly, pre-encoding probes and goals allows many-to-one or one-to-many Agree to be expressed (one probe, many goals – or many probes, one goal); in the absence of pre-encoding, a set of features  $\alpha$  simply acts as a probe on a set of features it immediately c-commands  $\alpha$  and  $\beta$ . If  $\beta$  in turns acts as a probe for  $\gamma$ , then, we have a sequence of agreement pairs  $(\alpha, \beta)$ ,  $(\beta, \gamma)$  and so on. It is only the pre-encoding of probe-goal status that allows the issue of multiple Agree to be defined (one goal, several probes – cf. Carstens 2001 – or vice versa). Again, (4) not only is simpler than its current versions in cutting out certain extra assumptions – it also has less expressive power; i.e. it is more restrictive.

These apparently abstract questions take on empirical significance when we consider agreement within the DP – which is what concerns us here directly. Having a concrete example at hand, for instance Italian (6), may help here.

- (6) l-e      molt-e      bell-e      region-i      italian-e  
 the-F.PL many-F.PL nice-F.PL region-PL Italian-F.PL  
 ‘the many nice Italian regions’

A preliminary question is whether what is sometimes called concord (DP-internally) is in fact the same phenomenon/rule as (sentence-internal) Agree. Some theorists recognize two separate phenomena, subject to two different rules: sentential agreement is deemed to fall under Chomskyan (probe-goal) Agree, while DP-internal concord responds to different processes; see for instance Giusti (2008). However, sentential and DP-internal agreement proper obviously share what Chomsky calls Matching – i.e. ‘the identity relation’ – and the locality conditions on it – indeed as laid out in (4). In this sense, it goes against commonly held measures of simplicity to postulate separate processes.

Nor is there much PF evidence for the separation. Consider Punjabi. In this language, verbs are participial forms agreeing in number and gender/nominal class. Therefore, morphologically it is impossible to separate agreement proper from concord (contrary to English). The same is true for nominal class agreement in Bantu (Baker 2008). Even in familiar Western European languages, where it would appear that there is a strong realizational asymmetry between agreement on verbs and nouns, it can be shown that, given a statistically significant sample of varieties, (pro)nominal and verbal inflections admit of common lexicalizations (Manzini & Savoia 2007 on Italo-Romance).

Nevertheless, theorists arguing for a single Agree process are faced by the issues of multiple probes/goals and directionality. First, while canonical sentential agreement involves one probe and one goal, DP-internal agreement may involve  $n$  categories, for arbitrary  $n$  (the head noun, its determiner, its quantifier, its adjectival modifier in (6)). Carstens (2001) argues that this type of agreement should be modelled by allowing one goal – i.e. N – to check several probes – i.e. the set of determiners and modifiers of N. This incidentally maintains the correct directionality of Agree, with the probe higher than the goal. However, Carstens’ analysis meets considerable difficulties when we consider that if we take interpretable features to be associated with N, we are forced to conclude that features associated with D are non-interpretable. Yet Ds alone appear perfectly capable of reference, implying the interpretability of their features (see Danon 2010 for more problems with D-N configurations). We may want to correct this state of affairs by changing the direction of agreement – i.e. having the goal higher than the probe – but then we are facing a further enrichment of the model, plus potential empirical problems having to do with the fact that gender/nominal class is clearly determined by N.

If we eliminate the [interpretable]/[valued] properties, or in any event we eliminate their pre-encoding on probes and goals, many potential problems are automatically eliminated, though we otherwise keep to the Chomskyan formulation of Agree in (4) in all of its aspects. Put simply, each category within the DP in



(6) acts as a probe for the immediately c-commanded category, all the way down from D to N and to the postnominal A. In other words, we surmise that Minimal Search and Match (the Agree computation), as in (7a), should be retained, but its connections with [interpretable]/[valued] features should be severed, as in (7b).

- (7) a. Agree is the Minimal Search and Match operation formalized by Chomsky (2000) – cf. (4).  
 b. Further stipulations about  $\pm$ interpretable and  $\pm$ valued features, and their pre-encoding on probe/goals (Chomsky 2001) are eliminated.

For present purposes, we are interested in the fact that (7) facilitates the discussion of agreement in DP-internal contexts. In other words, in addressing the core concerns of this article – i.e. the unification of *Suffixaufnahme* phenomena and the nature of oblique case – we will abstract away from any pre-encoding of features and of probe/goal status. Thus, in (6) Agree creates pairs (*regioni, italianae*), (*belle, regioni*), etc., where the c-commanding element and the c-commanded element serve as probe and goal respectively and their phi-feature sets are identified. We have already provided the reasons why we consider it unlikely that DP-internal ‘concord’ is separate from sentential Agree – and why we believe that (7) extends to subject-verb agreement. However, as far as we can tell, the discussion in this article goes through even if something like (7) holds only for DP-internal positions.

The main remaining problem is that in terms of Chomsky (2000; 2001), [interpretable] properties interact not only with the computational component, as we have been discussing, but also with the LF interface. In Chomskyan terms, the deletion of uninterpretable features is necessary because their permanence at the LF interface would violate Full Interpretation. But there is another reason why Agree is crucial to Full Interpretation, namely that at the LF interface there is a single interpreted copy of any phi-feature set, potentially identifying a referential argument; what is more, that copy is associated with the element that is capable of reference (cf. (5)).

Preminger (2014) points out that it is frequent to find default inflections on verbs capable in principle of agreement – which it is natural to construe as those verbs not entering into Agree at all. In Chomskyan terms, this would mean the survival of uninterpretable features and the violation of Full Interpretation – which leads Preminger to reject the [interpretable] feature. He therefore depends only on [valued] features for his formulation of Agree – i.e. find(f): “Given an unvalued feature f on a head H0, look for an XP bearing a valued instance of f and

assign that value to H0.”<sup>3</sup> But this means that we are in the dark as to what the Full Interpretation algorithm does with all those valued feature sets. It appears that information about which sets are and are not interpretable is relevant for LF after all – however it is formulated (for instance in terms of (5), from Baker 2008).

Manzini & Savoia (2007), by contrast, are quite explicit about the interaction of their proposal with Full Interpretation at the LF interface. They propose that Agree is a syntactic means for establishing equivalence classes between two or more copies of the same phi-feature material – to be interpreted at the interface as individuating a single referent. In other words, Agree establishes that two sets of phi-features in fact reduce to two occurrences of the same set. Manzini & Savoia speak of chain-formation. In reality, the notion of chain is unnecessarily rich – all that is needed is an unordered set. If Agree is identity, its representational counterpart is an equivalence class. This equivalence class achieves roughly the same result as the survival of a single phi-feature set in Chomsky (2000; 2001).<sup>4</sup>

In the discussion that follows we will consider data of the type presented in §1.1 on the basis of the ‘minimal’ theory of Agree that we have sketched here. In essence the simplified version of the standard model in (7) allows us to tackle the empirical evidence without paying attention to matters such as the (un)interpretable nature of an agreeing node or to the direction of the Agree operation. The emphasis will be on: (i) establishing the formal similarity of the internal structure of linkers and stacking; (ii) explaining their characteristic distribution in contexts (roughly) of adnominal modification.

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<sup>3</sup>Preminger (2014) proposes that when an unvalued probe fails to find a suitable goal, values are simply filled in by default in the morphology. It is worth pointing out that this may be necessary, but it is empirically insufficient. For instance, it has been known for a long time (Kayne 1989) that in French or Italian the perfect participle agrees with the internal argument of unaccusatives (eventually left in situ in Italian) but does not agree with the internal argument of transitives, surfacing in the default masculine singular form. Evidently, in the second case it is not sufficient to say that there is no possible goal for the perfect participle probe – because there is one, namely the internal argument.

<sup>4</sup>The results are not exactly the same. For instance, as already discussed, in DPs it is far from clear whether N or D ought to have the unique set of interpretable phi-features at LF predicted by Chomsky (2001). No such issue arises under the present proposal.

## 2 Linkers

### 2.1 Introduction

The very fact that case stacking and linkers are differently named points to the existence of surface dissimilarities between them, beyond the fact that the canonical environment for both of them is DP DP<sub>Gen</sub>, when the genitive DP is a modifier of the head DP. Case stacking has the case of the head DP realized as an extra suffix on DP<sub>Gen</sub> as in Lardil (1); cf. (8) below. The linker, realizing case and phi-feature agreement with the head DP, is an independent morpheme (a clitic of sorts) preceding DP<sub>Gen</sub> as in Albanian (2); cf. (12ff.) below. Morphologically, the stacked case in Lardil is a pure copy on DP<sub>Gen</sub> of the instrumental case realized on the DP head, while in Albanian the linker is sensitive to case and to phi-features as well. Importantly, however, the morphological differences cross-cut the basic syntactic difference between suffix (stacking) vs. independent morpheme (linker). Thus, in Punjabi, the stacked morphology is sensitive to phi-features and case, rather like the Albanian linker.

There are also considerable distributional similarities between stacking and linkers. First, the two phenomena have the same distribution, hinted at in (2) by the fact that a ‘primary’ and a ‘dependent’ are mentioned. Here is what Richards (2013: 46–47) has to say about Lardil: “In general, morphology that appears on a nominal is realized not just on the head noun but on everything dominated by the DP, including possessors, demonstratives, and adjectives”, as in (1), repeated here as (8a), and in (8b). “Similarly, the Case of the head noun is realized on relative clauses modifying that noun”, as in (8c).

(8) Lardil (Richards 2013: 47)

- a. Ngada latha karnjin-i marun-ngan-ku maarn-ku.  
I spear wallaby-ACC boy-GEN-INSTR spear-INSTR  
‘I speared the wallaby with the boy’s spear.’
- b. Kara nyingki kurri kiin-i mutha-n thungal-i.  
Q you see that-ACC big-ACC tree-ACC  
‘Do you see that big tree?’
- c. Kara nyingki kurri kiin-i mutha-n thungal-i, ngithun-i  
Q you see that-ACC big-ACC tree-ACC I.GEN-ACC  
kirdi-thuru-Ø.  
cut-FUT-ACC  
‘Do you see that big tree, which I am going to cut down?’

Adjectival modification, genitives and relative clauses are also the three core contexts for the insertion of linkers, as illustrated in (9) with the Persian *ezafe*. In standard Persian, relative clauses in (9c-d) are introduced by the morpheme *-i*, which is considered to be an allomorph of the *ezafe* morpheme *-e* introducing adjectives and genitives in (9a-b) (Samvelian 2007).

(9) Persian

- a. asman-e abi  
sky-LKR blue  
'blue sky'
- b. ketab-e Hasan  
book-LKR Hasan  
'the book of Hasan'
- c. zæn-i [ ke mæn dust daræm ]  
woman-LKR that I love give.1SG.PRS  
'the woman I love'
- d. bæcce-i ke lebas-a-ro be-heš dad-æm  
child-LKR that clothes-PL-DOM to-him gave-1SG  
'the child that I gave the clothes to'

In the West Iranian language Kurmanji Kurdish, the same set of phi-feature-inflected linkers are realized in front of adjectives, genitives, and relative clauses, as in (10–11).

(10) Kurmanji Kurdish, Bahdini dialect (Franco et al. 2015: 279)

- a. kurk-(ak-)e: mazæn  
boy-(one)-LKR.M big  
'a big boy'
- b. dest-e kurk-i  
hand-LKR.M boy-OBL.M  
'the hand of the boy'

(11) Kurmanji Kurdish (McKenzie 1961: 203)

- aw kas-e: (ku) awwili b-e:-t  
DEM person-LKR.M (that) first SUBJ-come-3SG.PRS  
'that person who shall come first'

The constituent structure of linkers is of particular importance in establishing that they are structurally related to stacking. The literature is unanimous in concluding that the linker, while eventually agreeing with the head noun in a modification structure, forms an immediate constituent with the modifier (genitive, adjective, relative clause). In Albanian, linkers appear in front of genitives (adjectives, etc.) in predicative contexts with an overt copular ‘be’, as in (12). Copular sentences provide us with a straightforward argument for constituency, since the linker that appears in front of the genitive DP, following the copula, must be part of the structure of the DP, as shown in (13). For the time being, in (13) we make no commitment to the category label of the ‘article’.

(12) Shkodër, Geg Albanian

- a. Ky qft i dial-i-t.  
 this is LKR boy-OBL.SG-DEF  
 ‘This is of the boy’s.’
- b. Ky qft i n-i dial-i.  
 this is LKR a-obl.sg boy-OBL.SG  
 ‘This is of a boy’s.’

(13) [<sub>Lkr</sub> t [<sub>DP</sub> n-i dial-i ]]

The Iranian *ezafe*, despite conventional orthography associating it with the head noun of a complex DP, also forms a constituent with the following modifier adjective or genitive DP, as concluded by Larson & Yamakido (2008) and Philip (2012) among others. One argument in favour of this structure is that in sequences of more than one modifier, the last modifier bears no *ezafe*, while other modifiers are obligatorily associated with it. This is true in Persian (14) and in Kurmanji Kurdish (15), despite other differences, for instance the fact that the *ezafe* is invariable in Persian and agrees with the head noun in Kurdish. If the *ezafe* forms a constituent with the following modifier, as indicated by our brackets, the last modifier of the sequence is correctly predicted to be *ezafe*-free.

- (14) Persian (Samvelian 2007: 606, our brackets)  
 in ketâb-[e kohne-[ye bi arzeš-[e maryam]]]  
 this book-LKR ancient-LKR without value-LKR Maryam  
 ‘this ancient worthless book of Maryam’s’

(15) Kurmanji (Yamakido 2005: 121, our brackets)

- a. kitêb-ek-[e bas-[e nû]]  
 book-INDEF-LKR good-LKR new  
 ‘a good new book’
- b. xani-yek-[î bas-[î nû]]  
 house-INDEF-LKR good-LKR new  
 ‘a good new house’

Further evidence comes from coordination. Philip (2012: 37ff.) shows that in Persian, when the head noun is coordinated, there can only be one *ezafe* on the coordinated head, next to the modifier, as in (16). In other words, the *ezafe* is an integral part of the modifier, not of the modified noun. Therefore in Iranian, adjectival modifiers have the same structure as in Albanian, namely the one indicated in (16) for Persian.

(16) Persian (Philip 2012: 38)

- [kolâh(\*-e) va lebâs][-e Maryam]  
 hat-LKR and dress-LKR Maryam  
 ‘Maryam’s hat and dress.’

The languages exemplified, namely Albanian, Kurdish and Persian, all display the head-complement/modifier order, at least within the DP; they also uniformly have head-final (i.e. suffixal) morphological structures. Therefore we know that the linker structure with an independent head in (13) differs from the suffixed structure of Lardil. Leaving this aside, linkers and stacking structures involve the presence of a copy of the phi-feature/case specifications of a head DP within the projection of a modifier DP/AP/CP.

It is also worth returning briefly to the question of morphological differences. Franco et al. (2015) have access to dialect variation data within Albanian (Manzini & Savoia 2011a,b), as well as within Kurdish. In the Shkodër Geg Albanian variety in (12) the pre-adjectival linker varies according to the gender, number and case of the head noun; specifically, it takes the form *i* for the nominative masculine singular, *ε* for the nominative feminine singular and for the accusative, and *t* for the oblique, as in (17–18) (cf. Solano 1972; Camaj 1984; Turano 2004; Campos 2008 for standard Albanian).

(17) Shkodër, Geg Albanian

- a. dial-i i mað  
 boy-NOM.M.DEF LKR.NOM.M grown-up.M

- b. diali-n            e    mað  
 boy-ACC.M.DEF LKR grown-up.M
- c. diali-t            t        mað  
 boy-OBL.M.DEF LKR.OBL grown-up.M  
 ‘(to) the big boy’
- a’. vaiz-a            ε    maðε  
 girl-NOM.F.DEF LKR grown-up.F
- b’. vaizə-n        ε    maðε  
 girl-acc.f.def LKR grown-up.F
- c’. vaiz-əs        t        maðε  
 girl-OBL.F.DEF LKR.OBL grown-up.F  
 ‘(to) the big girl’

## (18) Shkodër, Geg Albanian

- a. diem-t            e    maði  
 boys-DIR.PL.DEF LKR grown-up.M.PL
- b. diem-vε        t        maði  
 boys-OBL.PL LKR.OBL grown-up.M.PL  
 ‘(to) the big boys’

In the Arbëresh (Italo-Albanian) varieties discussed by Manzini & Savoia (2011a), on the other hand, the pre-adjectival linker only agrees with the head noun in phi-features (number, gender) and displays no sensitivity to case. The variation internal to Iranian languages follows the same parameters as the variation between Albanian dialects. The Persian *ezafe* is a non-agreeing morpheme *e/i*. In Kurmanji Kurdish (19), the linker has three realizations, namely *e* for the masculine, *a* for the feminine and *et* for the plural. In Hawrami Kurdish in (20), the adjectival *ezafe* has different realizations, *-i*, *-æ*, *-e*, depending on the number and definiteness of the head noun. At the same time, Hawrami Kurdish distinguishes the adjectival *ezafe* from the genitival one, since the latter takes the invariable *-u* form.

## (19) Kurmanji Kurdish (Franco et al. 2015)

- a. kurk-(ak-)e:    mazən  
 boy-(one)-LKR.M big  
 ‘a/the big boy’

- b. ketʃk-(ak-)ɑ: mazən  
girl-(one)-LKR.F big  
'a/the big girl'
- c. kurk-e:t / ketʃk-e:t mazən  
boy-LKR.PL / girl-LKR.PL big  
'the big boys/girls'

(20) Hawrami Kurdish (Holmberg & Odden 2008: 132)

- a. æsp-i sya:w  
horse-LKR black  
'black horse'
- b. æsp-æ zil-ækæ  
horse-LKR.DEF big-DEF  
'the big horse'
- c. due æsp-e zil-e  
two horse-LKR.PL big-PL  
'two big horses'
- d. pæl-u halo-i  
feather-LKR eagle-OBL  
'eagle's feather'

In conclusion, stacking (involving a suffix as in (8)) and linkers (involving a head) display the same syntactic distribution (roughly, adnominal modification). Constituency tests also show that the linker is internal to the structure of the modifier – no less than stacked suffixes. Finally, linkers can display agreement in phi-features or in case or an invariant form – providing no basis for differentiating them from stacked morphology, which also may involve case (Lardil) and/or phi-features (Punjabi, cf. §1.1).

## 2.2 Analysis

As already mentioned in §1, only a few theorists see linkers as agreement heads, most recently Philip (2012) and Franco et al. (2015); cf. also Zwart (2006). Franco et al. provide a detailed survey of why the other construals of linkers proposed in the literature meet empirical difficulties in accounting for linker phenomena crosslinguistically. Consider the idea that linkers are a means for avoiding NN



sequences, embraced by Richards (2010) for Persian. Franco et al. note that in Albanian linkers create obvious identical sequences of their own. Thus, consider the oblique singular in (17c), *djali-t t mað* ‘the boy LKR big’; the linker reproduces the definiteness, case and phi-features of the head noun, yielding a morphological copy of the N’s ending. It is far from clear in what sense the linker would contribute to identity avoidance.

Case theories of linkers (Larson & Yamakido 2008) construe the linker as a way of assigning case to adnominal modifiers, both DPs and APs, which could not be assigned case by the head N. Again, this idea is difficult to transpose from a language like Persian which has very little inflectional morphology (and no inflectional case) to a morphologically rich language like Albanian. To take up *djali-t t mað* ‘the boy LKR big’ in (17c) again – it is unclear why a linker which exactly reproduces a piece of the head N would be able to assign case while the head N is not able to do so.

Finally, den Dikken & Singhapreecha (2004) take linkers to be copulas – effectively the counterpart of the verb ‘be’ in the DP domain. It appears, however, that the fact that linkers can be found in predicative contexts, such as Albanian (12), weakens this theory considerably; since the copula is already lexicalized, it is hard to see what role the linker could play. In fact, the (typologically rare) occurrence of linkers in predicative position provides counterexamples to the theory of linkers as breaking identical \*NN sequences – or as assigning case in the presence of an N head.

We conclude in favour of the construal of linkers as agreement heads – which is interesting in the context of the present discussion because case stacking is also essentially an agreement phenomenon. As also mentioned in §1, linkers present the standard theory of Agree with a considerable challenge. Consider for instance Albanian (2b), repeated here as (21a) – with the structure in (21b).

- (21) a. Shkodër, Geg Albanian (Manzini & Savoia 2011b: 105)
- |                  |                  |                  |
|------------------|------------------|------------------|
| ka:m-a           | ε                | tʃɛn-it          |
| paw-F.SG.NOM.DEF | lkr-F.SG.NOM.DEF | dog-M.SG.OBL.DEF |
- ‘the paw of the dog’
- b. [DP ka:ma [LKR ε [DP tʃɛnit ]]]

Within a standard Minimalist framework, it is assumed that phi-features are interpretable on nouns, and uninterpretable on functional heads acting as probes for the Noun (Carstens 2001). Therefore in (21a) *ka:ma* ‘the paw’ is the goal for a probe associated with the linker, conceived of as a pure bundle of phi-features

and case.<sup>5</sup> Probe status in standard Minimalist theory is associated with uninterpretability. Therefore, there is a syntactic head, namely the linker, that entirely consists of uninterpretable features. This is actually predicted to be impossible by Chomsky (1995). For, under Full Interpretation at the C-I interface, we expect uninterpretable material to be deleted; but if a head consists of uninterpretable material, then this leads to the deletion of structure – which violates Inclusiveness. In other words, classical Minimalism requires heads to be interpretable – but linker heads must be probes and hence uninterpretable.

This leaves the approach taken here in (7) and embraced by Franco et al. (2015), who assume that Agree works on sets of features which are uniformly interpretable. Their approach is best appraised starting with the simpler linker structure involving adjectival modification. Consider for instance Albanian (17a), repeated as (22) for ease of reference.

- (22) Shkodër, Geg Albanian  
 dial-i            i            mađ  
 boy-NOM.M.DEF LKR.M grown-up.M  
 ‘(to) the grown-up boy’

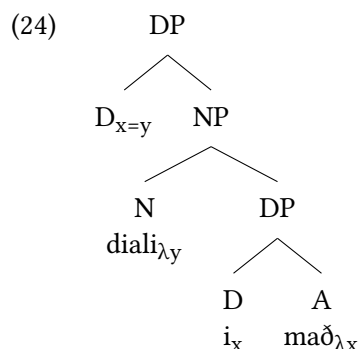
Franco et al. (2015) for Albanian, as well as Lekakou & Szendrői (2012) for Greek, take the category of the linker to be D, based (among other things) on its morphological identity with the definite article (Greek) or the definite inflection (Albanian; cf. table (18)). They further adopt Higginbotham’s (1985) proposals as to the interpretation of D-N sequences such as English *the boy*. The N *boy* is a predicate denoting the set of individuals with the property ‘boy’; its argumental slot (called the R-role; cf. Williams 1994) needs to be saturated by the determiner. Suppose we mechanically apply this analysis to Albanian (22). The predicate *mađ* ‘small’ must be satisfied by an argument, which is provided by the D element, as in (23).

- (23)
- $$\begin{array}{c}
 \diagup \quad \diagdown \\
 \text{D} \quad \text{A} \\
 i_x \quad ma\check{d}_{\lambda x}
 \end{array}$$

---

<sup>5</sup>In (21b) the potential goal – i.e. ‘paw’ – c-commands the potential probe – i.e. the linker structure. This change in directionality is allowed under certain models. Furthermore, the literature on languages with ‘post-nominal Ds’ (or definite inflections) consistently assumes that the noun (e.g. ‘paw’) moves from a lower (post-modifier) position to a higher (pre-modifier) position; see Turano (2002), Dimitrova-Vulchanova & Giusti (1998) for different implementations. Under this analysis, in (21b) there is a copy of ‘paw’ lower than the linker structure.

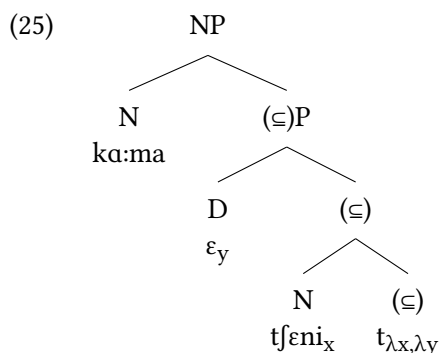
This is also the construal provided for Greek pre-adjectival linkers by Lekakou & Szendrői (2012), who distinguish the D category assigned to linkers from the Def category assigned to the definite operator. Franco et al. (2015) maintain the same label D for both, further assuming that all Ds have definiteness properties, besides being associated with nominal class (gender) and number features. Consider their structure (24) for example (22) (slightly simplified). The lower D simply values the argument slot of A, awaiting further quantificational closure. The higher D differs from it in that it is interpreted as a quantifier; i.e. as indicating that there is an individual (or set of individuals, or a unique/familiar etc. individual, and so on) to which the properties of the NP predicate and those of the sentential predicate both apply (or not). Following Higginbotham (1985), adjectival modification involves the identification of the theta-role of the adjective with the R-role of the noun (here  $x=y$ ); the same argument (the noun phrase's determiner, according to Higginbotham) satisfies both – whence the intersective reading of adjective modification. As a result, the linker D in (24) is essentially a bound variable of the operator D – much like a resumptive clitic may be a bound variable of a higher definite description.



Syntactically, theta-unification depends on Agree. Recall that following §1, phi-features are not precompiled as uninterpretable or interpretable (valued/unvalued etc.) on certain heads; thus, probe and goal status depend only on the syntactic configuration (ultimately *c*-command). In (24) the N *diali* ‘the boy’, in virtue of the phi-features associated with its D inflection, acts as a probe for the embedded pre-adjectival D linker *i*, its (closest) goal – in (24). Under Agree, phi-features must be matched; if they are not matched then Agree fails – and so ultimately does the interpretation at the LF interface, which returns no single argument satisfying both N and A.

Adjectival modification, as in (24), is not directly relevant to stacking, but genitival modification is at the core of it. With the background we have now established on pre-adjectival linkers, we are ready to tackle pre-genitival linkers. The latter are more complex, because they involve an analysis of genitive case. The standard Minimalist approach to case, namely that case is parasitic on agreement, is formulated by Chomsky (2000; 2001) for direct cases; i.e. nominative and accusative. We assume that this view is fundamentally correct (notwithstanding Baker & Vinokurova 2010). Nevertheless, it does not have any immediate implications for oblique case, of which genitive is an example (on morphological grounds, among others). To be more precise, an Agree approach could be made to work, at least within the sentential domain, by postulating Appl heads corresponding to dative and instrumental case (Pylkkänen 2008) – yet we are not aware of this approach being pursued at all DP-internally.

Following in essence the theory of obliques originally suggested by Fillmore (1968), we assume that oblique case inflections, like Ps (prepositions or postpositions), have a relational content. ‘Possessor’ in turn is the traditional characterization of genitives. Following Belvin & Dikken (1997), writing on the verb ‘have’, we take the relevant characterization of possession to involve ‘inclusion’. Following Manzini & Savoia (2011b), we notate it as  $(\subseteq)$ , to suggest that a part/whole interpretation is involved. Putting together this proposal with the proposal on linkers in (24), we obtain the representation in (25) for Albanian (21). The genitive noun is formed by the base *tʃɛni* ‘dog’ merged with the case ending *-t*. The latter encodes a relational part/whole content  $(\subseteq)$ , which projects a  $(\subseteq)P$  complement of the head noun *ka:ma* ‘paw’. In imputing a relational content to *-t*, we imply that it connects two arguments. One is the possessor ‘dog’ – namely the noun to which the oblique inflection attaches. The other argument is ultimately the possessum ‘paw’.



What is the status of the linker  $\varepsilon$  in (25) and of the agreement it enters into with the head noun? We assign to the linker the same D categorization that we adopted for the pre-adjectival context in (24), where we saw that the linker provides a partial discharge of the argumental role of the adjectival predicate. We have just proposed that an oblique case, specifically the genitive, is an elementary predicate, connecting two arguments (possessor and possessum) via a part/whole relation. As already stated, *tʃeni* ‘dog’ is the internal argument of the ( $\subseteq$ ) case relation (i.e. the possessor or ‘whole’); the linker provides a partial saturation of the ( $\subseteq$ ) predication inside the ( $\subseteq$ )P projection. Recall that the correct (intersective) interpretation of the adjectival modification structure in (24) depends on agreement between the head N and the linker, ultimately establishing that there is a single argument satisfying both the N’s and the A’s argumental slot. Similarly, in (25), the head N in virtue of its phi-features acts as a probe for the embedded D linker. This allows *ka:ma* ‘paw’ to be ultimately interpreted as the external argument of ( $\subseteq$ ).

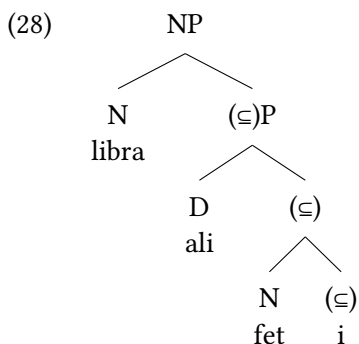
A considerable number of questions are raised by the account of linkers in (24–25). One which is of particular interest here regards the agreement relation between the head N and the linker in (25). The fact is that the configuration in (25) is equally compatible with a different derivation, under which the linker probes for the embedded N *tʃeni* agreeing with it. Full Interpretation at the interface should be achieved anyway, interpreting the linker as doubling the genitive – and the head noun as before as representing the other argument in the ( $\subseteq$ ) relation. Interestingly, we can show that this configuration, though impossible in Albanian, is attested in other languages. A case in point is Aromanian, which differs in this respect even from its closest cognate, Romanian.<sup>6</sup> Aromanian has pre-adjectival linkers, which are not present in Romanian (Campos 2008; Cornilescu & Giurgea 2013). On the other hand, in both Romanian and Aromanian the linker *al* is a form of the definite article (cf. Latin demonstrative *ille*) (Giurgea 2012), as in (26–27). While the linker agrees with the head noun in Romanian (26), it agrees with the embedded genitive in Aromanian (27).

- (26) Romanian  
 două cămăș-i ale băiat-ului  
 two shirts-F.PL LKR boy-DEF-OBL.M.SG  
 ‘two shirts of the boy’

<sup>6</sup>Our data are from varieties of Aromanian spoken in South Albania (in the towns of Fier, Divi-ake and Libofshe).

- (27) Aromanian (Franco et al. 2015: 324)  
 libr-a o fit or-u / ali fet-i  
 book-DEF.F.SG LKR boy-M.SG / LKR girl-OBL.F.SG  
 ‘the boy’s/the girl’s book’

We can assign to the Aromanian linker in (27) the same constituent structure assigned to Albanian (25), as shown in (28). Interpretively, on the other hand, the Albanian pre-genitival linker provides a lower-level satisfaction for an argument slot ultimately bound by the N head of the DP. The pre-genitival linker of Aromanian, by contrast, is a copy of the phi-features of the genitive itself. Recall now that under our proposed formulation of Agree, any phi-feature set can act as a probe or as a goal, according simply to the c-command configuration. In principle, it is therefore possible that the phi-feature set corresponding to the linker head acts as a probe for the embedded phi-feature set. This configuration appears to be realized in Aromanian (28).



Suppose we precompile (un)interpretability on lexical and functional heads in the sentence and in the DP. Then it stands to reason that the same element will have interpretable or uninterpretable status cross-linguistically (especially if lexical identity is involved, as in Romanian and Aromanian *ale/ali*). Thus, suppose the pre-genitival linker is uninterpretable, acting as a probe; everything else being equal, we expect its goal to be uniformly the genitive or the head noun. This is the position argued for by Philip (2012), for whom linker configurations must involve agreement with the head of the DP. According to Philip (2012) there are hardly any known exceptions to the predicted state of affairs – yet Aromanian (a relatively familiar language) must be added to her list.

On the present view, (un)interpretability is not essential to the working of Agree. Therefore, in the absence of pre-encoded features on the linker, we allow it to act as a probe for the lower genitive (Aromanian) – as we also allow the

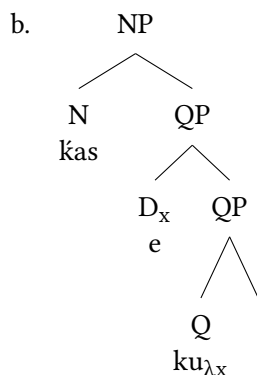
more frequently observed configuration where the N head of the DP acts as a probe for the linker. The parametric choice ultimately depends on the fact that the ( $\subseteq$ ) elementary predicate has two possible arguments; the linker may match the genitive and agree with it or introduce an instance of the external argument and agree with the head N. We assume, as is generally done, that the phasal organization of grammar prevents the phi-features of the higher N from probing into the lower N; in other words, assuming that a DP is a phase, the two N heads (overtly or covertly closed by a D operator) are in two separate phases, preventing Agree from applying.

Finally, besides pre-adjectival and pre-genitival contexts, linkers are found in relative clauses. We exemplified this context with Kurmanji Kurdish in (11), repeated in (29a) for ease of reference, where the linker agrees in phi-features (masculine singular) with the head noun and precedes the relative pronoun *ku*. We construe it in the same manner as both pre-genitival and pre-adjectival linker structures, as in (29b). In fact, adjectival modification bears a particularly close relation to modification by a relative clause. Both contexts involve the conjunction of two predicates, one represented by the predicative content of the head noun and the other represented by the adjective or the relative clause. Indeed, wh-relative pronouns are lambda operators turning the embedded sentence into a predicate with an open slot. In the spirit of our proposal concerning pre-adjectival linkers in (24), the linker *e* in (29b) introduces a partial saturation of the relative clause predicate. Agree applies between the embedded linker and the N head of the relative and ensures that the open slot of the relative clause is ultimately bound by the N head.<sup>7</sup>

<sup>7</sup>Albanian has two separate strategies for the formation of relative clauses. One involves the relative pronoun *që*, comparable to the English ‘that’ used to relativize direct arguments. A second strategy uses the relative expression *i cili* etc. inflected for phi-features and case and introduced by an article, namely *i* in the masculine singular nominative, *e* in the feminine singular nominative and *të* elsewhere. This way of forming relative clauses is disfavoured when relativizing direct arguments, as in (i), but is obligatory when obliques are relativized, as in (ii); note also the obligatory presence of a resumptive clitic. The question is whether the article in (i–ii) is a linker in the sense of (29b), or whether it forms part of a complex relative pronoun, on the model of French *lequel*, Italian *il quale*, etc. There are indications that the latter is correct, for instance the occurrence of the entire phrase under prepositions: *burrin prë të cilit* ‘the man for whom ...’.

- (i) ?Kam parë burrin të cilin e thirre  
I.have seen the.man ART whom him you.called  
‘I saw the man whom you called’
- (ii) Kam parë burrin të cilit i ke dhënë librin  
I.have seen the.man ART to.whom him you.have given the.book  
‘I saw the man to whom you gave the book’

- (29) a. Kurmanji Kurdish (McKenzie 1961: 203)  
 aw kas-e: (ku) awwili b-e:-t  
 DEM person-LKR.M (that) first SUBJ-come-3SG.PRS  
 ‘That person who shall come first.’



As indicated at the outset, the empirical focus of the present article is not linkers per se, but rather their unification with case/agreement stacking. We now have an analysis of linkers. If we are correct, Agree can achieve descriptive adequacy without employing any assumptions about features being interpretable or not interpretable, valued or not valued. Specifically, Agree can remain a simple one probe, one goal relation, without having to have access to multiple probing and/or multiple goals. Furthermore, there is no reason to modify the simplest c-command configuration of probe and goal in order to account for the variation between Albanian (25) and Aromanian (28). More importantly, from the point of view of a unification of linkers and stacking, accounting for linkers implied providing a baseline account of oblique case – or at least of genitive case. As we will see in §3, the basic descriptive problem of case/agreement stacking is that the inner case must always be an oblique. Our account will build on the treatment of obliques as elementary relations developed in this section in relation to linkers.

### 3 Case/agreement stacking

#### 3.1 Punjabi

In order to understand the Punjabi data, it is useful to have a sketch of Punjabi morphosyntax at hand (Bhatia 2000).<sup>8</sup> In Punjabi, there are two genders, mas-

<sup>8</sup>Our Punjabi data come from the Doabi variety spoken in the Indian town of Hoshiarpur. The genitival construct illustrated in (32) below for Punjabi characterizes several Indo-Aryan and Dardic languages (Payne 1995).



culine and feminine. A subset of masculine nouns present the inflection *-a* in the non-oblique singular form (30a) and *-e* in the oblique singular, i.e. when it is followed by a postposition, and in the non-oblique plural (30b). The oblique plural masculine, i.e. followed by a postposition, is in turn realized as *-ea* (31c). The feminine does not display a specialized oblique form. At least some feminine nouns present the inflection *-a* in the plural, as in (31a–a’); another subset of them alternates between a singular form with final *-i* and a plural with *-iã*, as in (31b–b’).

- (30) a. *muŋd-a*  
       ‘boy-M.SG’  
       b. *muŋd-e*  
       ‘boy-M.SG.OBL/boy-M.PL’  
       c. *muŋd-ea*  
       ‘boy-M.PL.OBL’
- (31) a. *kita:b*  
       ‘book.F.SG’  
       a’. *kitabb-a*  
       ‘book-F.PL’  
       b. *kur-i*  
       ‘girl-F.SG’  
       b’. *kur-iã*  
       ‘girl-F.PL’

A genitive modifying a noun bears its own (oblique) phi-feature inflection, followed by the case postposition *d-* and then by a phi-feature inflection agreeing with the modified noun.<sup>9</sup> In (32a) *muŋd-* ‘boy’ (in the absolutive case, or absolute

<sup>9</sup>Genitive in Punjabi yields a person split of sorts, since it is realized as *d-* on lexical nouns, but as *r-* on Participant (1/2 person) pronouns, as in (i). In either instance, the genitive postposition is followed by an inflection agreeing with the head noun.

- (i) *te-r-i/-iã*            *kəmiddz/kəmiddz-a*  
       YOU-GEN-F.SG/-F.PL shirt.F.SG/shirt-F.PL  
       ‘your shirt(s)’

Apart from dative *nu*, genitive *de/re* and ergative *ne*, other postpositions in Punjabi do not attach directly to the oblique form of the noun, but rather to the noun followed by genitive

form; cf. Bailey 1904) bears the masculine plural inflection *-ea*, followed by the genitive *-d*, followed in turn by a masculine singular inflection *-a*, which agrees with *darwaddz-a* ‘door’. In (32b-b’) the inflection following *-d* varies according to whether *kita:b* ‘book’ is in the singular or plural.

(32) Punjabi

- a. mund-*ea*-      d-*a*      darwaddz-*a* nam-*a*      a  
 boy-M.PL.OBL- GEN-M.SG door-M.SG new-M.SG be  
 ‘The boys’ door is new.’
- b. mund-*e*-      d-*i*      kita:b      nam-*i*      a  
 boy-M.SG.OBL- GEN-F.SG book(F.SG) new-F.SG be  
 ‘The boy’s book is new.’
- b’. mund-*ea*-      d-*ia*      kitabb-*a* nam-*ia*      a  
 boy-M.PL.OBL- GEN-F.PL book-PL new-F.PL be  
 ‘The boys’ books are new.’

The structure illustrated in (32) is recursive, as witnessed by the examples in (33). Thus, in the sequence of two genitives ‘the sister of the friend of the boy’ in (33a), the most embedded genitive ‘the boy’ bears the *-d* postposition followed by a feminine singular *-i* inflection, agreeing with the feminine singular ‘the friend’ – just as ‘the friend’ in turn bears a feminine singular *-i* agreement with ‘the sister’. Recall from the declension schemas in (30–31) that in the feminine, the noun is only inflected for phi-features; in the masculine, however, direct case is differentiated from oblique – i.e. the form of the noun which co-occurs with postpositions. This case distinction is in fact recorded by the feature set which inflects the genitive postposition. Consider for instance the examples in (33b-b’). The most embedded genitive, i.e. ‘of the boy’, agrees with the head it modifies, which is in turn a genitive, i.e. ‘of the brother(s)’. Therefore, the inflection on the genitive postposition *d-* is oblique masculine *-e*. This contrasts with (32a),

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morphology, which surfaces in the invariable form *de/re*, as in (ii). This ‘case compounding’ phenomenon is consistent with Svenonius (2006), who brings out the existence in the internal structure of PPs of both case components (here the genitive *de/re*) and of components with lexical/interpretive affinity to nouns, namely Axial Parts (here the embedding preposition).

- (ii) o-*de*-*nal*  
 him-GEN-with  
 ‘with him’

where the masculine singular head of the construction is in the absolute form (direct case) and the agreement following *d-* is therefore the masculine singular non-oblique *-a*.

(33) Punjabi

- a. *munḍ-e-d-i*                      *dost-d-i*                      *pen-ne*  
 boy-M.SG.OBL-GEN-F.SG friend(F.SG)-GEN-F.SG sister(F.SG)-ERG  
*kitt-a*                      *a*  
 done-M.SG be  
 ‘The sister of the friend of the boy did it.’
- a’. *munḍ-e-d-i*                      *dost-d-i*                      *pen-nu*                      *me*  
 boy-M.SG.OBL-GEN-F.SG friend(F.SG)-GEN-F.SG sister(F.SG)-DAT I  
*kita:b*                      *ditt-i*                      *a*  
 book(F.SG) given-F.SG be  
 ‘I gave the book to the sister of the friend of the boy.’
- b. *munḍ-e-d-e*                      *pra-d-i*                      *kita:b*  
 boy-M.SG.OBL-GEN-M.OBL brother(M.SG)-GEN-F.SG book(F.SG)  
*nam-i*                      *a*  
 new-F.SG be  
 ‘The book of the brother of the boy is new.’
- b’. *munḍ-e-d-e*                      *prama-*                      *d-i*                      *kita:b*  
 boy-M.SG.OBL-GEN-M.OBL brother(M.PL)- GEN-F.SG book(F.SG)  
*nam-i*                      *a*  
 new-F.SG be  
 ‘The book of the brothers of the boy is new.’

From a typological point of view, the fact that agreement on *d-* is sensitive to direct vs. oblique features establishes the continuity between the phenomena we are describing in Punjabi and the prototypical *Suffixaufnahme* of Australian languages, as discussed in §3.1 – as well as with linkers in languages like Albanian. Here, however, we are not interested in the functional equivalence between these various phenomena – but rather in whether they share formal properties, including their constituent structure and the rules that apply to it.

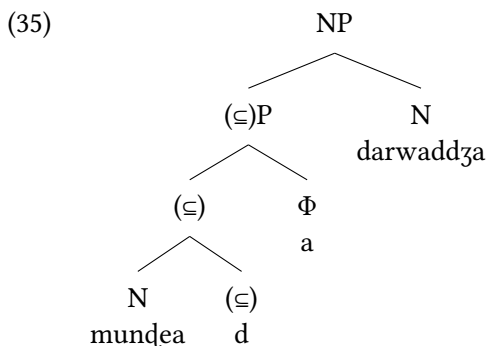
Following the discussion of Albanian (25), we take genitive case in Punjabi to correspond to the part-whole elementary predicate, notated ( $\subseteq$ ). The only difference is that, as argued by Payne (1995), oblique cases in Indo-Aryan correspond to postpositions, as opposed to inflections. Thus, in the coordination in (34a), the

*d*-genitive postposition takes a coordination of two DPs as its complement. This shows that the nature of *d*- is phrasal, akin to English -'s, rather than inflectional. A similar argument can be built from genitive nouns modified by an adjective. As can be seen in (34b), the *d*- case postposition appears only once in the structure, embedding the whole genitive NP 'open door'.

(34) Punjabi

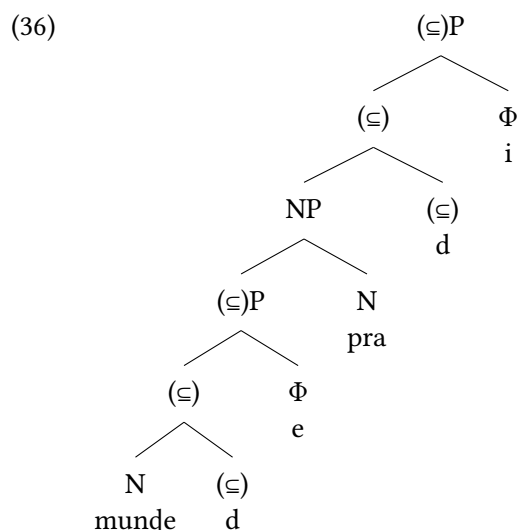
- a. rami e ran d-a pra  
 Rami and Ran gen-M.SG brother(M.SG)  
 'Rami and Ran's brother'
- b. kull-e darwaddz-e d-i tʃabb-i lend-i a  
 open-M.SG.OBL door-M.SG.OBL GEN-F.SG key-F.SG taking-F.SG be  
 'I(F) am taking the key of the open door.'

Next, Albanian is head-initial, while Punjabi is head-final; thus, in structure (35) for example (32a), the N *darwaddz-a* 'door' follows its genitive modifier. Second, recall that in Albanian (25), we categorize the inflections on N as D, as they carry not only phi-features and case, but also definiteness. In Punjabi, the inflections on N are compatible with both a definite and an indefinite reading, and do not therefore have D content. Because of this, we assign them the  $\Phi$  category in (35). The interpretation of (35) is the same as in Albanian (25) – namely that a ( $\subseteq$ ) relation, lexicalized by the postposition *d*, holds between the argument to which the genitive morphology attaches, i.e. *munḑea* 'the boys' (the whole or possessor), and the head DP *darwaddza* 'the door' (the part or possessum).



The ( $\subseteq$ )P structural cell in (35) can of course be embedded under another oblique, yielding recursive structures of the type illustrated in (36) for example

(33b). Recall that in the masculine, what we have called a  $\Phi$  inflection in (35) displays sensitivity to direct vs. oblique case. Importantly, the oblique inflection of the masculine never appears as a stand-alone form of the noun. In other words, its only occurrences are as a bound form selected by a postposition. Based on this observation, we conclude that the oblique masculine inflections *-e* and *-ea* do not bear ( $\subseteq$ ) content, but instantiate  $\Phi$  – with the proviso that it is sensitive to selection by a ( $\subseteq$ ) case element, or to agreement with an element selected by ( $\subseteq$ ). Specifically, in (36), the *-e* oblique inflection is triggered by agreement with the oblique inflection of the N, selected by *d-*.



In copular sentences, including most of the examples in (33–34), the predicative adjective agrees with the DP subject. On the basis of the parallelism observed so far between adjectives and genitives, we expect that the postcopular genitives will present the same agreement structure as genitives embedded in DPs. This prediction is verified by the data in (37).

(37) Punjabi

- a. mundɛ-e-d-i                      kita:b-d-e                      paper  
 boy-M.SG.OBL-GEN-F.SG book(F.SG)-GEN-M.PL sheets(M.PL)  
 me-r-e                      a  
 me-GEN-M.PL be

‘The sheets of the boy’s book are mine.’

- b. ghar-d-e                      darwaddz-ea-d-ia                      tʃabb-ia me-r-ia  
 house-GEN-M.PL.OBL door-M.PL.OBL-GEN-F.PL key-F.PL me-GEN-F.PL  
 ‘The keys of the house’s door are mine.’

Payne (1995: 295) reports the existence of reduced relative clauses headed by perfect participles, where the external argument of the perfect participle surfaces in the genitive and agrees with the head noun. In our corpus, this pattern is attested by data like (38). Recall that Punjabi is a head-final language. The fact that ‘meat’ in (38a) follows the participle ‘done’, of which it is the object, suggests that ‘meat’ heads a DP, modified by the participle and by the genitive that precedes the participle – i.e. by a reduced relative. On the other hand, sentences like (38b) are also possible, where ‘the meat’ precedes the participle ‘done’ and is in turn preceded by the genitive. In both environments the genitive alternates with the ergative.

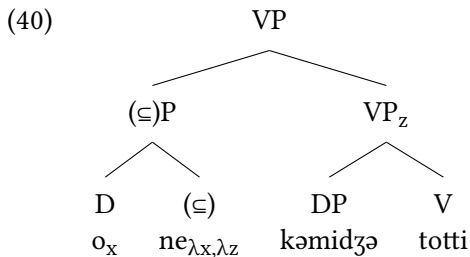
- (38) a. mɛ kur-i-d-a                      / kur-i-ne                      bəna-ea                      mi:tə  
 I(F) girl-F.SG-GEN-M.SG / girl-F.SG-ERG done-M.SG meat.M.SG  
 khan-d-i                      a  
 eat-PROGR-F.SG be  
 ‘I am eating the meat cooked by the girl.’
- b. mɛ kur-i-d-a                      / kur-i-ne                      mi:tə                      bəna-ea  
 I(F) girl-F.SG-GEN-M.SG / girl-F.SG-ERG meat.M.SG done-M.SG  
 khan-d-i                      a  
 eat-PROGR-F.SG be  
 ‘I am eating the meat cooked by the girl.’

Main sentences constructed with a participle, an absolute argument and a genitive argument, as in (39a), yield a meaning that Stroński (2013) characterizes as resultative for a range of Indo-Aryan languages. For ease of comparison, (39b) displays an ordinary perfective sentence, with the internal argument in the absolutive form and the external argument in the ergative. As again highlighted by Stroński, the resultative form requires the presence of the participle of ‘be’, *o* in Punjabi, which we also see in the stative predication in (39c).

- (39) a. o-d-i                      kəmidzə tott-i                      o                      a  
 he-GEN-F.SG shirt.F.SG wash.PERF-F.SG been be  
 ‘He has the shirt washed.’

- b. o-ne/mɛ kəmidzə tott-i (a/si)  
 he-ERG/I shirt.F.SG wash.PERF-F.SG be/be.PST  
 ‘He has washed the shirt.’
- c. eval-i kəmidzə tott-i (o) a  
 this-F.SG shirt.F.SG wash.PERF-F.SG been be  
 ‘This shirt is washed.’

There is an important stream of literature connecting ergative subjects, as seen in Punjabi (39b), with possession. Benveniste (1966: 176–186) concludes that “the Old Persian [ergative] structure ... is intrinsically possessive in its meaning” (cf. Butt 2006 on the dative-ergative connection in Indo-Aryan). For Manzini et al. (2015), the ergative case in sentences like (39b) has the same ( $\subseteq$ ) content reviewed here for genitives/datives; specifically, it introduces a relation between the DP it embeds ‘he’ and a nominal-like participial predicate, ‘washed the shirt’. In essence, the ( $\subseteq$ ) relation lexicalized by the ergative says that the state/event denoted by the VP (the perfect and its internal argument) is included by/located at the external argument.<sup>10</sup> In other respects, the ergative structure in (40) is characterized by agreement of the perfect participle with the internal argument, corresponding in Minimalist terms to a probe on  $v/V$ .



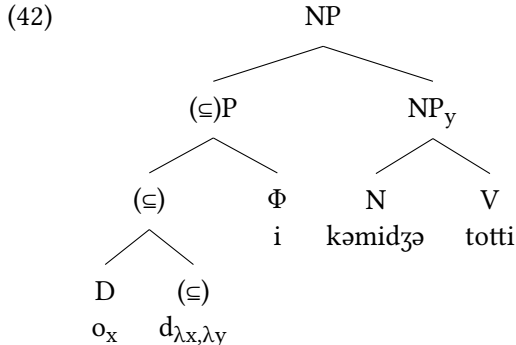
In the generative literature, the existence of a connection between ergative structures and nominalizations – hence between ergative subjects and possessors – is proposed by Johns (1992; cf. Yuan 2013 for a Minimalist update). In the words of Johns (1992: 61), the Inuktitut sentence in (41) “is constructed syntactically along the lines of ‘The bear is the man’s stabbed one’”. Thus, in Johns’ proposal the verb is a nominalization, which is first merged with the genitive/ergative

<sup>10</sup>Though a bare VP structure for Punjabi perfects is proposed by Manzini et al. (2015), in frameworks which distinguish a  $vP$  projection for transitivity from a VoiceP for introducing external arguments (Harley 2013), it is equally possible to characterize the predicate as  $vP$  (see Nash 2014). More descriptive labels such as PerfP are also possible.

possessor; the structure is then completed by the logical object of the verb in the absolutive. The verb agrees with the genitive/ergative; the morphology of the agreement suffix on the verb is exactly the same found on nouns agreeing with a possessor.

- (41) Inuktitut (Johns 1992: 61)  
 anguti-up nanuq kapi-ja-nga  
 man-ERG polar bear.ABS stab-PERF.PRT-3SG/3SG  
 ‘The man stabbed the bear.’

Punjabi (39a) matches quite closely the Inuktitut example in (41).<sup>11</sup> We take our bearings from Johns’ treatment of Inuktitut and treat the internal argument-participle complex as a nominalization. To be more precise, in the structure in (42) we advance the hypothesis that the noun ‘shirt’ heads the embedded predicate. Following our established practice, we treat the genitive as an elementary ( $\subseteq$ ) predicate – which implies that the argument it embeds is interpreted as a possessor. The reading is akin to that indicated by Johns for Inuktitut, namely a possession predication between ‘he’ and ‘the shirt washed’ – of the type rendered by the possession verb ‘have’ in English ‘He has the shirt washed’.



<sup>11</sup>There is another possible parallel between reduced relatives of the type in (38a) and structures in Japanese (Miyagawa 2011 and references quoted there), Turkic languages (Kornfilt 2008), Dagur (Mongolian; Hale 2002) and Polynesian (Herd et al. 2011), where (reduced) relatives also present a genitive subject. In several of these languages, though not in all (for instance not in Japanese or in standard Turkish) the genitive agrees with the head noun of the relative. Dagur in (i) illustrates the agreement between the head of a relative and the embedded genitive subject.

- (i) Dagur, Mongolian (Hale 2002: 109-110)  
 [[mini au-sen] mer<sup>y</sup>-min<sup>y</sup>] sain  
 1S.GEN buy-PERF horse-1S.GEN good  
 ‘The horse I bought (bought by me) is good.’



In (42) the outer  $\Phi$  slot of the genitive registers agreement with the nominal predicate. We take it that what we have described as reduced relatives in (38) involve the embedding of the structure in (40) or in (42), depending on the presence of a genitive or of an ergative.

### 3.2 Lardil and the crosslinguistic distribution of stacking

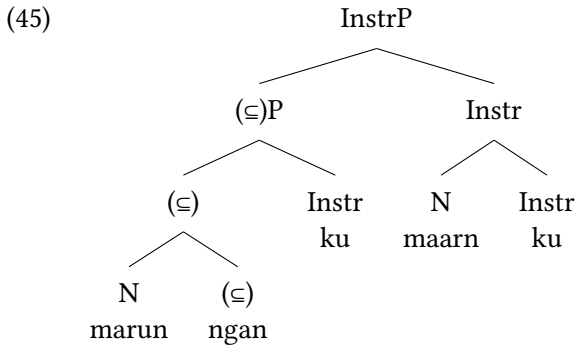
The question now arises whether canonical case stacking of the type seen in Pama-Nyungan languages, for instance Lardil in (1), can be unified with the Punjabi stacking and ultimately with Albanian linkers. While the discussions of Albanian and Punjabi that precede are based on primary data, in the discussion of Pama-Nyungan languages we depend entirely on data and generalizations provided by the literature. As before, our interest is not descriptive, but theoretical – i.e. considering whether, and how, the approach that we have taken to agreement and to oblique case leads to unified structures and derivations.

Let us begin with examples of adjectival modification, such as (8b), repeated below for the relevant part in (43). Adjectival structures in Lardil do not appear dissimilar from what one would observe in more familiar languages, where Agree applies between the adjective and the noun, as well as with the determiners and quantifiers of the DP. Thus, the demonstrative acts as a probe for the adjective and the noun, ultimately ensuring agreement all the way through. The only notable property of Lardil is that *n*, A and D inflections do not appear to have any phi-feature content, but only case content.

- (43) Lardil  
 kiin-i mutha-n thungal-i  
 that-ACC big-ACC tree-ACC  
 ‘that big tree’

Adnominal modification by a genitive, as in example (1), is partially reproduced below in (44). The internal structure of the genitive phrase is the same as proposed for Albanian or Punjabi, as in (45). Following the parallel with Albanian and Punjabi, we take it that so-called genitive case introduces the ( $\subseteq$ ) elementary predicate. Agree is responsible for the presence of a partial copy of the possessum, i.e. the external argument of the ( $\subseteq$ ) elementary predicate, within the genitive phrase ( $\subseteq$ )P. In this instance, the inflectional properties that copy under Agree are oblique case ones, which we provisionally notate Instr(umental).

- (44) Lardil  
 marun-ngan-ku maarn-ku  
 boy-GEN-INSTR spear-INSTR  
 ‘with the boy’s spear.’

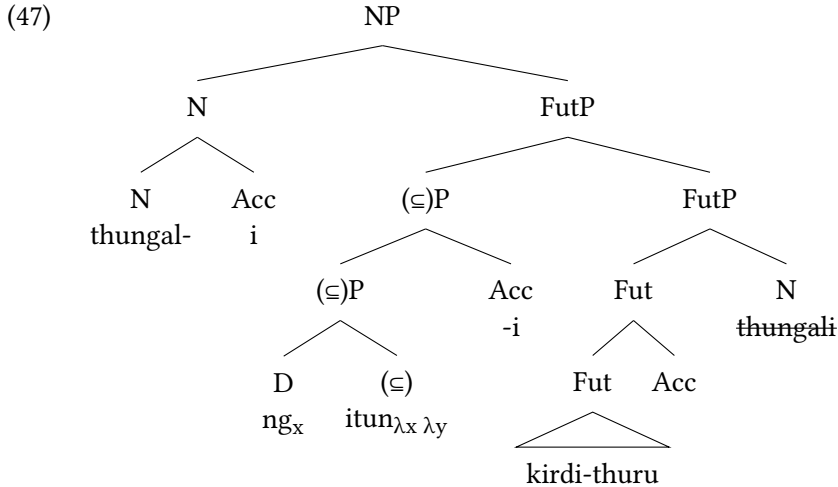


For the sake of completeness, we consider relative clause modification as well. The relevant portion of the example in (8c) is reproduced in (46), where the Acc case of the relative clause head is copied on all constituents of the relative clause. We tentatively propose that the state of affairs just observed is due to the fact that the verb is a participial form (here a future participle). Evidence for this claim is found in the Ngarna languages (Pama-Nyungan), as discussed by Breen (2004: 234–236).

- (46) Lardil  
 thungal-i, ngithun-i kirdi-thuru-Ø  
 tree-ACC I.GEN-ACC cut-FUT-ACC  
 ‘...tree, which I will cut down (for me to cut down)’

If the future form in (46) is participial, we expect it to agree with the head of the relative clause. More interestingly, the embedded subject is in the genitive case; this confirms the construal of the embedded form as a nominalization of sorts (what we have called a participle) – and leads to case stacking. Following the discussion of Punjabi, the  $(\subseteq)$  relation is maintained as the content of the genitive case, where the external argument of  $(\subseteq)$  in (47) is FutP. Thus the event ‘cut down (the tree)’ is interpreted as included by/located at the speaker ‘I’, which fills the internal argument slot of  $(\subseteq)$ . As for the extra argument slot available in linker/stacking languages in the projection of  $(\subseteq)$ P, the closest probe it can enter an agreement relation with is the relative clause. Hence the left edge of the  $(\subseteq)$ P

is taken up by a copy of the inflectional properties of the head of the relative clause, namely the Acc case.



Let us go back to the simple case of stacking in adnominal modification of the type in (45). So far, we have only seen stacking configurations where a genitive is involved. The outer case/agreement can correspond to any direct or oblique case, as can be seen in (44), where it is instrumental vs. (46), where it is accusative – but the inner case is genitive. In fact, the former condition appears to be too restrictive – the inner case can be any oblique, though it cannot be a direct case.<sup>12</sup> This generalization can be illustrated in a particularly clear way in Pama-Nyungan languages. For instance, Dench & Evans (1988) and Dench (1995) consider in detail the Western Australian language Martuthunira. Three typical case stacking configurations where the inner case is not genitive are provided in (48). In (48b), the inner case on ‘spear’ is proprietive, essentially the equivalent of English ‘with’ (comitative/instrumental). In (48a), the inner case is privative – i.e. the negation of ‘with’ (‘without’). In (48c) the inner case is locative.

<sup>12</sup>Pesetsky (2013) draws a parallel between overt case stacking as described by Richards (2013) and case inflections in Russian, which according to him result from the stacking of several cases and deletion of all but the outermost case. Specifically, Pesetsky argues that the innermost case in Russian is always genitive. Under the present view, however, cases are stacked, recursively, when the outer case lexicalizes agreement with another argument, excluding unification with Pesetsky’s Russian case stacking.

- (48) Martuthunira, Pama-Nyungan (Dench & Evans 1988: 7ff.)
- a. ... ngurnu-marta kanyara-marta tharnta-wirriwa-marta  
 ... that.OBL-PROP man-PROP kangaroo-PRIV-PROP  
 ‘... the man without a kangaroo’
  - b. nhawu-layi ngurnaa kurryarta-marta-a-rru  
 see-FUT that.ACC spear-PROP-ACC-now  
 ‘I’ll see that one with a spear now.’
  - c. ngali panyu-ngka-a warra kalyaran-ta-a thuur.ta-a manku-layi  
 IDU.INCL good-LOC-ACC CONT tree-LOC-ACC fruit-ACC get-FUT  
 ‘We’ll get fruit in a better tree.’

We can find evidence for the same distribution in other language families. Of particular interest here are Indo-Aryan languages. As shown by Payne (1995), in Kashmiri (Dardic) the benefactive postposition *k’ut* ‘for’ has the same agreement behaviour as the genitive postposition, agreeing with ‘house’ in (49a) and with ‘horses’ in (49b). Payne (1995) further reports the existence of agreeing locative postpositions in Punjabi such as *vicc* ‘in’ in (50) and *əndər* ‘inside’. In other words, case/agreement stacking is supported by locatives and by high applicatives (benefactives) in the sense of Pylkkänen (2008).

- (49) Kashmiri (Payne 1995: 293)
- a. [ paranas k’ut]           gari  
 reading.OBL.I for.DIR.M.SG house.DIR.M.SG  
 ‘house for reading’
  - b. [ cur’an k’it’aw]       gur’aw  
 thieves.OBL.I for.OBL.II.F.PL horse.OBL.II.F.PL  
 ‘horses for thieves’
- (50) Punjabi (Payne 1995: 289)
- [ pənjāb vicl-ī] hālət  
 Punjab in-F.SG situation.F.SG  
 ‘the situation in the Punjab’

Let us then assume that any case can be stacked on top of an oblique – but no case can be stacked on top of a direct case, as in (51). In morphological terms, the generalization is that direct cases can only be stacked as outermost in a stacking configuration – which is Richards’s (2013) formulation: “if a structural case

morpheme is to appear, it must be on the periphery of the DP's inflection".<sup>13</sup> Nevertheless it is hard to believe that such a strong cross-linguistic generalization reflects some morphological quirk, and not some deeper syntactic property – which the morphology of course externalizes.

- (51) Case/phi-feature stacking (by affixes or linker heads) is restricted to oblique DPs (genitives, datives, instrumentals, locatives).

A possible way to conceptualize this state of affairs in (51), suggested by the typological literature, is that case/agreement stacking is restricted to structure involving adnominal modifiers. Dench (1995: 386) expresses essentially this generalization by saying that “The NP is defined as a sequence of adjacent nominals over which some nominal suffix is distributed” – in other words, the spreading of nominal suffixes (case stacking) is possible to the extent that a nominal constituent underlies it. The canonical example of adnominal modification is by genitives – but instrumentals/ comitatives or locatives are equally possible adnominal modifiers. However, this characterization is arguably insufficient. For instance, while the adnominal modification relation is generally clear with genitives, it is much laxer with other obliques; specifically, it seems from examples like (48c) that the notion of adnominal modification must be stretched to cover environments where the noun and its modifier do not form a constituent. The same point in fact can be made with genitives in postcopular position, such as

<sup>13</sup>Richards (2013) does not derive the generalization that we are interested in. Rather, he discusses in detail a different restriction on case stacking, illustrated in (i–ii). In (ii), both Instr and Fut surface on ‘spear’ – but in (i) only Instr surfaces on ‘spear’ and not Acc. This is an instance of blocking an outer Acc – i.e. one that is expected to have the same position in (ii) as the outer Fut in (i).

- (i) Ngada latha liban-i                      kurrumbuwa-r.  
I        spear pumpkinhead-ACC multi.pronged.spear-INSTR  
‘I speared the pumpkinhead with a multi-pronged spear.’
- (ii) Ngada la-thur    liban-kur              kurrumbuwa-ru-r.  
I        spear-FUT pumpkinhead-FUT multi.pronged.spear-INSTR-FUT  
‘I will spear the pumpkinhead with a multi-pronged spear.’

These examples also raise the problem of agreement in Fut features. Richards observes that “the future suffix is morphologically identical to the instrumental suffix, with all the same allomorphs”. We in turn note that future/irrealis in a language like English can be introduced by a preposition “morphologically identical” to the high applicative/benefactive, namely *for* (e.g. *I desire for John to win*). These are all possible cues towards the conclusion that the content ‘future/irrealis’ need not necessarily be conveyed by an exponent of T.

Punjabi (37) or Albanian (12); one would need to argue that the subject of the copula is raised from within a complex DP of which the genitive is a modifier. This is unlikely, to the extent that the copula is deemed to embed a predicative small clause, not a DP.

More to the point, Dench's suggested generalization does not really explain (51) in terms of more primitive notions, but rather substitutes for the descriptive notion of 'oblique' in (51) the equally descriptive notion of 'adnominal modification'. In present terms, explaining (51) amounts to providing a theoretical content for the notion 'oblique'. The approach we have adopted here to genitive, beginning with the analysis of Albanian linkers in §2.1, leads us in the direction of assuming that what sets oblique cases apart from direct case is their relational nature. Specifically, in their investigation of the case system of Albanian, Manzini & Savoia (2011a,b) propose a construal of the genitive/dative syncretism 'oblique' and of the residual ablative (locative) in terms of the relation ( $\subseteq$ ) introduced in §2 for the genitive. Franco et al. (2015) argue in turn that instrumentals/comitatives instantiate the reverse relation ( $\supseteq$ ), where the DP bearing the DP case is to be construed as 'included by'/'possessed by' the DP head of the complex nominal.

This conceptualization of oblique case is easily explained with examples from familiar Western European languages, including English, which use Ps as externalizations of the relevant relations. In present notation, in (52a) the English preposition *of* relates the head and the modifiers of the DP by introducing a ( $\subseteq$ ) part/whole relation between them. The English preposition *to* introduces exactly the same ( $\subseteq$ ) relation in (52b) – holding between the argument embedded by *to* and the theme of the ditransitive predicate (Kayne 1984; Pesetsky 1995; Harley 2002; Beck & Johnson 2004; Manzini & Franco 2016). Languages like English which have distinct genitive and dative prepositions or cases simply have different externalizations for the ( $\subseteq$ ) content when embedded in nominal contexts (52a) or verbal contexts (52b). Languages like Albanian (Aromanian, etc.) which have the same morphological realization for genitive and dative simply have a non-context-sensitive externalization for the ( $\subseteq$ ) content.

- (52) a. the hat [ $_{(\subseteq)}$  of [the girl]]  
 b. I gave [the hat [[ $_{(\subseteq)}$  to [the girl]]]]

In turn, the comitative/instrumental preposition *with* may reverse the relation conveyed by the genitive (Levinson 2011). This is illustrated by the comparison between English (52a) and (53a). English *with* in (53a) introduces a possessum of the head noun of the DP (the possessor); following Franco & Manzini (2017), we notate the relevant relation with ( $\supseteq$ ). They further argue that the comitative

and instrumental values also associated with English ‘with’ are contextual manifestations of the same ( $\supseteq$ ) relation. Thus in (53b), *with the hat* has the canonical possession interpretation already noted for (53a); *with John* is a comitative, to the extent that ‘John’ carries the same degree of animacy/intentionality as ‘the girl’ of which it is predicated. Finally, in (53c) the instrumental reading of *with the hat* depends on it being a concomitant of ‘the girl’ in the role of causer of the event. In this sense, Franco & Manzini (2017), following in part Bruening (2012), propose that the ( $\supseteq$ ) relation applies between the instrumental (the part) and the subevent represented by the VP (‘chasing the fly’).

- (53) a. the girl [ $\supseteq$ ] with [the hat]]  
 b. The girl left [ $\supseteq$ ]with [the hat/John]]  
 c. The girl chased the fly away [ $\supseteq$ ]with [the hat]]

Recall that our goal here is explaining the generalization in (51) restricting case/agreement stacking to oblique arguments. What we have now proposed is that there is a common denominator in the oblique system (genitive-dative-instrumental). In terms of this proposal, the generalization in (51) can be restated as in (54). If oblique is seen as the ( $\subseteq$ )/( $\supseteq$ ) elementary relator, then it supports – and in fact it requires (in the languages where the relevant parameter is active) – a lexicalization of both its arguments within its maximal projection. The internal argument is its complement, the external argument is introduced as a linker or a stacked affix.

- (54) The external argument of the ( $\subseteq$ )/( $\supseteq$ ) relator (part/whole) is instantiated within the relator’s maximal projection (phase).

In evaluating the proposal in (54), it is worth keeping in mind what the range of possible alternatives is. The Distributed Morphology literature that endeavours to decompose traditional cases into a system of elementary features recognizes [obl] as a primitive (Halle & Vaux 1998; Calabrese 2008). However, in terms of [obl], the best generalization we can reach about Suffixaufnahme is indeed (51). The formal syntax literature, in turn, focuses on Chomsky’s (1986) distinction between structural case (depending on a syntactic configuration) and inherent case (depending on the selection properties of a predicate). Though the canonical structural cases are the direct cases, genitive is also typically treated as structural by the generative literature. Indeed, in present terms, this means that the ( $\subseteq$ )/( $\supseteq$ ) content does not necessarily depend on the inherent properties of the predicate head, but rather on a structural configuration. Therefore, the

structural/inherent distinction has no relevance for the Suffixaufnahme generalization. Case/agreement stacking examples may involve selected, i.e. inherent, obliques or what would count as structural obliques – the distinction is irrelevant to the distribution of Suffixaufnahme.

We thus revert to the possibility that there is no syntactic substance to Suffixaufnahme. And yet, this makes it extremely difficult to capture the formal (not merely functional) overlapping of affixation and linker phenomena – where by common consent linkers involve phrasal syntax. In other words, Suffixaufnahme provides an argument in favour of the syntactic relevance of the notion of oblique. The latter in turn suggests that more primitive syntactic notions may underlie the descriptive ‘oblique’. Here we have suggested that the relevant notions are that of elementary relator (with the part/whole content) and the case/agreement stacking corresponds to the presence of complete or partial copies of the arguments satisfying the relator within its phrasal projection.

## 4 Conclusions

In this paper, we have shown that stacked suffixes and linker heads display the same syntactic distribution, roughly adnominal modification. Furthermore, constituency tests show that linker heads, no less than stacked suffixes, are internal to the projection of the modifier phrase (an AP, a genitive phrase, a relative clause). From a morphological point of view, linkers can display agreement in phi-features or in case or in both, generally with the modified noun; similarly, stacked suffixes may involve agreement in case (Lardil) and/or in phi-features (Punjabi).

We have argued that Agree can achieve descriptive adequacy without making reference to features being [interpretable] or [valued]. In fact, at least in the DP domain, taking agreement to result from interpretable-uninterpretable (valued-unvalued) pairs of features imposes partitions between phi-feature sets that are not evident in the interpretation, where it is hard to determine whether (un)interpretable properties reside on N rather than on Q/D – or vice versa. In our conception, each category within the DP acts as a probe for the immediately c-commanded category, all the way down from D to N. Agree is necessary for the establishment of equivalence classes between two or more copies of the same phi-feature material – to be interpreted at the interface as individuating a single referent.

Furthermore, stacking and linkers provide an argument in favour of the syntactic relevance of the notion of oblique. We have argued that more primitive syntactic notions underlie the descriptive label ‘oblique’. We have proposed that there is



a common denominator in the oblique system (genitive-dative-instrumental) of natural languages. Specifically, obliques are elementary predicates/relators with a part/whole content, whose internal argument is the DP/AP/CP they embed (the modifier) and whose external argument is the modified D/NP. Stacked morphemes and linkers introduce partial copies of the external argument (the modifier) at the edge of the relator phrase.

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## Chapter 9

# A diagnostic for backward object control in Brazilian Portuguese

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This paper discusses the relation between two apparently independent syntactic phenomena, backward object control (BOC) and the inflected infinitive in Brazilian Portuguese. Specifically, I argue that the inflected infinitive can be regarded as a diagnostic for backward object control patterns since the default nominative case percolation from the matrix T to the embedded T requires local checking by an overt DP in the absence of a preposition. The overt realization of the lower copy in backward control is enabled by the loss of the [+person] feature. According to Cyrino (2010), the absence of the [+person] feature both in the finite and the non-finite domain enables nominative subjects in the Spec of the inflected infinitive T, just like in finite clauses. Moreover, backward object control verbs like *mandar/fazer* are similar to double object verbs (as in John gave Mary a book), since, like other causative verbs, they have three arguments: the causer, the cause and the caused event (cf. Zubizarreta 1985; Alsina 1992; Ippolito 2000).

## 1 Introduction

This paper examines two apparently independent phenomena – *obligatory object control* and *the inflected infinitive* – in Brazilian Portuguese and the potential relation between them.

### (1) Forward Control

Maria convenceu eles de [limpar(-em) a casa].  
Maria convinced they.ACC of clean-3PL the house



- (2) a. Forward Control  
Maria mandou-os / eles [ limpar-(\*em) a casa ].  
Maria ordered them.ACC / they.ACC clean-INF.3PL the house
- b. Backward Control  
Maria mandou [ eles limpar-em a casa ].  
Maria ordered they.NOM clean-INF.3PL the house

The interrelation between the inflected infinitive and the realization of the object copy in obligatory control is highlighted on the basis of the distinction between (1) and (2). Specifically, I argue that the inflected infinitive is triggered in Brazilian Portuguese either by a case-marking preposition as in (1) or by backward object control as in (2b), whereby there is a local case-checking through the realization of the lower copy in the embedded clause. Nevertheless, the availability of backward object control in Brazilian Portuguese is still debated and, therefore, one of the main aims of this paper is to bring novel arguments for the reality of backward object control in Brazilian Portuguese. Specifically, I argue that one of the diagnostics for backward object control is the realization of the inflected infinitive (third person plural) in the embedded clause.

This paper is structured as follows: §2 provides a short overview of the backward control patterns across languages. §3 focuses on backward object control in Brazilian Portuguese, presenting semantic and syntactic arguments that attest to the availability of backward object control with verbs such as *mandar/fazer* in this language. In §4 I present the syntax of the inflected infinitive and its relation to backward object control. §5 summarizes the main assumptions of the paper and raises a couple of questions regarding the availability of backward control across languages.

## 2 Backward control

In order to simplify the Government and Binding Theory (GB), Chomsky & Lasnik (1993) developed what would become known as the Minimalist Program (MP). However, Chomsky's intention was not to develop a new theory, but to develop a new way of investigating that is simpler and more flexible.

The Minimalist Program provides a radical departure from some essential assumptions, such as the lack of a distinction between D(eep)- and S(urface)-Structure. In addition, syntactic movement is restricted not in terms of the modules of Government and Binding Theory, but by principles of economy.

Within the Minimalist framework, Hornstein (1999; 2001) inaugurates a new view of control, known as the movement theory of control (MTC). He proposes



that control is an instance of movement, and thus that control is similar to raising. Replacing PRO with an A-trace allows for the PRO/control module of GB to be eliminated.

For Hornstein (1999), the difference between raising and control is that while in the former an embedded element moves directly from a lexical domain to the subject position of a finite clause, in the latter an element moves from a lexical domain to the matrix subject position after remerging in the embedded clause (Boeckx & Hornstein 2006). The following examples illustrate the structural difference between raising and control:

(3) [TP Mary [VP seemed [to [VP <Mary> like John]]]]

(4) [TP Mary [VP <Mary> tried [to [VP <Mary> like John]]]]

If this is correct, then movement to thematic positions is possible. This assumption is necessary, since in control structures the element that moves receive two theta-roles, contrary to raising constructions, in which the moved element bears only one theta-role (Hornstein 1999).

The MTC has many advantages over the PRO-based GB approach to control. The MTC can account for the contradictions that PRO creates, eliminating aspects such as the PRO Theorem and null Case (see Hornstein 2001).

One of the most important advantages of the MTC is the possibility of accounting for backward control (BC). Since Principle C of the binding theory would not allow BC constructions, the MTC is the only theory that can explain this linguistic phenomenon.

BC was first observed in the 1980s, but theories at this point were still not able to explain it. BC is characterized by the existence of a controlled null element in a higher position in the structure than its antecedent (Farrell 1995; Rodrigues 2004; Boeckx & Hornstein 2006).

- (5) BP  
 Maria mandou  $\Delta_1$  [ eles<sub>1</sub> se comportarem.]  
 Mary ordered they.ISG.NOM self behave.INF.3PL  
 'Mary ordered them to behave themselves.'

The most plausible analysis of BC was put forward by Polinsky & Potsdam (2002), who investigated the phenomenon in Tsez. Subsequently, BC was investigated in other languages such as Malagasy, Brazilian Portuguese (BP), Korean and Japanese. Potsdam (2009) shows that in Malagasy the object in obligatory control structures can be expressed either in the matrix clause as in (6a), where

the object is case-marked with accusative by the matrix verb, or in the embedded clause as in (6b), where the lower copy is pronounced as nominative. The former represents forward object control, as the object of the matrix verb is overtly realized in (6a), while the latter represents backward object control, since it is the subject of the embedded clause that is overtly pronounced in (6b).

(6) Malagasy (Potsdam 2009: 755)

- a. nampahatsiahivan' i Soa ahy<sub>i</sub> [ hohidiana Δ<sub>i</sub> ny varavaran-dakozy].  
remind                      Soa me      lock                      the door-kitchen
- b. nampahatsiahivan' i Soa Δ<sub>i</sub> [ hohidiana ko<sub>i</sub> ny varavaran-dakozy].  
remind                      Soa      lock                      I      the door-kitchen  
'Soa reminded me to lock the kitchen door.'

The classic works on control have shown that control occurs in non-finite clauses. Nevertheless, some recent studies assume that finite control is possible in some languages, such as Korean (Yang 1985; Borer 1989), Spanish (Suñer 1988), Greek (Terzi 1992; Modesto 2000a; 2000b; Alexiadou et al. 2010; 2011), Japanese (Uchibori 2000) and BP (Farrell 1995; Rodrigues 2004; Boeckx & Hornstein 2006).

A controversial matter concerning control in BP, however, involves the assumption that agreement with topics across a finite CP is licensed in this language (Martins & Nunes 2005), although it is a well-known fact that CPs act as phases (see Chomsky 2000). This crucial question about the Phase Impenetrability Condition in the MTC is one of the main topics to be discussed in this paper. Moreover, the novel contribution of this paper is that it correlates the reality of backward control in BP with another well-known syntactic phenomenon in BP – the inflected infinitive subcategorized by the control verbs *mandar* and *fazer*.

### 3 *Mandar/fazer* in Brazilian Portuguese

This section examines the controversial topic of whether backward object control (BOC) is available in Brazilian Portuguese and what we can learn from the relation between (backward) object control verbs and the inflected infinitive.

In Brazilian Portuguese, we see the following variation: standard object control verbs such as *forçar* 'obligate' and *proibir* 'prohibit' allow only *forward object control* (FOC) and 'causative' object control verbs such as *mandar* 'order', *fazer* 'make' and *deixar* 'allow' allow both *forward* (FOC) and *backward object control* (BOC).

As the subject/object distinction has been lost for third person full pronouns in Brazilian Portuguese, the distinction between forward and backward object control can only be directly observed for the first person. (cf. Farrell 1995; Boeckx & Hornstein 2004; 2006):

- (7) a. FOC  
 Maria **me** proibiu [de limpar a casa].  
 Maria me.ACC prohibited from clean the house
- b. \*BOC  
 Maria proibiu [eu de limpar a casa].  
 Maria prohibited I.NOM from clean the house  
 ‘Maria prohibited me from cleaning the house.’
- (8) a. FOC  
 Maria **me** mandou [limpar a casa].  
 Maria me.ACC made clean the house  
 ‘Maria made/had me clean the house.’
- b. BOC  
 Maria mandou [eu limpar a casa].  
 Maria made I.NOM clean the house  
 ‘Maria made me clean the house.’

However, if we consider other languages we can see that causative verbs can be ambiguous between raising and control. The *loísta* variant of Spanish disambiguates the dual status of the analytic causative verb *hacer* through the use of the clitics *lo/la* and *le*. Specifically, the causative verb occurring with the accusative *lo/la* (which triggers an animacy restriction both on the object and the subject of *hacer*) marks the control reading of the analytic causative:

- (9) a. La recesión **le** ha hecho perder el trabajo a **María**.  
 the recession CL.DAT has made lose the job to Mary  
 ‘Recession has made Mary lose her job.’
- b. \*La recesión **la** ha hecho perder el trabajo a **María**.  
 the recession CL.ACC has made lose the job to Mary  
 ‘Recession has made Mary lose her job.’

On the basis of this, Torrego (2010) proposes two different analyses for *leísta*<sup>1</sup> and *loísta* causatives: *raising* occurs with the causative *hacer* when the subject is

<sup>1</sup>We use the term *leísta* to differentiate the use of dative *le* clitics from the accusative *lo* clitics in *loísta* Spanish.

not agentive and the causative verb *hacer* does not subcategorize a causee. The sole argument of the causative *hacer* is the caused event. Almost all Romance languages allow the raising construction with the causative verb *hacer* when the caused event is realized as an embedded CP. The following constructions are clear cases of non-restructuring raising on a par with the verb *pare* ‘seem’ (the embedded clause is introduced by the complementizer *ca*, which is the marker of a CP layer in Romanian; cf. Alboiu 2007):

- (10) a. Romanian  
 Uraganul a făcut ca mulți oameni să-și piardă  
 hurricane.the has made that many people SUBJ.CL.their lose  
 casele.  
 houses  
 ‘The hurricane made many people lose their houses.’
- b. Brazilian Portuguese  
 A vaga de frio fez nevar nas terras altas.  
 the wave of cold weather made snow in.the highlands  
 ‘The wave of cold weather made it snow in the highlands.’

In line with López (2001), I argue that, similarly to *mandar/fazer* in Brazilian Portuguese, the loísta causative *hacer* assigns an (+affected) theta-role to its causee. Control loísta *hacer* causative verbs have three arguments: the *causer*, the *causee* and the *caused event* (cf. Zubizarreta 1985; Alsina 1992; Ippolito 2000).

Below, I show that, like loísta *hacer*, the causative *mandar* and *fazer* do not represent cases of the ECM/raising construction (cf. Farrell 1995), but real cases of backward object control when they subcategorize a DP.

### 3.1 Semantic arguments for Backward Object Control

First, unlike in the case of the ECM/raising construction, the passivization of the complement of *fazer* and *mandar* does affect the interpretation of the entire construction.<sup>2</sup>

<sup>2</sup>According to Jairo Nunes (p.c.), the alleged difference in meaning between (i) and (ii) seems to be no different from what we find in their subjunctive counterparts:

- (i) Eu mandei que / fiz com que o médico examinasse a minha filha.  
 I ordered that / made with that the doctor examine the my daughter
- (ii) Eu mandei que / fiz com que a minha filha fosse examinada pelo médico.  
 I ordered that / made with that the my daughter was examined by.the doctor

(11)  $a = b$  (Farrell 1995: 119)

- a. I wanted [ the doctor to examine my daughter].
- b. I wanted [ the daughter to be examined by the doctor].

(12)  $a \neq b$

- a. Eu mandei/fiz o médico examinar a minha filha.  
I ordered/made the doctor examine the my daughter
- b. Eu mandei/fiz a minha filha ser examinada pelo médico.  
I ordered/made the my daughter be examined by.the doctor

As Farrell (1995) argues, the causee is affected by the action denoted by the verbs *fazer* and *mandar* and, therefore, unlike in (9), the active and passive sentences are not synonymous.

Second, these two verbs impose selectional restrictions on the overt cause. This element cannot be a clause or an expletive.

(13) \* [O maracujá tem algum componente que faz [IP tomar  
the passion.fruit has.3SG some component that makes to.take  
muito suco dele dar sono]].  
a.lot.of juice his gives.3SG drowsiness

‘Passion fruit has something in it that makes the one drinking a lot of the juice drowsy.’ (Farrell 1995: 119)

(14) \* Aquilo faria ser óbvio que eu sou forte.  
that would.make.3SG to.be.INF obvious that I am.1SG strong.

‘That would make it be obvious that I am strong.’ (Farrell 1995: 120)

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Crucially, in Romanian, a language that permits only subjunctives, there is a clear distinction between (iii) and (iv).

- (iii) L-am trimis / făcut pe Ion să mearga la doctor.  
him.ACC-have sent / made PE John SBJV go to.the doctor
- (iv) Am trimit / făcut să mearga Ion la doctor.  
have sent / made SBJV go John to.the doctor

The verbs *a trimit/a face* in (iii) can be interpreted as ‘convince/obligate/force’ whereby John is the syntactic argument of these verbs, while the same homophonous verbs in (iv) are mere causative verbs that do not subcategorize a direct object. We argue that *mandar* and *fazer* behave similarly, allowing both types of readings and, hence, two different syntactic structures: as mere causative verbs in subjunctive clauses and as object control verbs like *trimit* ‘send’ in (iii). Wurmbrand (2001) also claims that in German causative verbs are ambiguous between raising and control (see Wurmbrand (2001) for more details).

Third, like standard object control verbs that require a syntactic object, the verb *mandar* in Brazilian Portuguese can occur only with animate objects:<sup>3</sup>

- (15) \*Eu mandei a pedra cair.  
I ordered the stone fall

### 3.2 Syntactic arguments for Backward Object Control

In addition to Farrell's semantic arguments, I put forth several syntactic arguments that confirm the existence of backward object control in Brazilian Portuguese.

#### 3.2.1 No restructuring

Like in the cases of subject control, backward object control with *mandar*, *fazer* and *deixar* do not represent cases of restructuring and, hence, are not monoclausal structures (for more details see Cyrino 2010):

Two separate negations are possible:

- (16) a. Maria não mandou eles limpar(em) a casa.  
Maria not ordered they clean.INF the house  
'Maria didn't order them to clean the house.'
- b. Maria mandou eles não limpar(em) a casa.  
Maria ordered they not clean.INF the house  
'Maria ordered them not to clean the house.'
- c. Maria não mandou eles não limpar(em) a casa.  
Maria not ordered they not clean.INF the house  
'Maria didn't order them not to clean the house.'

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<sup>3</sup>Marcelo Ferreira (p.c.) argues that (14) might sound odd for pragmatic reasons. Sentences like (i), which clearly involves a null expletive in the embedded subject, sound perfect:

- (i) O arquiteto mandou ter uma janela em cada quarto.  
the architect ordered have a window in each room

The example Ferreira gives in (i) is similar to examples with the homophonous causative verb *trimite* or 'made' in Romanian, which is syntactically distinct from the object control *trimite/face*:

- (ii) Arhitectul a trimis să se aducă o fereastră în fiecare cameră.  
the.architect sent SBJV REFL bring a window in each room  
'The architect sent to be brought a window in each room.'

Two separate event modifiers are also possible:

- (17) a. Maria mandou quatro vezes eles enxaguar a camisa.  
 Maria ordered four times they rinse the shirt  
 ‘There were four times that Maria ordered them to rinse the shirt.’  
 (four orderings)
- b. Maria mandou eles enxaguar a camisa quatro vezes.  
 Maria ordered they rinse the shirt four times  
 Also: ‘Maria ordered them to rinse the shirt four times.’ (four rinsings)

### 3.2.2 The 1st person singular nominative pronoun

The first person singular nominative subject pronoun *eu* (which is still distinct from the accusative) cannot be used in object position, either in monoclausal sentences (16a) or with standard object control verbs such as *forçar* ‘obligate’ and *proibir* ‘prohibit’ (16b), but it is grammatical with *mandar* and *fazer* (16c).

- (18) a. Ela me viu/ viu \*eu.  
 she me.ACC saw/saw I.NOM  
 ‘She saw me.’
- b. \*A professora proibiu eu de apagar o quadro.  
 the teacher prohibited I.NOM of erase the board  
 ‘The teacher prohibited me from erasing the board.’
- c. A professora mandou/ fez eu apagar o quadro.  
 the teacher made/had I.NOM erase the board  
 ‘The teacher had me erase the board.’ (Farrell 1995: 121)

### 3.2.3 No transparency effects

Like many other scholars, Cinque (2004) argues that a diagnostic for restructuring verbs is that they show transparency effects (clitic-climbing/object-raising). Transparency effects can be obtained with restructuring causative verbs in Italian but not in Brazilian Portuguese:

- (19) a. Italian  
 Maria la fa riparare a Giovanni.  
 Maria it.ACC made repair to Giovanni  
 ‘Mary made Giovanni repair it.’

- b. \* Brazilian Portuguese  
Maria me mandou o João beijar.  
Maria me.ACC ordered the John kiss.INF  
'Maria ordered John to kiss me.'s

### 3.2.4 No *Faire-Par* type of causatives

Analytic causatives come in two different guises (cf. Kayne 1975; Huber 1980; Burzio 1986; Enzinger 2010; Campanini & Pitteroff 2012): the embedded subject may be either realized as an argumental DP (*Faire-Infinitive*) or as part of an optional adjunct PP (*Faire-Par*):

(20) Italian

- a. Gianni ha fatto riparare la macchina a Mario.  
Gianni has made repair.INF the car to Mario  
'Gianni made Mario repair the car.'
- b. Gianni ha fatto riparare la macchina (da Mario).  
Gianni has made repair the car (by Mario)  
'Gianni got the car repaired (by Mario).' (Campanini & Pitteroff 2012)

Unlike in Italian restructuring constructions, the embedded subject cannot be realized as part of an optional adjunct PP in Brazilian Portuguese with *mandar/fazer*, providing strong evidence that these causative verbs need to subcategorize an internal argument realized as a covert copy in the backward control pattern.

- (21) \* O João mandou limpar a casa por Maria.  
John order clean.INF the house by Mary  
'John got the house cleaned by Mary.'

### 3.2.5 The loss of [person] features

Nunes (2008), Ferreira (2009) and Rodrigues (2004) propose that finite T in Brazilian Portuguese now has only [number]. In the same vein, Cyrino (2010) argues that the same has happened to inflected infinitives and uninflected infinitives in Brazilian Portuguese. The sole morphological marking in inflected infinitives is found in the 3<sup>rd</sup> person plural. Therefore, Cyrino (2010) claims that Brazilian Portuguese allows nominative subjects in an embedded non-finite domain. This amounts to saying that the embedded domain is not a complete phase, but rather it is similar to embedded subjunctive clauses in Balkan languages like Romanian and Greek, whose defectively inflected verb can also assign nominative case. This

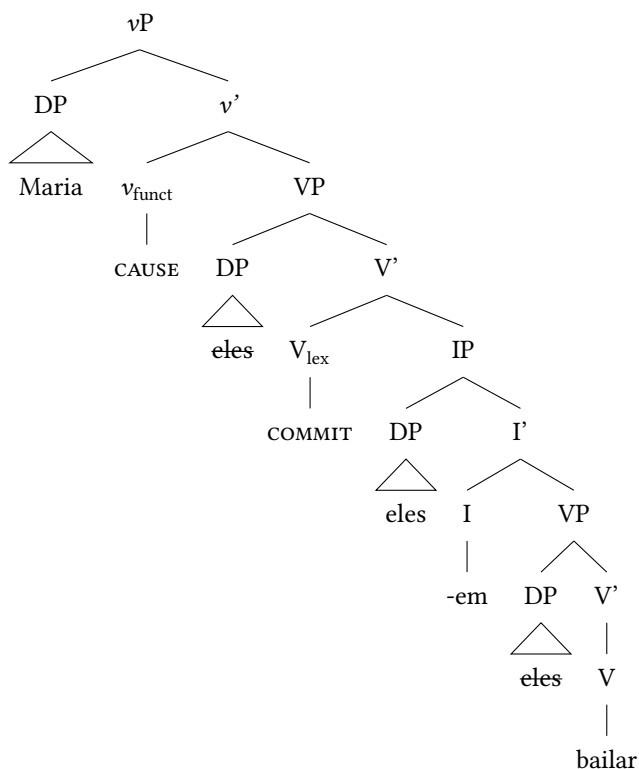


might go hand in hand with with primary data from the Bahdini dialect of Kurmanji Kurdish cited by Manzini et al. (2017), who show that nominative case corresponds to the bare nominal base, and hence is a default case.

### 3.3 The syntax of *mandar/fazer* causative verb types

This section aims at discussing the syntactic structure of causative verbs of the *mandar/fazer* type in Romance in order to show how they interact with the syntax of the inflected infinitive. Hence, I focus on three syntactic phenomena specific to Brazilian Portuguese: i. the argument structure of *mandar/fazer* verb types, ii. the syntax of the embedded (inflected) infinitive and iii. the case assignment properties of the (inflected) infinitive in object control. With respect to ii., this paper argues that *mandar/fazer* as control verbs have three arguments: the causer, the cause and the caused event (cf. Zubizarreta 1985, Alsina 1992 and Ippolito 2000). On the basis of the semantic and syntactic tests provided in the above mentioned section, I argue that *mandar/fazer* are object control verbs and have the following structure:

- (22) *mandar* ‘order’ and similar verbs [ \_\_\_\_\_ NP TP \_\_\_\_\_ ]  
 $\theta_{\text{AGENT}}$   $\theta_{\text{THEME}}$   $\theta$  caused event



The structure with *mandar/fazer* in (20) is, therefore, similar to Double Object Constructions in the spirit of Larson (1988). Specifically, Larson (1988) assumes that object control predicates are VP shell structures in which a subject control predicate is embedded under an object predicate.

Crucially, unlike light verbs such as *fare* in Romance and *make* in English (see Guasti 1996; Folli & Harley 2007; Pyllkkänen 2002; 2008), *mandar/fazer* in control constructions (18) are not restructuring verbs; rather they are lexical verbs embedded by a functional  $v_{\text{CAUSE}}$  that need to subcategorize a real internal argument.<sup>4</sup> The next section discusses the syntax of the embedded infinitive that influences the Spell-Out of the embedded subject or the matrix object of backward object control verbs.

## 4 The inflected infinitive

Regarding the syntax of the inflected infinitive in Brazilian Portuguese, this paper makes two claims: first, it regards the distribution of the inflected infinitive as a diagnostic for the fact that the shared argument is truly embedded. More explicitly, it argues that backward object control with *mandar* and *fazer* is signalled

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<sup>4</sup>However, there is a potential counterargument to this proposal: Farrell (1995) argues that in Brazilian Portuguese, *mandar* and *fazer* have an ECM syntax and an object control semantics since, unlike standard object control verbs, they cannot be passivized:

- (i) \* O nenê foi feito dormir.  
the baby was made sleep.
  
- (ii) Os alunos foram forçados a estudar mais.  
the students were forced to study more

On the basis of these examples, Farrell (1995) and Hornstein (2003) argue that the causee does not occupy a matrix object position. As Landau (2004) points out, if the causee is an embedded ECM subject, matrix passivization should be able to absorb the accusative and allow raising to the matrix subject position. Thus, examples such as (i) are blocked by the different syntax of causatives, since passivization of causatives is illicit in several languages (see Landau 2004; Hornstein et al. 2008). Specifically, Hornstein et al. (2008) argue for English and European Portuguese that the asymmetry between active and passive forms of causative verbs is triggered by the fact that the infinitival complement must be *bare* when selected by *the active form* but *prepositional* when selected by *the passive form*, as the past participle morpheme intervenes between the finite and the inflected T, blocking agreement between the two heads (Hornstein et al. 2008: 220). This also seems to be valid for Brazilian Portuguese. Accordingly, since *mandar* and *fazer* are not prepositional verbs, unlike other object control verbs, they disallow passivization. Hence, the passivization test does not constitute a counterargument to a control analysis of *mandar* and *fazer*.

by the presence of the inflected infinitive when the shared argument is third person plural. Second, in line with Raposo (1987), Nunes (1995) and Pires (2007), it considers inflected infinitive clauses as nominal Case-bearing projections. In order to support the former assumption, I build on the contrast between subject control verbs such as *conseguir* ‘manage’ in (21a) that do not select a preposition and verbs like *aprender* ‘learn’ that do select one (21b). The two classes of control verbs differ in that the inflected infinitive is illicit with the former (21a) but not with the latter (21b) (see also Modesto 2010).

(23) Subject Control

- a. Os meninos conseguiram vender-\*em a casa.  
 the boys manage.3PL sell.INF(-3PL) the house  
 ‘The boys managed to sell the house.’
- b. Eles aprenderam a não falar(-em) alto à mesa.  
 they learned to not talk-(3PL) loud at.the table  
 ‘They learned not to talk loudly at the table.’

On the basis of (21), I assume that the BOC verbs *mandar* and *fazer* in (21b) behave similarly to subject control verbs like *conseguir* ‘manage’ in (21a), as they do not select prepositions and disallow the inflected infinitive. By contrast, the forward object control verbs *convencer de* ‘convince of’ in (23b) are similar to subject control verbs such as *aprender a* ‘learn to’ in (23a): both of them select prepositions, and optionally permit the inflected infinitive.

(24) a. Subject Control

- Os meninos conseguiram vender-\*em a casa.  
 the boys manage.3PL sell.INF(-3PL) the house  
 ‘The boys managed to sell the house.’
- b. Forward Object Control  
 Maria mandou eles [ limpar-\*em a casa ].  
 Maria ordered they.NOM clean-3PL the house  
 ‘Maria ordered them to clean the house.’
- c. Backward Object Control  
 Maria mandou [ eles limpar-em a casa ].  
 Maria ordered they.NOM clean-3PL the house  
 ‘Maria ordered them to clean the house.’

- (25) a. Subject Control  
 Eles aprenderam a não falar(-em) alto à mesa.  
 they learned to not talk(-3PL) loud at.the table  
 ‘They learned not to talk loudly at the table.’
- b. Object Control  
 Maria convenceu eles de [ limpar(-em) a casa ].  
 Maria convinced they.NOM of clean-3PL the house  
 ‘Mary convinced them to clean the house.’

More explicitly, I argue that if control verbs do not subcategorize prepositional embedded clauses and the controller is realized in the matrix clause, the inflected infinitive is illicit, as shown in (22a, b). The interplay between the realization of backward object control with *mandar/fazer* and that of the inflected infinitive is not morphologically visible on the basis of the pronominal paradigm in spoken Brazilian Portuguese, since the nominative-accusative distinction has been lost for all pronouns with the exception of the 1<sup>st</sup> person singular form and, crucially, first person singular pronouns do not trigger overt morphological agreement in infinitives.

Table 1: The pronominal paradigm of colloquial Brazilian Portuguese

Number	Person	Subject	Object
Singular	1st	<i>eu</i>	<i>me</i>
	2nd	você/tu	você/te
	3rd	ele, ela	ele, ela
Plural	1st	nós	nos
	2nd	vocês	vocês
	3rd	eles, elas	eles, elas

Nevertheless, this hypothesis is supported by the written register of Brazilian Portuguese that has a parallel grammar which still preserves the morphological nominative-accusative distinction in pronouns.

- (26) a. Written register  
 Maria mandou-os [ limpar-\*em a casa ].  
 Maria ordered-them.ACC clean-(\*-3PL) the house

- b. Spoken/written register  
 Maria mandou [ eles limpar-em a casa ].  
 Maria ordered they.NOM clean-3PL the house
- c. Os meninos conseguiram vender-\*em a casa.  
 the boys manage.3PL sell(-3PL) the house

Analogically, in European Portuguese inflected infinitives are not allowed when their subjects are Case-marked by the matrix verb (cf. Hornstein et al. 2008):

- (27) European Portuguese  
 A Maria viu-te sair/\*saíres.  
 the Maria saw-CL.2SG.ACC leave.INF/leave.2SG  
 ‘Mary saw you leaving.’

In the above examples from different registers and grammars, one can clearly observe that when the object controller of *mandar/fazer* is realized in the accusative in the matrix clause, the inflected infinitive is completely illicit. Thus, the diagnostic provided by the inflected infinitive for backward object control is supported by two important arguments, namely the distinction between prepositional and non-prepositional subject control verbs in (21) and evidence provided by the written register and European Portuguese (24 & 25).

Other interesting pieces of evidence for a backward control analysis of analytic causatives in Brazilian Portuguese are provided by the distribution of the anaphoric pronoun *ele*, which can co-occur with the raised subject and raised object of forward control verbs, but never in the causative constructions. The reason for this is that the causee/object of the causative verb is truly embedded and the entire construction is a backward control structure, since both control and causative verbs in Brazilian Portuguese have the same control semantics imposing commitment on the direct object:

- (28) a. Os meninos<sub>i</sub> querem ELES<sub>i</sub> limpar a casa.  
 the children want they clean the house  
 ‘The children want themselves to clean the house.’
- b. A Maria convenceu os meninos a ELES limparem a casa.  
 Mary convinced the children they clean-3PL the house  
 ‘Mary convinced the children to clean the house themselves.’
- c. \*A Maria mandou os meninos ELES limparem a casa.  
 Mary ordered the children they clean the house  
 ‘Mary ordered the children to clean the house themselves.’

The examples above clearly show that both the raising verb *querem* ‘want’ in (26a) and the forward object control verb *convenceu* ‘convinced’ in (26b) accept an anaphoric pronoun coindexed with the raised subject, because in both cases the subject of the embedded domain has raised to the matrix clause either as a subject or as an object. This is not the case with the causative verb *mandar* in Brazilian Portuguese (26c) because the embedded subject position is already occupied by the causee, which is backwardly controlled by an empty copy in the matrix clause.

Crucially, the inflected infinitive is licit only with the forward object control verb *convencer* ‘convince’ and the analytic causative verb *mandar* – a fact which also leads to the conclusion that, in contrast to *querer* ‘want’, the analytic causative verb is a control verb rather than a raising verb. In the following section we will have a closer look at inflected infinitives in Brazilian Portuguese and see that they can function as diagnostics for backward control constructions.

#### 4.1 Towards an analysis of inflected infinitives

In line with Raposo (1987) I argue that inflected infinitives are ‘nominal’ projections, being associated with case and phi-features but not with Tense (see Stowell 1982):

- (29) a. \* Maria manda eles terem limpado a casa ontem  
Maria orders they have.INF.3PL cleaned the house yesterday  
‘Maria orders them to have cleaned the house yesterday.’  
b. \* Maria mandou eles limparem a casa amanhã.  
Maria orders they clean.3PL the house tomorrow  
‘Maria makes them clean the house tomorrow.’

Thus, structural case (nominative/accusative) is related to phi-features (cf. George & Kornfilt 1981; Sitaridou 2006) rather than to tense<sup>5</sup> (see also Pires 2007). In Brazilian Portuguese, the nominative case is linked to [+number]. The overt subject-verb agreement in the inflected infinitive of Brazilian Portuguese is linked to both to the case properties and to [+number] features of T (cf. Nunes & Eduardo 1998). In more specific terms, the case of the inflected infinitive is assigned either by a preposition that subcategorizes the entire embedded clause

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<sup>5</sup>Hence, I argue that the embedded (inflected) infinitives are tense-deficient IPs/Ts, consisting of a TP missing the CP layer; the source of ‘defective’ T is attributed by Chomsky (2008) to the lack of feature inheritance from C. Alboiu (2007) and Alexiadou et al. (2010) provide the same analysis for subjunctive clauses of subject control verbs in Romanian and Greek.

and assigns inherent case to the head of the infinitival TP (Hornstein et al. 2008) or by the matrix verb as in the Double Object Constructions<sup>6</sup>: *I gave her a book* (see Larson 1991 for more details). Hence, in line with Raposo (1987), I claim that there is a percolation of default nominative case from the matrix verb to the embedded T that is specified with [+number] features. The default case must be locally checked by an overt DP. This is the case of backward object control with *mandar* and *fazer*. In the case of forward control with *mandar/fazer*, the [+number] feature is not realized in the embedded T (the morphological marking for number is also missing) so the default case cannot be assigned and the controller DP must raise to the matrix clause and realize the structural case of the matrix verb.

Explicitly, I argue that when a preposition is lacking, the inflected infinitive can be realized if the embedded T is specified with [+number] that triggers case assignment by the matrix verb and local case checking by an overt embedded subject in Spec TP (see Raposo 1987). The embedded subject bears default structural case and locally agrees with the head of the embedded infinitival TP. In this paper, I adopt the approach to case assignment proposed by McFadden & Sundaresan (2011), according to which the nominative serves as a default case for those arguments not assigned other marked cases.

- (30) a. Maria mandou [ eles limpar-em a casa].  
 Maria ordered they.NOM clean-3PL the house
- b. Maria mandou eles [ limpar a casa].  
 Maria ordered they.ACC clean-INF the house  
 ‘Mary ordered them to clean the house.’

<sup>6</sup>Brazilian Portuguese, however, has lost Double Object Constructions (DOC). For languages that allow clitic doubling (CD) of objects, various scholars have argued that constructions that contain clitic-doubled indirect objects are DOCs and not prepositional constructions (see Demonte 1995; Bleam 1999; Anagnostopoulou 2003; among others). As Brazilian Portuguese has lost its clitics, it does not make use of the DOC.

- (i) Brazilian Portuguese  
 Maria deu um livro para ele.  
 Maria gave a book to he
- (ii) European Portuguese  
 Maria deu-lhe um beijo a ele.  
 Mara gave-him a kiss to him

Double object constructions are marginally available with *mandar/fazer* subcategorizing infinitives because unlike other control verbs, these verbs are not prepositional, hence allowing the structure: DP VP DP IP.

The example (28) shows that backward object control and the inflected infinitive are allowed only if there is morphological case matching<sup>7</sup> between the overt and the covert controller, that is if the morphological case form of the subject is the same as that of the object in forward object control.<sup>8</sup> Crucially, this is linked to the fact that morphological accusative case forms are disappearing in the colloquial language and being replaced by the corresponding nominative case forms.

(31) (Farrell 1990: 328)

Eu o            conheci / conheci ele            / conheci Ø numa festa.  
I   him.ACC met            met            he.DEFAULT met            Ø in.a party

In the presence of the preposition that assigns inherent case to the inflected infinitive, the structural case of matrix verbs must be obligatorily realized by an accusative object realized in the matrix clause. Therefore, standard object control verbs that subcategorize prepositions allow only forward control patterns. They correspond to Prepositional Constructions (PC) in Larson's (1988) terms: *I gave a book to Mary*.

<sup>7</sup>A further comparison between Brazilian Portuguese, which allows backward object control, and Romanian, which does not, seems to suggest that the occurrence of backward object control patterns and of the inflected infinitive is linked to the morphological case marking of the object. While in Romanian, the case of the direct object is obligatorily marked by the preposition *pe*, in Brazilian Portuguese, both the object and the subject use the nominative case form:

- (i) \* Maria I-a            obligat \*pe el            să zâmbească.  
Maria CL.ACC-has obligated PE him.ACC SBJV smile.3SG

Case-matching between the overt and covert argument DP in backward control patterns in Brazilian Portuguese has been independently observed for Free Relative Clauses in Romanian (see Alexiadou et al. 2010). Essentially, in the case of Free Relative Clauses in Romanian, the less marked case (Nominative) cannot play the role of the Accusative: in (ii) *pe* requires Acc and 'arrive' requires Nom; if *pe* is deleted, the pure Nom form *cine* cannot override the Acc required by 'have prized':

- (ii) (Alexiadou et al. 2010)  
Au premiat \*(pe) [ cine a ajuns primul].  
have prize.given PE.ACC who.NOM has arrived first

<sup>8</sup>We might wonder, however, how to explain the optionality between realizing the higher copy in the matrix clause and the lower copy in the inflected infinitive; that is, the distinction between forward control and backward control. Arguably, this optionality can be explained by principles of chain reduction (cf. Nunes 2004) according to which a copy of a given chain with the fewest features must be pronounced. Building on Nunes, Potsdam argues that the optionality in control arises when two copies in a chain have the same number of unchecked features, since one case value can be overridden by another case.



All in all, this paper claims that backward control and the inflected infinitive<sup>9</sup> overlap when the embedded T is phi specified with [+number] and is assigned default case by the matrix verb in the absence of a preposition. Moreover, the default case of T must be locally checked by an overt DP. The embedded T allows nominative subjects because, like finite T, infinitival T has lost its [+person] feature (see Cyrino 2010).

## 5 Concluding remarks

In this paper, I argued that the inflected infinitive can be regarded as a diagnostic for the backward object control pattern (when the controller is not the first person singular), since the percolation of default nominative case from the matrix T to the embedded T requires local checking by an overt DP in the absence of a preposition. Several crucial questions still remain to be answered: why is backward object control available only relatively rarely across languages? Why do languages apparently show complementary distribution between backward subject control and backward object control? In line with Alexiadou et al. (2010), I argue that languages such as Greek, Romanian and Spanish that allow backward subject control show different parametric properties from those allowing backward object control. Specifically, Alexiadou et al. (2010) show that backward subject control is linked to some essential properties such as the availability of subject *pro*, VSO order with internal subjects (cf. Alexiadou 2001) and EPP checking via V movement (Alexiadou & Anagnostopoulou 1998 among others). In contrast to backward subject control, I argue that BOC is available in Brazilian Portuguese due to various parametric triggers such as:

1. strict SVO order,
2. the gradual loss of the morphological nominative/accusative distinction (with the exception of first person) and
3. the loss of the [+person] feature in finite, inflected infinitive and non-finite Ts
4. (indirectly) the availability of null objects.

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<sup>9</sup>The optional realization of the inflected infinitive with standard object control verbs is not linked to the Case of T, as this is assigned by the preposition, but is due to the optional realization of number on T: [+number] & [+inherent Case] triggers inflected infinitive while [-number] & [+inherent Case] triggers uninflected infinitive.

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## Chapter 10

# Extraction from DP in French: A minimalist approach

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This article is about the extraction of French PP complements of nouns headed by *de*, mostly in *wh* and relative clause contexts. After a review of the literature on extraction in French, it addresses the issue of the constraints on extraction in cases with multiple arguments, eventually following Kolliakou (1999) in assuming that there can only be one argument of a noun, whereas other expressions are adjuncts. I then explain the relevant extractions within the Minimalist Program: on the assumption that DPs are phases, an extracted item must first move to the phase edge, as assumed in previous accounts. The exact extraction mechanism is then modeled by assuming a phi-probe plus an unvalued operator feature on the D head. The fact that only complements introduced by the preposition *de* can be extracted from the DP is explained by considering *de* as a post-syntactic marking for genitive case, which is assigned by the phi-probe.

## 1 Introduction

### 1.1 Aims and organization of the article

This article readdresses the extraction of elements from a DP, which has been a topic for the last fifty years or so within the context of long-distance dependencies and DP islands (cf. Ross 1967; Sportiche 1981; Huang 1982; Obenauer 1985a; 1985b; 1994; Chomsky 1986; Cinque 1990; Szabolcsi 2006, among many others). I concentrate on French, a language for which the phenomena at issue have been intensely discussed within generative grammar, in particular in the 1980s and 1990s (e.g. by Tellier 1990; Sportiche 1981; Obenauer 1994; Pollock 1989; Valois 1991; Godard 1992). Before going into the reasons that motivate my reopening this debate, let me illustrate the structures that I am interested in.



- (1) a. \* Qui connais-tu [DP l' homme qui a vu qui] ?  
 who know-you the man who has seen whom  
 'Who do you know the man who has seen \_\_?' (cf. Sportiche 1981: 222)
- b. \* [PP De qui] est-ce que [DP la secrétaire [PP de qui]] t'a  
 of whom is-this that the secretary of whom you.has  
 téléphoné?  
 called  
 'Of whom has the secretary \_\_ phoned?' (cf. Tellier 1990: 306–307)
- (2) a. \* [PP Sur qui] as-tu lu [DP le livre [PP sur qui]] ?  
 on whom have-you read the book on whom  
 'On whom have you read the book \_\_?'
- b. \* [PP A qui] avez-vous vu [DP une amie [PP a qui]] ?  
 to whom have-you seen a friend to whom  
 'Of whom have you seen a friend \_\_? (similar to Grosu 1974: 312, Footnote 3)
- c. [PP De qui] avez-vous vu [DP une photo [PP de qui]] ?  
 of whom have-you seen a photo of whom  
 'Of whom have you seen a photo \_\_?'
- d. [PP De quel livre] connais-tu [DP la fin [PP de quel livre]] ?  
 of which book know-you the end of which book  
 'Of which book do you know the end \_\_?' (cf. Sportiche 1981: 224)

The examples in (1a–b) illustrate a complex DP island and a subject island, respectively. These structures involve the extraction of a constituent (in this case a *wh* element) from a deeply embedded syntactic region (usually a clause) within a DP, or from a DP that is a subject. Extractions from complex DP islands and subject islands are usually considered as ungrammatical in all languages and are not the focus of this article.<sup>1</sup> Instead, I will be mostly concerned with cases like those in (2), i.e. the extraction of a PP from a complement or adjunct DP.

<sup>1</sup>The subject condition does not hold for all subjects, but mainly for subjects of transitive and unergative verbs; cf. e.g. Chomsky (2008: 153–154) (see Broekhuis 2005: 64–65 for discussion); for French cf. Tellier (1991: 90). For other exceptions, see Truswell (2005) and the references mentioned there, in particular with respect to “possessor extraction”, to which the French cases mentioned by Tellier (1990) for the relative element *dont* (also cf. Heck 2008; 2009) can be argued to belong. Stepanov (2007) claims that subject islands are not universal, in contrast to adjunct islands.



Without considering the status of the PP for now, the data in (2a–d) suggest that, in French, extraction of a PP that contains a *wh* element is grammatical when the PP is headed by the preposition *de* and ungrammatical with other prepositions. These facts also apply to relative clauses:<sup>2</sup>

- (3) a. le linguiste [<sub>PP</sub> duquel/dont]<sup>3</sup> tu as lu le livre [<sub>DP</sub> [<sub>PP</sub>  
the linguist of.which you have read the book  
duquel/dont]]  
of.which  
'the linguist of (= by) whom you have read the book \_\_'
- b. \* le linguiste [<sub>PP</sub> sur lequel / sur qui] tu as lu le livre [<sub>DP</sub>  
the linguist on which / on whom you have read the book  
[<sub>PP</sub> sur lequel / sur qui]]  
on which / on whom  
'the linguist on whom you have read the book \_\_'

As we shall see, this first rough approximation needs some refinement, and, in addition, problems arise when the DP contains more than one PP headed by *de*, as shown in (4a,b) from Milner (1978; 1982; quoted in Sag & Godard 1994). Although the relative element *dont* is generally exempt from the subject condition mentioned above,<sup>4</sup> as shown by the grammaticality of (4a), the example in (4b) is ungrammatical:

- (4) a. M. X [<sub>PP</sub> dont] [<sub>DP</sub> la maison [<sub>PP</sub> de Le Corbusier] [<sub>PP</sub>–  
Mr. X of.whom the house of Le C.  
dout]] n' est guère confortable.  
of.whom NEG is hardly comfortable  
'Mr. X, whose house of (= by) Le Corbusier \_\_ is hardly comfortable.'

<sup>2</sup>And, in addition, to focusing via fronting (if available) and clefting, see (23c) and Footnote 17 in §4.

<sup>3</sup>French has a relative complementizer *que*, which cannot be used after prepositions and is thus irrelevant here. After prepositions, we find the relative pronoun *lequel* (fem.: *laquelle*, plur.: *lesquels/lesquelles*), which combines with the preposition *de* in the masculine singular and in the plural forms (*duquel, desquel(le)s*). The element *dont* is invariable and equivalent to *duquel, de laquelle, desquel(le)s*, thus representing a kind of relative pro-PP. In addition, for persons, *de qui* 'of whom' can be used. I will assume here that relative pronouns move to [spec,CP], pied-piping the preposition (i.e. the whole PP moves). I will not consider Kayne's (1994) raising-analysis of relative clauses, nor the idea that *dont* might better be analyzed as a complementizer. However, my approach presented in §4 can easily be made compatible with these theories.

<sup>4</sup>See Footnote 1.

- b. \* Le Corbusier [<sub>PP</sub> dont] [<sub>DP</sub> la maison [<sub>PP</sub> dont] [<sub>PP</sub> de M.  
 Le C. of.whom the house of.whom of Mr.  
 X]] n' est guère confortable.  
 X NEG is hardly comfortable  
 'Le Corbusier, by whom the house \_\_\_ of Mr. X. is hardly  
 comfortable.'

Similar facts can also be observed when extraction takes place from a direct object. There have been several proposals in the literature mostly assuming a thematic hierarchy (such as, e.g., Pollock 1989; Godard 1992), but this problem has never been fully resolved. The goals of this article are (i) to readdress the question of which constituent can be extracted in cases like (4) by adapting a very promising approach by Kolliakou (1999), which was formulated within the HPSG framework and has never been considered in the minimalist literature; (ii) to explain the extraction mechanism within a minimalist probe-goal approach (following Chomsky 2000 et seq.). Both goals are connected in the following sense: Kolliakou's approach assumes that, when there is more than one PP headed by *de* in a DP, only one is an argument and the other one is an adjunct (in particular, a property-denoting expression, see Chierchia 1982; 1985), which cannot be extracted. But since there is no general ban in UG against the extraction of adjuncts, a minimalist analysis must be able to predict this property of extractions from DP. The approach I suggest at the end of the article builds on the old idea that cyclic movement must use [<sub>spec,DP</sub>] as an "escape hatch" (cf. among others Gavrusseva 2000, following older ideas that go back to Cinque 1980). In the Minimalist Program, this means that the DP is a phase (see, e.g. Heck 2008; 2009, among others), and consequently, extractions must pass through its phase edge. In the constructions at issue, [<sub>Spec,DP</sub>] acts as a kind of filter that admits only argumental DPs. In a framework such as Chomsky (2000 et seq.), argumental DPs must be identified by an unvalued case feature. In my approach, this case feature is checked and valued as [<sub>genitive</sub>] by the D head, which leads me to adopt a view that treats 'genitive' *de* in French as a kind of case marker rather than a preposition.

This article is organized as follows. In the rest of the introduction (§1.2), I explain the framework I adopt (in particular concerning A'-movement in a probe-and-goal-based approach). In §2, I present some of the basic data at stake and summarize the discussions that took place within the GB framework. I then turn to Kolliakou's (1999) explanation of the data shown in (4) and finally develop a tree structure that is compatible with Kolliakou's view. §3 summarizes two articles

(Gutiérrez-Bravo 2001; Cinque 2014) that analyze data from Spanish and Italian, respectively, using phase-based approaches, which are not, however, formulated according to the feature-checking system of Chomsky (2000 et seq.). Nevertheless, both solutions offer some important insights, namely that the mechanism for extraction of material from within a DP is related to the assignment of genitive case in Romance, and that movement to the phase edge of DP at least partially involves properties of A-movement. In §4 I develop my own analysis, arguing that the data at issue can be explained straightforwardly by applying Chomsky's (2000 et seq.) probe-goal mechanism, and, ultimately, by the feature composition of French D heads. In particular, my proposal amounts to saying that D heads contain two phi probes, one that is responsible for agreement between D and the N head, and another one that takes the complement of N as a goal, valuing its unvalued case feature as [genitive]. This second probe has an optional unvalued operator feature that comes with an [EPP]-feature, which ultimately licenses the extraction. The article ends in §5 with some conclusions. Note that most of the ingredients of my own approach can be found elsewhere, but, as far as I can see, this is the first time that they have been coherently put together using the machinery assumed in a modern minimalist framework.

## 1.2 Theoretical framework

For the minimalist analysis, I assume phase theory and the probe-goal approach of Chomsky (2000 et seq.). According to phase theory, syntactic structure is built up in a step-wise fashion, where some categories (such as v and C, but crucially not T) are so-called phase heads. Every time such a phase head has projected its full structure (vP, CP), the phase domain (which is the whole complement of the relevant phase head) is sent to Spell-Out and is therefore not available for further syntactic operations.<sup>5</sup>

Movement of elements related to the case-agreement system is implemented by unvalued phi-features on a functional head. Such features are called probes, which search the tree downward (under c-command) for a matching goal (valued phi-features). A valid goal is identified by an unvalued case feature. Matching of features triggers the operation Agree, which basically consists of three steps: (i) the probe's unvalued phi-features receive the values of the goal; (ii) the goal's unvalued case feature is valued according to the nature of the head that bears

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<sup>5</sup>Ultimately, this follows from the *Phase Impenetrability Condition* (PIC). For the cases at issue here, it is irrelevant whether we adopt the version of Chomsky (2000: 108) or Chomsky (2001: 13–14).

the probe (e.g., [Nom] in the case of T, [Acc] in the case of v, and – as I will argue – [Gen] in the case of D); (iii) the goal is licensed for movement, which takes place if the category that bears the probe has an [EPP]-feature (essentially an instruction to project a specifier) that is not checked otherwise (e.g. by an expletive). In this article, I will not consider further elaborations of the probe-goal framework such as Pesetsky & Torrego (2007) or Zeijlstra (2012), although my solution can be easily implemented in these and other frameworks.

The probe-goal approach has also been extended to A'-movement. I will here use a system adapted from Radford (2004: 419ff.), who assumes that the target category of A'-movement bears a probe consisting of an uninterpretable operator feature (uOp) and an [EPP] feature, while the item undergoing movement has an interpretable operator feature, with values such as [*wh*], [*rel(ative)*] or [*focus*]. Chomsky (2007; 2008) assumes that, instead of [EPP]-features, phase heads can optionally have other movement-inducing features, so-called edge features (EFs), which do not depend on a probe-goal relationship. In particular, a phase head can have an EF when it can trigger a movement step that causes some effect, e.g. a necessary intermediate movement step in order for the derivation to converge (cf. Chomsky 2008: 149, Müller 2010). The idea of EFs has been criticized in the literature, among other reasons because, since optional EFs (or P(eripheral)-features in earlier minimalist work) are held to be a universal property, it is difficult in such a framework to model cross-linguistic variation (cf. Ceplova 2001; Boeckx & Grohmann 2007; Boeckx 2011, among others). Thus, “[d]ifferent domains count as opaque in different languages; it makes sense to look for features that vary cross-linguistically and that may induce islandhood” (Boeckx 2011: 4). In the cases to be discussed in the present article, the variation at issue is even intra-linguistic, i.e. within the same language. If the (un)grammaticality of the French cases presented in §1.1 is due to the phase property of DP, as I assume, in a case such as (2a), movement of [<sub>pp</sub> *sur qui*] to the DP-phase edge would be needed to make the derivation converge, and thus an EF could be freely generated on the D° head. However, the structure is ungrammatical, which calls the EF approach into question. I therefore assume a probe-goal approach for A'-movement as sketched above, in the sense that the D head contains an [EPP]-feature bound to a probe that is sensitive to particular kinds of features.

## 2 Basic data and state of the art

As I have already mentioned in §1.1, a PP can be extracted from a complement DP in *wh* and relative constructions when the PP is headed by *de*, as is illustrated again in (5) and (6):

- (5) a. [PP De qui] avez-vous vu [DP une photo [~~PP de qui~~] ?  
of whom have-you seen a photo of whom  
‘Of whom have you seen a photo \_\_?’ (repeated from (2c))
- b. [PP De quel livre] connais-tu [DP la fin [~~PP de quel—livre~~] ?  
of which book know-you the end of which book  
‘Of which book do you know the end \_\_?’ (cf. Sportiche 1981: 224)
- c. [PP De quel linguiste] avez-vous rencontré [DP les parents [~~PP de  
of which linguist have-you met the parents of  
quel—linguiste~~] ?  
which linguist  
‘Of which linguist have you met the parents \_\_?’
- (6) a. la maison [PP dont / de laquelle] vous avez vu [DP une photo  
the house of.which / of which you have seen a photo  
[~~PP dont— / de laquelle~~]  
of.which / of which  
‘the house of which you have seen a photo \_\_’ (Grosu 1974: 312,  
Footnote 3)
- b. un linguiste [PP de qui / dont] vous avez rencontré [DP les  
a linguist of whom / of.which you have met the  
parents [~~PP de qui— / dont~~]  
parents of whom / of.which  
‘a linguist of whom/of which you have met the parents \_\_’ (Tellier  
1991: 90)

However, as observed by Sportiche (1981: 225), extraction is barred when the preposition *de* indicates source/origin (also cf. Tellier 1991: 90):

- (7) a. \* [PP De quel pays] avez-vous rencontré [DP les arrivants [~~PP—  
from which country have-you met the arrivals  
de—quel—pays~~] ?  
from which country  
‘From which country have you met the arrivals \_\_?’
- b. \* Cette prison, [PP de laquelle] [DP le transfert [~~PP de laquelle~~] de  
this jail of which the transfer of which of  
l’ accusé au tribunal]...  
the accused to.the court  
‘This jail, from which the transfer \_\_ of the defendant to the court ...’  
(Sportiche 1981: 225)

Taking this together with the observation made in §1.1, according to which PPs headed by prepositions other than *de* cannot be extracted either, Sportiche (1981) arrives at the descriptive generalization in (8) for extractable constituents:

- (8) Provisional descriptive generalization (I)  
 “Class 1: genitive PP’s [sic] introduced by the preposition ‘de’.  
 Class 2: PP’s introduced by other prepositions (including the one homophonous to ‘de’ indicating the source).  
 [...] the second class of PP’s is, in general, not wh-extractable. [...] However, PP’s in the first class sometimes are; PP’s in this class introduce either the object of the head noun, its subject or its possessor (if possible).” (Sportiche 1981: 225)

Note by the way that Sportiche calls the extractable PPs “genitive PPs”, which he further divides into those representing “the object of the head noun, its subject or its possessor”, corresponding to the traditional division into objective, subjective and possessive genitives. In the literature published after Sportiche (1981), we observe two tendencies. First, phrases introduced by *de* are considered to be arguments, whereas phrases introduced by other prepositions are taken to be adjuncts, to which those headed by *de* indicating source/origin can also be argued to belong (cf. Cinque 1990; Moritz & Valois 1994; Alexiadou et al. 2007: 586). Second, the terms subject, object and possessor were replaced by the theta-roles AGENT, THEME and POSSESSOR (e.g. Pollock 1989; Valois 1991; Godard 1992). Crucially, theta-roles were argued to be responsible for determining which constituent can be extracted in the case of multiple PPs headed by *de*:

- (9) a. \* La jeune femme [PP dont] [DP le portrait [PP de Corot] {PP-  
 the young woman of.which the portrait of C.  
~~dont~~] se trouve à la Fondation Barnes ...  
 of.which REFL finds at the Foundation Barnes  
 ‘The young woman, the portrait of whom by Corot \_\_ is located in  
 the Barnes Foundation ...’
- b. Corot [PP dont] [DP le portrait {PP-~~dont~~} [PP de cette jeune  
 Corot of.which the portrait of.which of this young  
 femme]] se trouve à la Fondation Barnes ...  
 woman REFL finds at the Foundation Barnes  
 ‘Corot, by whom the portrait \_\_ of this young woman is located in  
 the Barnes Foundation ...’ (examples from Godard 1992: 268–269,  
 following Ruwet 1972; also cf. Sag & Godard 1994).

(10) (repeated from (4), from Milner 1978; 1982; quoted in Sag & Godard 1994)

- a. \* Le Corbusier [PP dont] [DP la maison [PP ~~dont~~] [PP de M.  
Le C. of.which the house of.which of Mr.  
X]] n' est guère confortable ...  
X NEG is hardly comfortable  
'Le Corbusier, by whom the house \_\_ of Mr. X. is hardly comfortable ...'
- b. M. X [PP dont] [DP la maison [PP de Le Corbusier] [PP-  
Mr. X of.which the house of Le C.  
~~dont~~]] n' est guère confortable ...  
of.which NEG is hardly comfortable  
'Mr. X, whose house of (=by) Le Corbusier \_\_ is hardly comfortable ...'

The examples in (9) are about a portrait featuring a young lady (THEME) painted by Corot (AGENT). The distinction between (9a) and (9b) is supposed to show that, when there is an AGENT and a THEME in the same DP, the AGENT can be extracted and the THEME cannot. Similar facts seem to apply to (10), where the presence of a POSSESSOR seems to block the extraction of an AGENT. This was assumed to follow from the following thematic hierarchy: POSSESSOR > AGENT > THEME (cf. Pollock 1989; Godard 1992). Let us assume this for now, so that the descriptive generalization in (8) can be replaced by the one in (11):

(11) Provisional descriptive generalization (II):  
Argument PPs of nouns can be extracted if they

- are introduced by *de* and
- bear the theta-role AGENT, THEME OR POSSESSOR.

If the noun has more than one complement, only the highest in the hierarchy POSSESSOR > AGENT > THEME can be extracted. Adjunct PPs cannot be extracted.

However, Pollock (1989: 160) mentions some exceptions, in which the THEME is extractable even when an AGENT is expressed:

- (12) a. La symphonie [PP dont] j' aime [DP l' interprétation [PP de  
the symphony of.which I love the interpretation of  
Karajan] [PP ~~dont~~] ...  
K. of.which  
'The symphony, of which (THEME) I love the interpretation \_\_ by K.  
(AGENT) ...'

- b. L' histoire [PP dont] je n' ai jamais pu avoir [DP la  
 the story of.which I NEG have never could have the  
 version [PP de Marie] [~~PP dont~~] ...  
 version of M. of.which  
 'The story, of which (THEME) I could never have Mary's (AGENT)  
 version \_\_ ...'
- c. Les événements [PP dont] j' ai apprécié [DP le  
 the events of.which I have appreciated the  
 compte rendu [PP du Monde] [~~PP dont~~]...  
 report of L.M. of.which  
 'The events of which (THEME) I appreciated the report \_\_ by Le  
 Monde (AGENT) ...'

As Godard (1992: 268, Footnote 31) observes (for 12c), “the complement *du Monde* is a modifier rather than an argument; it is interpreted as a location, equivalent to the RC “which appeared in *Le Monde*””. In a similar vein, Milner (1982: 86–87, Footnote 2) remarks that, in an expression such as *La symphonie de Beethoven de Karajan* (lit. ‘The symphony of Beethoven of Karajan’), it is not obvious that *Beethoven* is an authentic AGENT, whereas one might consider *symphonie de Beethoven* as a kind of compound noun, of which *Karajan* would be the only complement.

Such considerations led Kolliakou (1999) to the conclusion that, in all the examples at stake – i.e. such as those in (9), (10), and (12) – there is only one argument PP in the DP.<sup>6</sup> Her basis is Chierchia’s (1982; 1985) distinction between IDPs (*individual-denoting phrases*), i.e. phrases denoting individuals that refer to an entity in discourse, and PDPs (*property-denoting phrases*), i.e. phrases denoting properties that determine a type of entity. When there is more than one PP headed by *de* in a DP, there can only be one IDP, whereas the other one is necessarily a PDP. Consider the examples in (13) from Kolliakou (1999: 736):

- (13) a. En ce moment, *une attaque de partisans* serait fatale. (PDP)  
 in this moment an attack of partisans would.be fatal  
 ‘At this moment a partisan attack would be fatal.’
- b. L' *attaque des partisans* a commencé à 7 heures. (IDP)  
 the attack of.the partisans has begun at 7 o'clock  
 ‘The attack of the partisans began at 7 o'clock.’

<sup>6</sup>Also cf. Cinque (2014: 93), who arrives at similar conclusions for Italian, cf. Footnote 11.



- c. *L' attaque de(s) partisans ce matin n' était pas une attaque*  
 the attack of(.the) partisans this morning NEG was not an attack  
 de partisans.  
 of partisans  
 'The attack of (the) partisans this morning wasn't a partisan attack.'

Actually, the French expression *une attaque de partisans* can be translated into English either as 'an attack by partisans' or as 'a partisan attack', where, in the latter case, *partisans* cannot be interpreted as an AGENT, but designates a property; thus, a *partisan attack* is an attack that is typical for partisans. As Kolliakou observes, such PDPs are adjuncts, whereas only IDPs can act as arguments. In French, there are no compound nouncompound expressions of the English type, but the PDP can sometimes be substituted for by a corresponding adjective; e.g. in (12a) *l'interprétation de Karajan* could be paraphrased by *interprétation karajienne*, a test which shows that *de Karajan* is a PDP. That fact that PDPs behave like post-nominal adjectives confirms the idea that such expressions are adjuncts. Importantly, Kolliakou also observes that, in cases without extraction, the PDP is closer to the head noun than the argument (IDP). This is illustrated in (14), from Kolliakou (1999: 714), which also shows the interaction of syntax with extra-linguistic factors, in this case world knowledge:

- (14) a. *la maison [pp de Le Corbusier] [pp de Monsieur X]*  
 the house of L. C. of Mr. X  
 b. # *la maison [pp de Monsieur X] [pp de Le Corbusier]*  
 the house of Mr. X of L. C.  
 (cf. Kolliakou 1999: 730)

(14b) is not accepted because, syntactically, *de Monsieur X* is closer to the head noun than *de Le Corbusier*, which means that it must be interpreted as a PDP-adjunct and not as a possessor argument. The unacceptability then results from the fact that, without a very specific context, there is no such thing as a typical "Mr. X house". Just like some putative agents or possessors, apparent themes can also qualify as PDPs. Thus, the ungrammaticality of (9a) also falls into place if *le portrait de la jeune femme de Corot* is interpreted as something like 'the young woman-portrait of/by Corot'.<sup>7</sup>

On these grounds, let us reject the descriptive generalization in (11) and, instead, adopt (15):

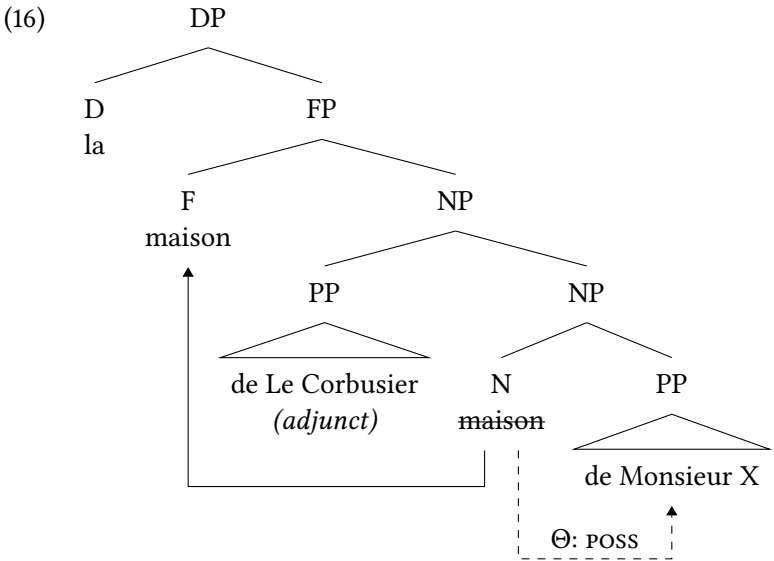
<sup>7</sup>The status of an expression as either an IDP or a PDP often depends on world knowledge. For further illustration, see Kolliakou's (1999) remarks concerning (i) and (ii):

- (i) *le portrait [ d' Aristote] [ de Rembrandt]*  
 the portrait of Aristotle of Rembrandt

(15) Descriptive generalization (III)

- A noun can select only one PP argument headed by the preposition *de*, usually expressing AGENT, THEME or POSSESSOR. This argument can be extracted in *wh* and relative constructions.
- Other PPs headed by *de* (including those indicating SOURCE and PDPs), as well as PPs headed by other prepositions, are adjuncts. Adjuncts cannot be extracted in *wh* and relative constructions.

Kolliakou herself uses an HPSG account to derive the structures at issue in this section. Note that her theories about arguments and PDP-adjuncts in the DP can easily be expressed in a minimalist framework. I cannot discuss here the numerous proposals for the internal structure of DPs and the position of post-verbal adjectives in Romance. A quite widespread approach is to assume one or more functional projections between DP and NP (cf. the discussion in Alexiadou et al. 2007), represented as FP in the simplified version in (16) representing (14a):



- (ii) le portrait [ de Rembrandt ] [ d' Aristote ]  
 the portrait of Rembrandt of Aristotle

“*[D]’Aristote* in [(i)] is different from *d’Aristote* in [(ii)]: *portrait d’Aristote* in [(i)] can identify a typical portrait representing Aristotle (or even a typical Aristotle portrait depicting someone else); on the other hand, *d’Aristote* in [(ii)] refers to an individual named ‘Aristotle’, and who in principle can be associated in one out of many ways with the portrait (painter, owner, etc.) – provided we leave aside the historical/“meta-linguistic” information that biases our interpretation” (Kolliakou 1999: 748).

Here, the noun *maison* has one argument, to which the theta-role POSSESSOR is assigned. The other PP, the PDP *de Le Corbusier* is an adjunct, left-adjoined to NP. The head noun is raised to a functional projection (maybe NumP). It follows naturally from this analysis that the PDP adjunct is closer to the head noun, in conformity with what Kolliakou observes.

However, all this does not explain why the adjunct cannot be extracted and how the extraction of the complement can be modeled within the Minimalist Program. I will solve these problems within the account that I will develop in §4, but let us first look at some more recent work in which the DP is considered as a phase.

### 3 Phase-based approaches

The idea that cyclic movement uses [spec,DP] (or [spec,NP] in former frameworks) as an “escape hatch” can already be found in Cinque (1980) and has been elaborated on, e.g., by Stowell (1989); Szabolcsi (1983/1984); Giorgi & Longobardi (1991), and Gavrusseva (2000). In more recent work, the DP has been considered to be a phase (cf. e.g. Svenonius 2004; Chomsky 2008; Heck 2008; 2009). For data concerning extractions from DP that are similar to those considered here, originating from Spanish and Italian, respectively, I briefly summarize Gutiérrez-Bravo (2001) and Cinque (2014).

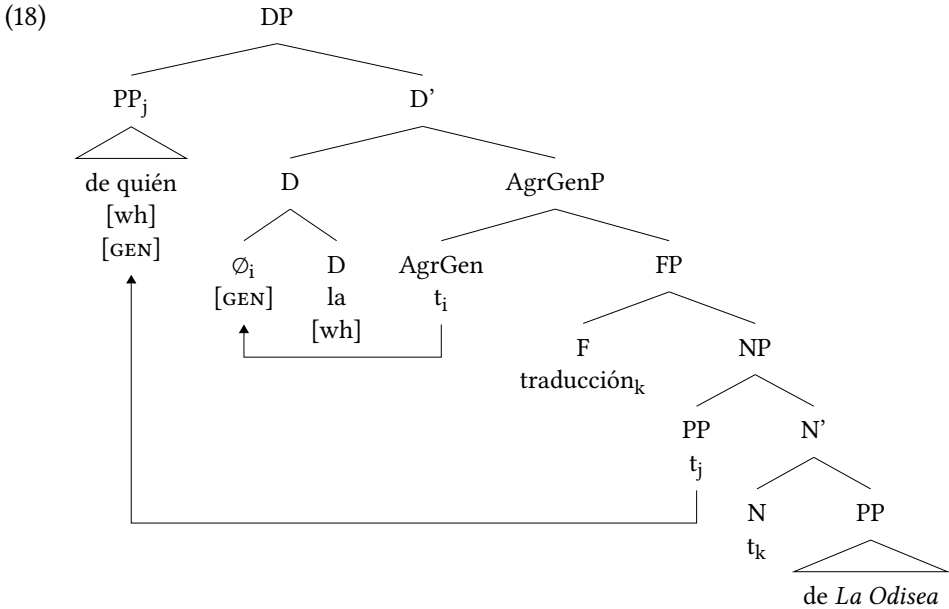
Gutiérrez-Bravo (2001) is a surprisingly early article on phase theory, which, however, still follows Chomsky (1995) with respect to (strong and weak) features, checking theory, and agreement. The Spanish data that this article aims to explain are similar to the French data in §2:

(17) Spanish (Gutiérrez-Bravo 2001: 111)

- a. [PP De quién] perdiste [DP la traducción [PP de La Odisea] [~~PP de~~  
of whom lost.2SG the translation of the Odyssey of  
quién]] ?  
whom  
‘Of whom did you lose the translation of The Odyssey \_\_\_?’
- b. \* [De qué] perdiste [DP la traducción [PP de Juan] [~~PP de qué~~]] ?  
of what lost.2SG the translation of J. of what  
‘Of what did you lose Juan’s translation \_\_\_?’

As shown in (18) below, Gutiérrez-Bravo assumes an AgrGen[itive] projection situated lower than D. In order to attract the *wh* constituent to the phase edge,

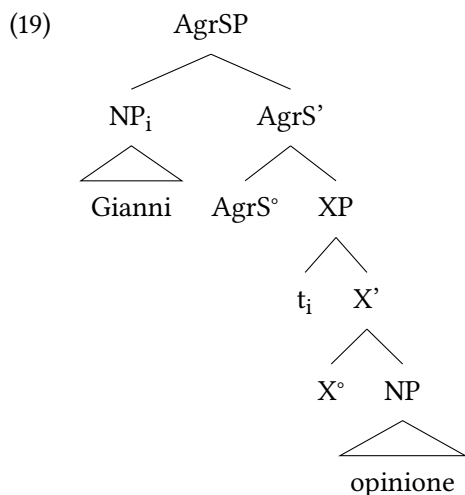
the D head has a strong  $[wh]$ -feature. The covert AgrGen head has a genitive feature, which is adjoined to D. This feature will then attract the PP that also bears a  $[GEN]$ -feature to  $[Spec,DP]$  (recall that, in Chomsky’s 1995 framework, features are checked via specifier-head agreement). The attracted PP must also bear a  $[wh]$ -feature, which checks the  $[wh]$ -feature of D. Within the NP, a PP that encodes the AGENT is merged in  $[Spec,NP]$ , whereas the PP bearing the THEME theta-role is the complement of N. The ungrammatical case (17b) is then explained by the Minimal Link Condition, which forces the  $[GEN]$  feature in D to attract the closest constituent that also bears a  $[GEN]$  feature. In (17b), this would be the PP *de Juan*, which does not, however, bear a  $[wh]$ -feature. For (17a), the derivation would converge in the following way:



Apart from the fact that this account uses an early minimalist framework, it contains some weak points. For example, the adjunction of the  $[GEN]$ -feature is not motivated, and questions arise concerning how the second genitive feature (on the N complement in (18)) is checked, and why a PP can bear a case feature in the first place. However, Gutiérrez-Bravo’s approach contains an interesting point: the incorporation of the case feature into D creates a complex D head that has both A and A’ properties. In other words, the extraction from DP “is conditioned by the possibility of the extracted constituent to check the Case feature of the adjoined functional head” (Gutiérrez-Bravo 2001: 116).

In a similar vein, Cinque (2014: 23) assumes, for parallel Italian data, that “DPs are phases (which forces movement to the highest specifier of DP, before extraction takes place)”. He argues that this specifier is an A- (rather than an A’-) position. Cinque furthermore makes use of the notion “subject of DP” (cf. Cinque 1980), which can be identified, among others, by means of the following test: “the subject is the only argument of the noun which can be expressed by a possessive adjective” (Cinque 2014: 95, Footnote 1).<sup>8</sup>

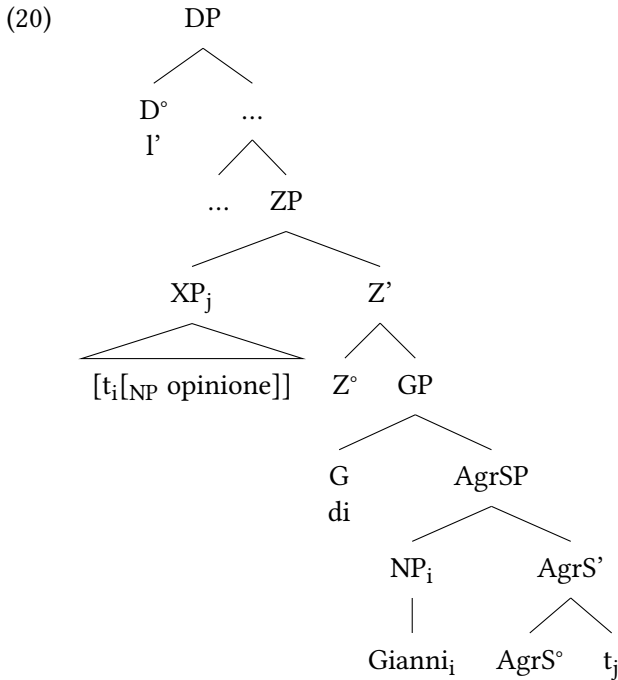
His derivation of a DP containing a “subject” is very complex and can only be sketched here. It starts off as shown in (19) (representing the DP *l’opinione di Gianni* ‘Gianni’s opinion’, lit. ‘the opinion of Gianni’), where the “subject” moves from its “thematic (Merge) position to a licensing position (Spec AgrSP or NominativeP [...])” (2014: 92):



The rest of the derivation yields the structure sketched in (20).<sup>9</sup> A GP (genitive phrase) headed by the element *di* is merged above AgrSP, whereas the XP remnant containing the head noun is moved to a higher specifier (cf. Kayne 1999; 2004, among others).

<sup>8</sup>This also applies to French. A second test for Italian is mentioned by Cinque (ibid.): “the subject is the only argument of the noun which cannot be expressed by a 1st and 2nd pers. sing. pronoun preceded by *di*”. French is even stricter here, since it includes the third person, too. Thus: *la maison \*de moi / \*de toi / \*de lui / \*d’elle / \*d’eux*. I will not examine this property here, but agree with Cinque’s (2014: 49) idea, which roughly amounts to saying that these pronouns are incompatible with the genitive case because their forms are fixed for oblique case.

<sup>9</sup>The three dots represent the “criterial subject position” of the DP (SubjP; cf. Rizzi 2007; Rizzi & Shlonsky 2007), which remains empty (containing *pro*) in the case at issue and is irrelevant for our discussion.



It is precisely the “subject” of a DP that can be extracted, for example if we use the *wh* element *chi* ‘who’ instead of *Gianni* in (19) and (20); technically, the whole GP must be extracted in this case. Cinque (2014: 94–95) explains the impossibility of extracting other arguments when the “subject” position is filled (cf. our French cases in §2) in terms of relativized minimality (Rizzi 1990; 2001; 2004): the external specifier of DP is an A-position in Italian and other Romance languages, essentially because “if it were an A’-position, we would expect any argument or adjunct to be able to move into it” (2014: 91).<sup>10</sup> Although this is not very clear in the article, what is meant here is that a non-“subject” argument would have to move out of the NP in the situation in (19), thus crossing the subject in Spec-AgrSP, an A-position. Since the ultimate goal of the constituent is [spec,DP], which is an A-position, too, this movement is barred by relativized minimality.

Note that Cinque’s idea concerning the A-status of [spec,DP] is similar to Gutiérrez-Bravo’s assumption. Although Gutiérrez-Bravo assumes that [spec, DP] has a mixed A and A’ status, the primary trigger of movement is the case

<sup>10</sup>For further evidence with respect to the properties of [spec,DP] as an A-position, see Cinque (2014: 87–91).

feature, while the operator feature (e.g. [*wh*]) is checked as a “free rider”. With respect to the issue of why a PP can have case, the advantage of Cinque’s approach is that the relevant types of N arguments are not PPs but DPs, and the element *di* or French *de* is a genitive head.<sup>11</sup> Within the Minimalist Program, it remains to be seen, however, how the A or A’ status of a projection should be encoded, an issue to which I will return in §4.

Cinque’s article contains some other interesting aspects, e.g. his criticism of those explanations that involve a thematic hierarchy (cf. §2):

[...] this is true only inasmuch as thematic roles enter into the determination of what eventually counts as the syntactic subject. When divorced from the notion of subject the thematic hierarchy fails to predict what can be extracted and what cannot. Not all Agents/Experiencers can extract in the absence of Possessors (e.g. those introduced by a *by* phrase). Not all Themes can extract in the absence of Agents/Experiencers and Possessors (e.g. the Theme of Ns like *desiderio* ‘desire’; cf. Cinque 1980, p. 64; Longobardi 1991, p. 66; Kolliakou 1999, sect. 2.3). Ultimately, only what qualifies by the two diagnostics above as the *syntactic* subject of the DP can extract.

(Cinque 2014: 95–96, Footnote 1)

Note, however, that Cinque’s argumentation pushes the question back one step, because what is going to be realizable as a subject of DP may still depend on some kind of hierarchy.<sup>12</sup>

Summarizing, both Gutiérrez-Bravo (2001) and Cinque (2014) consider DPs to be phases.<sup>13</sup> Thus, a constituent can only be extracted from the DP if it first moves to its (external) specifier. Both accounts agree on the fact that this movement step has properties of A-movement, related to case properties (the extracted

<sup>11</sup>Note by the way that Cinque arrives at conclusions very similar to those of Kolliakou (1999) sketched in §2: “The ungrammaticality (or marginal status) of two *di*-phrases with derived nominals based on transitive verbs (\*[*la distruzione [del ponte] [dei nemici]*] ‘the destruction of the bridge of the enemies’/[\**la distruzione [dei nemici] [del ponte]*] ‘the destruction of the enemies of the bridge’, as opposed to [*la distruzione [del ponte] [da parte dei nemici]*] ‘the destruction of the bridge by the enemies’) [...] may suggest that, in the Italian DP, only one *di* is available to license genitive Case [...]. Where two *di*-forms appear to be (marginally) possible ([*l’organizzazione [della mostra] [di Gianni]*] ‘the organization of the exhibition of G.’), the subject *di Gianni* might in fact be a reduced relative clause ([*l’organizzazione [della mostra] [(che era) di Gianni]*] ‘the organization of the exhibition which was by Gianni.’” For French, similar speaker judgments apply; i.e. *Le portrait d’Aristote de Rembrandt* is more marginal than *Le portrait d’Aristote par Rembrandt*.

<sup>12</sup>Thanks to an anonymous reviewer for pointing this out.

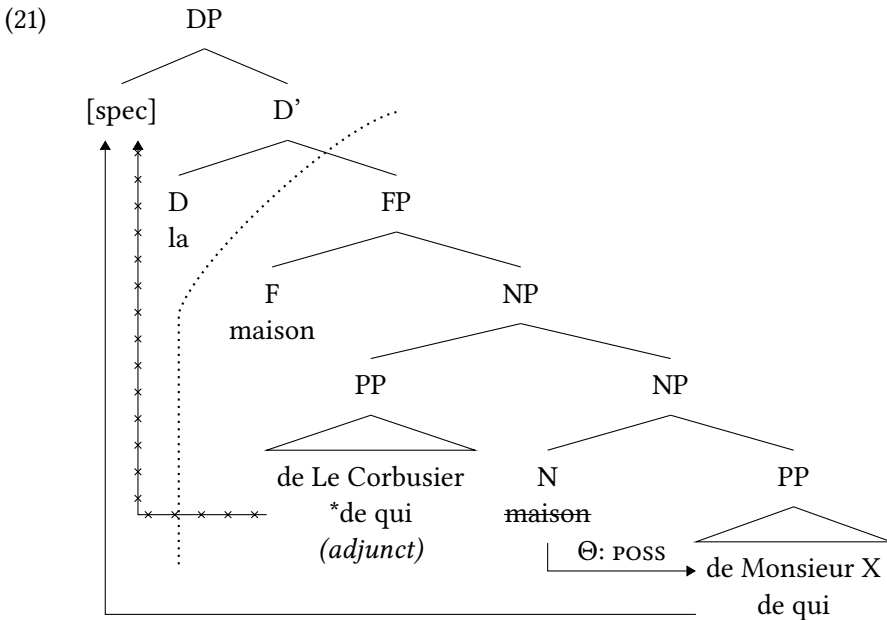
<sup>13</sup>For further arguments for the status of DP as a phase in connection with *pied-piping* in French, see Heck (2008).

constituent bears genitive case). We can thus observe a kind of circle in the discussion of Romance extraction phenomena: while at the beginning of the 1980s the constituents extracted from the DP were considered to be genitives, the discussion in the course of the 1980s and 1990s turned on theta-roles rather than case, an initiative with doubtful success. More modern (minimalist) approaches based on phase theory have returned to considering the relevant constituents (headed by elements such as French *de* or Italian *di*) as exponents of genitive case. This will be important to keep in mind for what follows.

## 4 A phase- and probe-based minimalist analysis

### 4.1 Basic outline

In this section, I develop a phase-based account that is in conformity with the minimalist probe-and-goal framework (Chomsky 2000 et seq.). As we will see, some of the insights of the previous solutions sketched in §3 independently follow from the application of this framework. Let us begin with the illustration in (21), based on (16):



The dotted curved line represents the phase boundary; i.e. the part lower than the D head is not accessible for further computation. The element that we want



to extract must be raised to [spec,DP] as indicated by the arrows. The problem is now why the extraction of the adjunct is barred while that of the complement is not, even though the adjunct is closer to the D head.<sup>14</sup>

As mentioned in §1.2, and as became obvious, I hope, in §§2–3, we cannot just assume an optional edge feature (EF) on D, which could just attract any constituent needed for further computation – in (21), either the *wh*-marked complement or the *wh*-marked adjunct. If we cannot use an EF, we need to assume an [EPP]-feature that is connected to a probe. One necessary condition for the probe (following the framework adopted in §1.2) is that it contains an unvalued operator feature (uOp). Let us provisionally assume (22), a probe that is sensitive to interrogative, relative and focalized elements, which I argue bears [vOp] (see §1.2 above),<sup>15</sup> thus licensing the structures in (23):<sup>16</sup>

(22) Features of D (provisional formalization I)

[uOp] with uOp  $\hat{=}$  Op = X, X  $\in$  {*wh*, rel, Focus}

|

[EPP]

(23) a. [<sub>PP</sub> De qui] as-tu vu [<sub>DP</sub> [<sub>PP</sub> de qui] [<sub>DP</sub> la photo [<sub>PP</sub> de  
of whom have-you seen of whom the photo of  
qui]] ?  
whom  
'Of whom have you seen the photo \_\_ ?'

<sup>14</sup>Note that this problem could easily be resolved by assuming the right-ascending theory of adjuncts (see, e.g., Andrews 1983) together with relativized minimality. In this article, I prefer to follow Kayne's (1994) antisymmetric approach, according to which adjuncts always left-adjoin. In addition, the problem persists independently of the approach chosen, because adjuncts cannot be extracted even if there is no argument in the structure (see below). In Cinque's (2014) framework, this would follow because [spec,DP] is an A-position, but note that, according to the Minimalist Program as assumed here, the notion "A-position" is not a primitive of syntax and must be expressed through features, as will be done in what follows. As for relativized minimality, note that it is not easily compatible with a minimalist, derivational approach; see Boeckx (2008; 2009) for discussion.

<sup>15</sup>In addition, the extractable item must have another unvalued feature [uF] (not corresponding to the case feature discussed in §4.2), which is valued by the probe of the final landing site. Thus, for the cases at issue, C' will have a probe that not only contains [uOp] but is also able to value [uF] on D. This is to ensure that the *wh* or relative phrase cannot remain in any of the intermediate positions ([spec,DP] or [spec,vP]), which would lead to ungrammaticality. I will not investigate the nature of this feature in the present article.

<sup>16</sup>Movement to the phase edge of v is not represented in these simplified structures.

- b. le prof [PP dont] j' ai vu [DP {PP ~~dont~~} [DP la  
the professor of.which I have seen of.which the  
photo {PP ~~dont~~}]  
photo of.which  
'the professor of whom I have seen the photo \_\_'
- c. (C'est) [PP DE JEAN] (que) j' ai vu [DP {PP ~~de Jean~~} la photo {PP-  
it.is of Jean that I have seen of J. the photo  
~~de Jean~~]].<sup>17</sup>  
of J.  
'It is JEAN that I have seen the photo of \_\_'

However, the provisional formalization in (22) clearly overgenerates: a D head with this feature composition could also attract the adjunct *de qui* in the upper PP in (21) so as to yield the ungrammatical (24a) vs. the grammatical (24b). In fact, according to the descriptive generalization in (15), adjuncts can never be attracted, witness the PP indicating SOURCE in (24c) and an adjunct with another preposition as in (24d):

- (24) a. \* [PP De qui] as-tu vu [DP {PP ~~de qui~~} [DP la maison {PP-  
of whom have-you seen of whom the house  
~~de qui~~} [PP de M. X]]] ?  
of whom of Mr. X  
'Of whom have you seen the house \_\_ of Mr. X?'
- b. [PP De qui] as-tu vu [DP {PP ~~de qui~~} [DP la maison [PP  
of whom have-you seen of whom the house  
de Le Corbusier] {PP ~~de qui~~}}] ?  
of Le C. of whom  
'Of whom have you seen the house of Le Corbusier \_\_?'
- c. \* [PP D' où] aimes-tu [DP {PP ~~d' où~~} [DP les bananes {PP-  
from where like-you from where the bananas  
~~d' où~~}}] ?  
from where  
'From where do you like the bananas \_\_?'

<sup>17</sup>The Standard French focusing strategy is to use a cleft sentence. The focus-fronting option indicated by the brackets is available in other varieties of French.

- d. \* [PP Sur qui] as-tu lu [DP [~~PP sur qui~~] [DP un livre [~~PP sur~~—  
on whom have-you read on whom a book on  
qui]]] ?  
whom  
'On whom have you read a book \_\_\_'?

For this reason, the feature set in (22) is not enough. Since we are looking for features that can act as a probe for detecting only arguments, an obvious solution is phi-features. Recall that, according to Chomsky (2000), subjects of sentences are the goals of a phi-probe in T, whereas direct objects are the goals of a phi-probe in v. If we can generalize from this, arguments are typically the goals of a phi probe. Let us therefore modify (22) by assuming that the D head has a complex probe consisting of the unvalued operator features plus unvalued phi-features. The refined version of (22) is given in (25):

(25) Features of D (provisional formalization II)

- [uOp] with uOp  $\hat{=}$  Op = X, X  $\in$  {wh, rel, Focus}  
 [u $\phi$ ] with u $\phi$   $\hat{=}$  person = X, number = Y, gender = Z  
 |  
 [EPP]

Although this cannot be the final version, as we will see in §§4.2–4.3, this formalization has the advantage of coinciding with Gutiérrez-Bravo's (2001) hypothesis that [spec,DP] is a hybrid A/A'-position. This is so because the [EPP]-feature is linked to a complex probe that contains an operator feature (held responsible for A'-movement) and phi-features (related to A-movement).<sup>18</sup>

#### 4.2 The argumental status of extractable PPs and the case problem

Unfortunately (25) does not yet bring the desired result, since, as in (24a), the adjunct *de qui* must also be argued to contain phi-features. An even clearer example is the relative pronoun *lequel*, which is inflected for gender and number, but is still ungrammatical when it forms part of an adjunct PP extracted from a DP, while it is grammatical if it is part of an argumental PP. In order to further refine

<sup>18</sup>Note that the lexical entry of a D head in (25), as well as the further elaboration in what follows (in particular on genitives with *de*), is language-specific. Hence, other languages may show a behavior different from French. See, e.g., English *Who have you seen a picture of* or even *?What did you read books about?*

the formalization in (25), some more considerations, in particular concerning the status of the preposition *de*, are in order, along the following lines: crucially for my analysis, in the case of subjects and direct objects, it is the unvalued case feature that makes the goal visible to the probe (Chomsky 2000: 123).<sup>19</sup> This leads me to assume that those expressions in French containing the element *de* that can be extracted from a DP are themselves DPs (containing an unvalued case feature), and not PPs, so the element *de* is not a preposition but a kind of genitive case marker. Note that the idea that the expressions under discussion here are genitives coincides with the conclusions reached by Gutiérrez-Bravo (2001) and Cinque (2014) for independent reasons and in other frameworks (see §3). However, it is a natural outcome of my attempt to apply a minimalist approach of the kind proposed in Chomsky (2000 et seq.).

To treat arguments of N that contain *de* or analogous elements in other Romance languages (such as Italian *di*) as genitives is an old idea formulated as early as Benveniste (1966), and later implemented in various ways in generative grammar. We have already seen one possibility in §3: the G[enitive]P assumed by Cinque (2014). This is not, however, appropriate in the framework adopted here, in which case features are valued later by a higher probe. A more neutral label is K[ase]P (cf. Bittner & Hale 1996; Neeleman & Weerman 1999, among many others), although such a label should in fact be avoided, as it does not have semantic content (cf. Chomsky 1995). In my view, it would be preferable to assume that the element *de* is inserted post-syntactically, just like synthetic case morphology (see, e.g., Marchis Moreno 2018). I cannot discuss this any further here and remain rather theory-neutral with respect to the status of Romance analytical genitives. I provisionally use the term KP, following Biggs (2014: 23), in that KP is “primarily employed as a placeholder for (late) morpho-phonological insertion.” I will not be concerned with the internal structure of KPs, on which various views exist, so I will label the whole expression as KP.

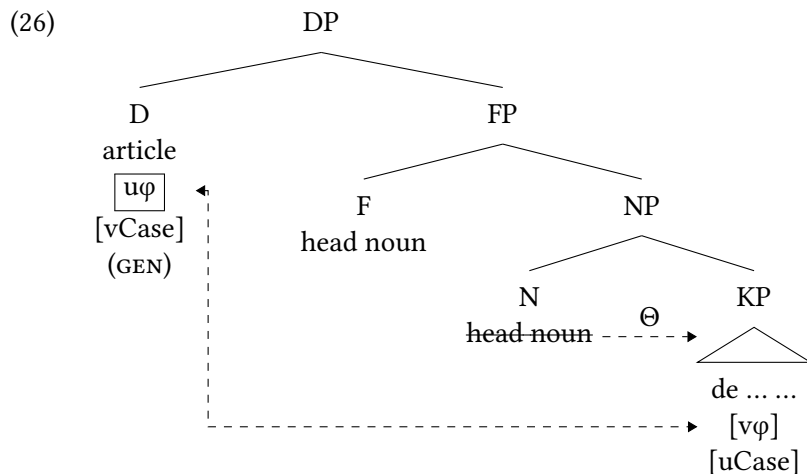
Let us then assume that arguments of N that represent AGENT, THEME or POSSESSOR<sup>20</sup> are KPs, where KP has valued phi-features plus an unvalued case feature. I furthermore assume that the D-head assigns genitive case under Agree (cf. Radford 2004: 368–369; Rappaport 2006, among others), which I formalize with

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<sup>19</sup>As an anonymous reviewer points out, late-adjunction approaches would also predict that adjuncts cannot be found by the probe, because when Agree takes place the adjunct is simply not yet present.

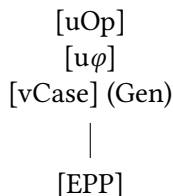
<sup>20</sup>To these we may possibly add “partitive” complements of nouns designating a quantity (such as *moitié* ‘half’, *plupart* ‘majority’, *litre* ‘liter’, *kilo* ‘kilo’ etc.), cf. Godard (1992: 236–237); Doetjes (1997).

a valued case feature on D.<sup>21</sup> For a case without extraction, such as *le livre de Jean*, lit. ‘the book of Jean’, this can be illustrated as follows:



The unvalued phi-features of D act as a probe and find the valued phi-features of the KP, triggering Agree and valuing the KP’s [uCase] as [Gen], which is spelled out as *de* on the K head. Intervening adjuncts do not have an unvalued case feature and will not be seen by the probe. The D head has no intrinsic [EPP]-feature in French, so the KP is not attracted to [spec,DP] in (26). A determiner with this feature composition is thus not apt for our extraction cases, which is the desired result, since only a subset of KPs, namely those containing an additional valued operator feature, can be extracted (recall my provisional formalization in (25)). Thus, if something needs to be extracted (ultimately because C has an unvalued operator feature), the determiner must be merged with the special feature composition shown in the (still provisional) formalization in (27) (revised from (25)):

(27) Features of D (provisional formalization II)



<sup>21</sup>Since the whole DP itself has a case feature that is valued by a higher functional head, this is a complex issue (cf. Weisser et al. 2012). Also see Footnote 22.

Although this feature composition of the D head responsible for extraction makes the right predictions, it is still incomplete. The reason is that the head noun also has phi-features, and possibly even an unvalued case feature, which must be valued by a head outside the DP (e.g. with [Nom] or [Acc]). This problem will be addressed in the next subsection.

### 4.3 The feature composition of French determiners

Thus far in §4, I have been concerned with determining the features that must be assumed for the D head in its functions as a genitive assigner and as a phase head that can permit, in some special cases, the extraction of DP-internal material to its specifier in order to license further extraction. But, of course, the D head has another, more obvious property, namely agreement with the head noun. Thus, crucially, in an expression like *la maison de Pierre* (the.FSG house.F.SG of Pierre.M.SG) the determiner (*la*) agrees in gender with the head noun *maison* and not with the KP *de Pierre*. This seems to cast serious doubt on the probe approach that I have just developed. The solution that I will adopt is that French determiners actually have two phi-sets, corresponding to two probes. Thus, French articles have the following basic feature composition:

$$(28) \quad \left( \begin{array}{l} [u\phi_1] \\ [u\phi_2] \\ [vCase] \text{ (Gen)} \end{array} \right)$$

This is an instance of multiple probes (cf. Chomsky 2008), and, more particularly, of feature-stacking (see Manetta 2011: Chapter 2 for discussion and literature). In our case, this means that the two probes are ordered, with  $[u\phi_1]$  having to probe first (finding the head noun as its goal) and  $[u\phi_2]$  second (finding the KP). The bracket around the second probe indicates that it is optional (i.e. it must enter the derivation only if a KP with an unvalued case feature is present). The fact that multiple phi-sets can exist on D-heads can be seen in French possessives, as shown in (29):

(29)	son	livre	ma veste	tes	livres
	his/her.M	book.M	my.F jacket.F	your.SG-PL	books.PL

The morphemes {s-}, {m-}, {t-} represent the phi-features (3rd sg., 1st sg., 2nd sg.) of the possessor, whereas the morphemes {-on}, {-a}, {-es} reflect those of the head noun. I actually assume that the complex possessive forms in (29) are the spell-out of D heads with a very similar feature composition to that in (28). Let us

assume that the expressions in (29) are DPs that contain a phonologically empty KP (something like a covert pronominal). Since articles combine with referring expressions whereas pronominals do not, the difference between articles and possessives can be modeled by a further feature that I provisionally identify as [+/- ref(erential)]:<sup>22</sup>

- (30) a. articles<sup>23</sup>  
           [D]  
           [uφ<sub>1</sub>]  
           ( [uφ<sub>2</sub>]  
           [vCase] (Gen)  
           [+ref] )  
       b. possessives  
           [D]  
           [uφ<sub>1</sub>]  
           [uφ<sub>2</sub>]  
           [vCase] (Gen)  
           [-ref]

We can now return to the problem of extraction and proceed to the final revision of the formalization initiated in (22) and further refined in (25) and (27): the D head needed for the extraction cases at issue here is a variant of (30a), enriched with the [uOp] feature and the [EPP]-feature connected to it (cf. (27) above). We can integrate this as a further optional part of (30a) so as to yield (31):

- (31) Features of D (articles; final formalization)

$$\begin{array}{l} [D] \\ [u\phi_1] \\ \left( \begin{array}{l} [u\phi_2] \\ [vCase] (GEN) \\ [+ref] \\ \left( \begin{array}{c} [uOp] \\ | \\ [EPP] \end{array} \right) \end{array} \right) \end{array}$$

<sup>22</sup>I do not address the issue of external case assignment to the DP. As an anonymous reviewer points out, D heads also need [uCase], which is valued by a probe from outside the DP (e.g. the probe contained in v), and then probably passed to the N head (concord).

<sup>23</sup>And, possibly, demonstratives.

This complex entry reads as follows: minimally, a French article (or a demonstrative) has one unvalued phi-set which probes the head noun and determines the morphology of the determiner. Optionally, there can be an additional probe with a (genitive-)case-assigning property. This option is needed when the head noun has a KP complement and can be enriched by an unvalued operator feature connected to an [EPP]-feature if the KP needs to be extracted.

## 5 Conclusions

In this article, I have focused on the extraction of PPs from DPs (in *wh*, relative and focus contexts), which is sometimes permitted but at other times leads to ungrammaticality. The main aim of this article has been to determine the conditions that allow/disallow extraction, on which there has been controversy in the literature, and to develop a phase-based account within Chomsky's (2000 et seq.) probe-and-goal framework. I have concentrated on French, although the data are similar in other Romance languages.

On a purely descriptive level, it appears that a subset of PPs headed by the preposition *de*, in which the PP represents an AGENT, THEME or POSSESSOR, is extractable. Other instances of [<sub>pp</sub> *de* ...] (e.g. PPs indicating source/origin or – following Kolliakou 1999 – PPs that are property-denoting expressions and have a similar function to adjectives), as well as PPs with prepositions other than *de*, cannot be extracted from the DP, thus yielding a kind of “island effect”. Still at a descriptive level, this can be generalized by assuming that only PPs with *de* that represent an AGENT, THEME or POSSESSOR are complements, while all other PPs are adjuncts, and that adjuncts are not extractable from DPs. A major issue that is discussed in the literature is the presence, in a single structure, of two or more PPs that fit the relevant extraction criteria. I have followed Kolliakou's (1999) argument that, in such cases, only one of them can be an argument, whereas the others are adjuncts (property-denoting expressions).

The relevant subset of PPs introduced by *de* has sometimes been informally classified as “genitives” in the literature, but in the 1980s and 1990s, the discussion mostly turned on theta-roles, trying to predict the extraction of PPs from DPs in terms of a thematic hierarchy. By contrast, two minimalist accounts that I have summarized in §3 (Gutiérrez-Bravo 2001; Cinque 2014) assume that extractable PPs headed by *de* or equivalent prepositions in other Romance languages represent genitive case in the technical sense. However, these accounts assume agreement phrases, which are not compatible with more recent minimalist literature. Both accounts are nevertheless formulated within phase theory, an idea that logi-



cally continues the view formulated by Cinque (1980), according to which extraction from DP (NP in Cinque 1980) to a higher category (usually CP) necessarily passes through [spec, DP] (formerly [spec,NP]).

In §4, I applied Chomsky's probe-goal approach in order to explain extraction of a PP to the DP phase edge. Essentially, what we need to assume is that D° can have an unvalued operator feature ([uOp]) bound to an [EPP]-feature. The operator feature alone, however, does not qualify as a probe capable of explaining the data, since it would match any constituent containing [vOp], crucially including adjuncts. There must therefore be an additional feature on the goal that guarantees the visibility of arguments (but not of adjuncts) to the probe. Following the logic of the probe-goal approach, this should be an unvalued case feature, a solution that lends further support to the genitive hypothesis. Since case belongs to the agreement system, the data must be explained by a complex probe on the D head, which contains unvalued phi-features in addition to [uOp]. I then argued that Romance articles can optionally have this complex probe, in addition to their "regular" unvalued phi-set (which regulates agreement between the article and the head noun). Thus, if something needs to be extracted from a DP, the D head has two phi-sets. Note that the extracted constituent must be classified as a DP or a KP rather than a PP.

French possessives, another type of determiner, can also be argued to have two phi-sets (in this case both are morphologically visible). This is encoded in the lexical entries of possessives, which do not have [uOp] and lack an [EPP]-feature. Interestingly, the fact that possessives and articles compete for the D° position then explains the incompatibility of extraction with the presence of possessives, which has been observed in the literature (cf. Milner 1978; 1982; quoted in Sag & Godard 1994):

- (32) a. la neuvième, dont j' ai beaucoup aimé l' interprétation  
 the ninth of.which I have much loved the interpretation  
 de Karajan  
 by K.  
 'the Ninth (symphony), of which I have much loved the  
 interpretation by Karajan'
- b. \* la neuvième, dont j' ai beaucoup aimé son interprétation  
 the ninth of.which I have much loved his interpretation  
 'the Ninth (symphony), of which I have much loved his  
 interpretation'

The theory sketched here also explains complex DP islands. In an example such as (1a), the special complex probe in the D head needs to identify a constituent with an unvalued case feature as its goal in order to attract it to the DP phase edge. However, the case feature of the putative goal, *qui* in the relative clause, is already valued as accusative in the relative clause.

A final note concerns the assumption that constituents introduced by prepositions other than *de* are adjuncts, which is assumed in most of the literature and which I have adopted as a working hypothesis during the whole article. My final approach makes this assumption unnecessary, since such constituents would be PPs and not KPs.

On a more general theoretical level, the study of the phenomena at issue here shows that not all intermediate movement steps can be explained by Chomsky's (2008) edge features (EFs). EFs are designed to optionally apply whenever needed, but they are not capable of selecting specific goals. Whereas we can assume an EF on *v* for ensuring cyclic movement from the DP edge to the CP, we cannot do so for the movement to the DP edge itself.

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## Chapter 11

# Null possessives in European Portuguese

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The paper investigates the referential properties of so-called null possessives in European Portuguese. The term refers to the phenomenon that the possessor argument of relational nouns may be left unrealized. Structural diagnostics like locality of binding and c-command, and interpretative diagnostics like readings under ellipsis and in only-contexts, split antecedents, and binding by a quantifier are discussed. The result of these tests is that a syntactic analysis in terms of movement or agreement is not feasible in EP. Furthermore, a comparison of the referential properties of simple and complex possessives is presented with the aim of outlining a possible semantic analysis.

## 1 Introduction

This article investigates the interpretation of null possessor arguments of inherently relational nouns in European Portuguese (EP). Inherently relational nouns (e.g., kinship and body part nouns) express a relation between two arguments, the possessum and the possessor. For example, the relational noun *pai* in (1) relates the referent of the DP *o pai* (the possessum) to the referent of the name *o João* (the possessor) through the relation *being-the-father-of*.

- (1) EP  
o pai do João  
the father of.the J.  
'João's father'

As shown by Barker (2011) and Löbner (2011), the possessor argument is lexically determined by the type of noun, and even if it is not syntactically realized, it is present for semantic and/or pragmatic interpretation. In European Portuguese it can be left unrealized, as shown in (2).



(2) EP

O João<sub>i</sub> conversou com [o pai]<sub>[i, h=speaker+, \*m]</sub>.  
the J. talked with the father

‘João talked with his father.’/‘João talked with our father.’

The empty possessor argument in (2) may be interpreted as coreferential with the subject *o João*, but it may not corefer with another person present in discourse (indicated by the index “m”). Furthermore, it can be interpreted like a 1<sup>st</sup> person plural possessive pronoun (as shown by the index “h=speaker+”). For the latter option there are three possible combinations of referents: (i) the speaker and the hearer, (ii) the speaker, the hearer and *o João*, and (iii) the speaker and *o João*. The referents will be siblings or belong to a group in which the use of the definite DP *o pai* has a unique referent, independent of the context. In this sense the DP *o pai* is interpreted like a proper name.

Additionally, the possessor argument can be realized as an overt possessive pronoun. European Portuguese has two types of possessive pronouns, a simple possessive pronoun and a complex possessive. The complex possessive is formed with the preposition *de* and a personal pronoun. Both forms are shown in (3).

(3) EP

a. O João<sub>i</sub> conversou com o seu<sub>[?i, m, h]</sub> pai.  
the J. talked with the his father

b. O João<sub>i</sub> conversou com o pai dele<sub>[i, m, \*h]</sub>.  
the J. talked with the father of.him

The simple possessive may be interpreted in three ways: it can refer to the subject *o João* or to another person salient in the context (indicated by the index “m”), or it can be used as a polite form addressing the hearer (indicated by the index “h”). The interpretation as polite form is in fact the preferred interpretation of (3a), according to native speakers.<sup>1</sup> The complex possessive in (3b) may take the subject as antecedent and it may corefer with some other person present in the context. In case the use of the simple possessive creates an ambiguity between the interpretation as politeness form and the anaphoric interpretation, the complex possessive will be used.<sup>2</sup>

<sup>1</sup>Thanks to Ana Maria Martins (CLUL) and Sandra Pereira (CLUL) for their judgements.

<sup>2</sup>For a detailed discussion of the use and interpretation of simple and complex possessives, see Castro (2005).



All three possessives (simple, complex and null) can be used anaphorically and refer to a sentence-internal antecedent. But according to native speakers, the use of the null possessive is preferred over the simple possessive with a sentence-internal antecedent. The null possessive can be used anaphorically or as a kind of indexical referring to the speaker and possibly including the hearer and other persons. In the present article I will focus on the anaphoric use.

Furthermore, inherently relational nouns are not uniform with respect to the interpretation of the null possessor argument in combination with indefinite determiners. In (4b), but not in (4a), the relational noun allows for a null possessor interpretation. (4a) cannot mean that *Maria* talks to one of her mothers.

## (4) EP

- a. A Maria conversa com uma mãe.  
 the M. talks with a mother  
 ‘Maria talks with a mother.’
- b. A Maria conversa com uma amiga.  
 the M. talks with a friend  
 ‘Maria talks with a friend.’

(4a) could be uttered in the following context: Maria is a teacher, and at a reunion with the pupils’ parents she is talking to the mother of a pupil. In this context, the DP *uma mãe* is interpreted as a non-relational noun with a meaning such as ‘female parent’ or ‘female legal guardian’. A similar effect has been observed for proper names by Longobardi (1994). In (4b), the relational interpretation is not affected by the indefinite determiner. Löbner (2011) relates this contrast to the interaction between concept type (relational, functional), possessor specification and definite/indefinite determination. Nouns like *father*, *mother* or *weather* are functional in the sense that they are inherently relational and inherently unique. Functional nouns are affected by indefinite determination in that it neutralizes their inherent uniqueness. Relational nouns are inherently relational, but inherently non-unique and are thus not affected by indefinite determination. Additionally, the way the possessor is realized plays an important role.<sup>3</sup> If the possessor is overt (simple or complex), as in (5a) and (5b), a relational reading is available.<sup>4</sup>

<sup>3</sup>Löbner (2011) additionally assumes that the possessor argument is existentially saturated in order to shift a functional to a sortal concept as in (4a).

<sup>4</sup>In EP possessives are prenominal with a definite article and postnominal with indefinite article. Details on the placement are introduced in §4.1.

(5) EP

- a. O João<sub>i</sub> conversou com uma mãe sua<sub>i</sub> .  
the J. talked with a mother his
- b. O João<sub>i</sub> conversou com uma mãe dele<sub>i</sub>.  
the J. talked with a mother of.him  
'João talked with one of his mothers.'

The sentences are perfectly acceptable if *João* grew up in a patchwork family. Thus, the interpretation of a relational noun is affected by determination and by the way a possessor argument is realized.

Let us summarize the three properties of null possessives: (i) they are lexically determined arguments, (ii) they affect the overall reference of the DP together with concept type and determination and (iii) they are interpreted in two ways: anaphorically and indexically.

In previous work, the phenomenon of null possessives has been observed for European Portuguese by Mateus et al. (2003: 350, Footnote 30), and for Brazilian Portuguese (BP) by Floripi (2003), Floripi & Nunes (2009, henceforth F&N), and Rodrigues (2010). To my knowledge, the referential properties of null possessors have not been investigated for European Portuguese, at least in published work.<sup>5</sup> The analysis of F&N and Rodrigues (2010) is taken as a starting point for the investigation of EP null possessives.

### 1.1 A movement-based analysis: F&N (2009) and Rodrigues (2010)

F&N and Rodrigues (2010) present a movement-based analysis of null possessive elements for (Colloquial) Brazilian Portuguese. Their analysis is based on the referential properties of null possessive elements with 3<sup>rd</sup> person, sentence-internal antecedents. An important difference between EP and (colloquial) BP is that BP has lost the 3<sup>rd</sup> person simple possessive. The possessive form *seu* in (6a) is 2<sup>nd</sup> person and exclusively refers to the addressee.

(6) BP

- a. O João<sub>i</sub> conversou com o seu\*<sub>i,j</sub> pai.  
the J. talked with the your father
- b. O João conversou com o pai.  
the J. talked with the father
- c. O João<sub>i</sub> conversou com o pai dele<sub>i</sub>.  
the J. talked with the father of.him

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<sup>5</sup>Ana Maria Martins and João Costa have pointed out to me that Ana Maria Brito has given a talk on null possessives in EP, but no abstract or handout is available.

In order to refer to the third person, both the null possessive and the complex possessive are used, as shown in (6b) and (6c). F&N and Rodrigues (2010) state that (6b) and (6c) do not differ with respect to interpretation or markedness.<sup>6</sup> But the complex and the null possessive differ with respect to their referential properties: the former shows anaphoric properties and the latter pronominal properties. F&N use the terms “anaphoric” and “pronominal” in the sense of the classical binding theory of Chomsky (1981; 1986). Whether a lexical item qualifies as an anaphor or as a pronominal can be determined by a set of structural and interpretative diagnostics. The structural diagnostics test for locality and c-command. An anaphoric element has to be bound by a c-commanding antecedent in a local domain.<sup>7</sup> IP/TP and DP have been detected as local domains for binding of anaphoric elements. If the antecedent may be non-local, outside the TP or DP, the nominal element qualifies as pronominal, and it is free to corefer with some salient antecedent. The c-command requirement, explicit in the definition of binding, states that an anaphoric/bound element must be c-commanded by its antecedent. A pronominal element is free in reference and can thus take a non-c-commanding antecedent.

The interpretative diagnostics distinguish a bound or free (co-referential) reading of a nominal element. There are two contexts that help to detect this difference: (i) in VP ellipsis and (ii) in *only*-contexts. Anaphors only allow for a bound reading and pronominal elements also permit a coreferential reading. Furthermore, the availability of split antecedents tests whether a pronoun can pick out a referent in discourse.

F&N show that a null possessive has anaphoric properties in a position from which movement is possible. If it is in a position that disallows movement, the possessive exhibits pronominal properties. F&N and Rodrigues (2010) follow the approaches of Hornstein (2001; 2007) and Boeckx et al. (2010), who derive anaphoric dependencies, including obligatory control, by movement. F&N and Rodrigues assume that a null possessive contained in an object DP, a position from which a DP may be moved, is a copy of the moved DP. The anaphoric properties

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<sup>6</sup>They conclude that the null possessive is not subject to the Avoid Pronoun Principle. The principle is formulated in Chomsky (1981) and just says “Avoid Pronoun”. For example, in structures like (i) the overt and covert pronoun are equally possible, but they differ with respect to their interpretation. The covert pronoun is interpreted as coreferential with *John* and the overt pronoun is interpreted as disjoint, at least if it is unstressed.

(i) John would much prefer [his/PRO going to the movie].

Chomsky (1981: 65) also mentions that this principle may be a conversational principle like “Do not say more than is necessary”, either a principle of deletion-up-to-recoverability or a principle of grammar.

<sup>7</sup> $\alpha$  binds  $\beta$  iff (i)  $\alpha$  and  $\beta$  are co-indexed and (ii)  $\alpha$  c-commands  $\beta$  (Chomsky 1981: 184).

are the effect of this movement operation. In case the null possessive is contained in a subject DP (a position from which movement cannot take place), it shows pronominal properties, and F&N assume a kind of last resort pronominalization, as proposed by Hornstein (2001; 2007). The movement analysis of null possessives is illustrated in Figures 1 and 2 for the sentence in (6b).<sup>8</sup> The relational noun is base-generated together with its possessor argument, as shown in Figure 1.

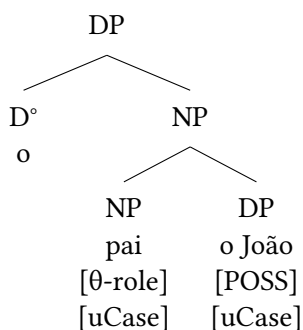


Figure 1: Base-generation of a relational noun and its possessor argument

After  $v^\circ$  has merged, the possessor DP *o João* moves to Spec $v$ P, the position of subject/agent DPs, as shown in Figure 2 below.

The DP and its copy fulfil two distinct roles: the DP is the subject of the sentence and the copy is the possessor argument. The movement analysis of anaphoric dependencies is one branch of recent Minimalist approaches to binding theory. The aim of such approaches is to derive the interpretation of nominal elements by means of their lexical properties (features), by principles of the computational system (Narrow Syntax) and from interface conditions. In the following section, the following three interpretative options are briefly introduced: mechanisms of syntactic encoding, semantic binding and coreference.

## 1.2 Theoretical background

The approaches of Hornstein (2001; 2007), Boeckx et al. (2010), Zwart (2002) and Kayne (2002) aim at deriving the interpretative and structural dependencies of anaphora (condition A/B of classical Binding Theory) by movement of the antecedent. Other approaches derive anaphoric dependencies by the operation Agree. For example, Hicks (2009) assumes that an anaphoric relation is

<sup>8</sup>This analysis diverges from the following basic Minimalist conceptions of Chomsky (1995; 2000; 2001; 2004): (i) movement into theta-positions is allowed, (ii) a DP may bear more than one theta-role and (iii) theta-roles may be assigned or discharged after movement.

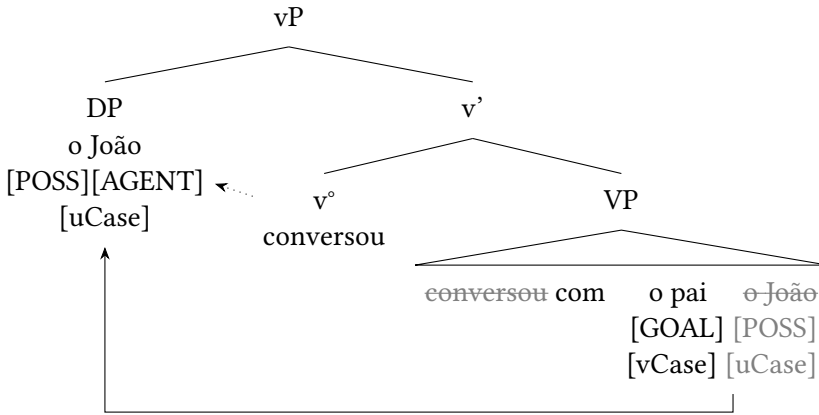


Figure 2: Movement of the possessor argument to the subject position

established via (upward) agreement of semantico-syntactic features. The distinction between anaphors and pronominals is encoded by referential features. An anaphor has an unvalued feature that is valued during the derivation via upward Agree with its antecedent. A pronominal enters the derivation with a valued feature, which induces a free variable interpretation. Locality restrictions on anaphoric dependencies are derived by restrictions on the operation Agree and by phases. Reinhart (2006) and Reuland (2011), based on previous work (e.g., Reinhart 1983; Reinhart & Reuland 1993; 1995; Reuland 2001) present a predicate-based account of bound anaphora. Anaphoric dependencies between co-arguments, which create a reflexive (syntactic) predicate, are encoded in syntax by formation of a chain. A chain is formed by several agreement steps. Whether a pronoun can be part of a chain depends on its feature composition.

The main focus of all these accounts is on anaphors and pronominals as arguments of verbal predicates. The behaviour of anaphors and pronominals as arguments of a nominal predicate was already puzzling from the point of view of GB binding theory. In nominal contexts, in particular inside so-called picture nouns, anaphors and pronominals “misbehave”, in the sense that anaphors can take a non-local antecedent and pronominals can corefer with a local antecedent. This is exemplified in (7) and (8).

- (7) (Chomsky 1986: 166–167)
  - a. They<sub>i</sub> heard [stories about each other<sub>i</sub>/them<sub>i</sub>].
  - b. They heard [PRO<sub>i</sub> stories about each other<sub>i</sub>].
  - c. They heard [PRO<sub>k</sub> stories about them<sub>i</sub>].

- (8) a. They<sub>i</sub> told [stories about each other<sub>i</sub>/\*them<sub>i</sub>].  
b. They heard [PRO<sub>i</sub> stories about each other<sub>i</sub> /them\*<sub>i</sub>].

In order to explain the difference between (7) and (8), Chomsky (1986) assumed the presence of a covert nominal argument, PRO, as subject of the NP. The presence of a nominal subject is taken to be essential for the definition of a binding domain. Furthermore, co-indexing of PRO with the subject of the sentence is taken to be a lexical property of the verb. The verb obligatorily or optionally controls the subject of the NP. In the experimental studies of Runner & Kaiser (2005), it was shown that the presence or absence of a subject is not decisive for the interpretation of anaphors with picture nouns. In (9) a non-local anaphor is allowed despite the presence of a subject, but the local pronominal is still excluded.

- (9) Runner & Kaiser (2005: 597)  
a. Ebenezer<sub>i</sub> saw Jacob<sub>k</sub>'s picture of himself<sub>i/k</sub>.  
b. Ebenezer<sub>i</sub> saw Jacob<sub>k</sub>'s picture of him<sub>i/\*k/m</sub>.

The non-local anaphor in (9a) is labeled an *exempt anaphor* or *logophor* (cf. Reuland 2011).<sup>9,10</sup> Inside an NP, anaphors can be used like pronominals. Any approach that assumes a (blind) syntactic encoding of anaphoric dependencies has to explain why anaphors have different interpretative properties inside the nominal domain and why syntactic encoding is blocked. What is important here is that the interpretative dependencies of exempt anaphora can be established by semantic binding and pragmatic coreference. Reinhart (2006) and Reuland (2011) discuss the competition between semantic binding and coreference. Semantic binding is restricted by sentence-internal structural conditions. The definition is given in (10).

- (10) A-binding: logical-syntax based definition (Reinhart 2006: 171)  
 $\alpha$  A-binds  $\beta$  iff  $\alpha$  is the sister of a  $\lambda$ -predicate whose operator binds  $\beta$ .

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<sup>9</sup>An anaphor is exempt (from Binding Condition A) if c-command by the antecedent is not required and if a reflexive pronoun is not in complementary distribution with a personal pronoun (cf. Büring 2005).

<sup>10</sup>The term “logophor” in its narrow sense is used for pronouns that refer to an individual whose viewpoint, words or thoughts are being reported (e.g., Speas 2004). Reuland (2011) uses the term in a broader sense for (morphological) anaphors that have pronominal-like referential properties in certain environments.

If a pronominal (a semantic variable) is not bound, it remains free and gets assigned a value from discourse. Coreference is taken to be determined by discourse principles. Reuland (2011) argues that the encoding of referential dependencies follows a kind of economy hierarchy: syntactic encoding is more economical than variable binding, and variable binding is more economical than a free, discourse-based interpretation. Reuland (2011), following the work of Reinhart (1983), assumes that sentence-internal coreference should be blocked if variable binding is possible and both methods yield an identical interpretation. Reinhart (2006) revisits her older proposal, based on different economy considerations. She proposes a C-I interface condition that restricts sentence-internal coreference as follows.

- (11) Rule I (Reinhart 2006: 185)  
 $\alpha$  and  $\beta$  can not be covalued in a derivation D, if
- a.  $\alpha$  is in a configuration to A-bind  $\beta$ , and
  - b.  $\alpha$  cannot A-bind  $\beta$  in D, and
  - c. the covaluation interpretation is indistinguishable from what would be obtained if  $\alpha$  A-binds  $\beta$ .

The definition works as follows. In (12) a covaluation interpretation is allowed, because clause (a) of Rule I does not hold. The possessive pronoun is not in a configuration to bind the DP *Max*, because *Max* is not a variable that can be bound.

- (12) (Reinhart 2006: 186)  
 His mother loves Max.  
 [his mother]  $\lambda x(x \text{ loves } y)$ ; his = Max

In (13), both bound and covaluation interpretations are allowed. The DP *Max* is in a configuration to bind the possessor. Furthermore, binding is possible between the DP and the possessive. Therefore Rule I in (11) does not hold and a coreferent interpretation is not blocked.

- (13) (Reinhart 2006: 186)  
 Max loves his mother.  
 Max  $\lambda x(x \text{ loves } y\text{'s mother})$ ; y = Max

An important aspect of Reinhart's proposal is that the interface with the interpretative component operates on PF structures. In her words, an economy principle should state something like "minimize interpretative options of a given

PF” (Reinhart 2006: 103). English has just one possessive pronoun, but EP has two ways to realize a possessive, and presumably also a third, covert, possessive, which is restricted to relational nouns. The theories mentioned above offer the following options for anaphora resolution. Anaphors are either bound by syntactic means or they are logophoric. Logophoricity in the sense of Reuland (2011) includes bound and coreferential readings. Pronominals are either bound semantically or they are coreferential.

### 1.3 Aims and structure of the article

The article aims at investigating the referential properties of EP null possessives. Based on these referential properties, conclusions can be drawn about the nature of null possessives and the way they are interpreted. F&N propose a syntactic encoding for BP null possessives. In §2, the diagnostics for the referential properties of null possessives in BP, as presented in F&N and in Rodrigues (2010), are compared to those in EP. The individual diagnostics will be discussed, and it will be shown that null possessives in EP are not subject to structural conditions like locality and c-command. Although they do not obey the structural conditions attributed to anaphoric elements, they are (partially) anaphoric from an interpretative point of view. It will be concluded that the referential dependency between a null possessive and its antecedent cannot be derived by means of syntactic operations like movement or Agree.

If EP null possessives are not copies of a moved NP, what kind of element are they and how are their referential properties to be explained? In §3, additional diagnostics are presented that support the idea that null possessor arguments are realized as possessive *pro*. The idea is based on a comparison of the referential properties of simple and complex possessives with the properties of null possessives. The results of the comparison are somewhat puzzling, because the possessive elements do not fit well into any particular category, nor do the interpretative options account for their behaviour. It will be concluded that null possessives can be classified as possessive logophors.

Given the assumption that null possessive *pro* may exist in the grammar of EP, in §4 a semantically motivated syntactic account of the restriction to relational nouns is proposed. The main claim of this analysis is that relational and non-relational nouns have a different internal syntax. The former select a possessive as their external argument in *SpecnP*, while the latter combine with a *PossP*. The conclusion summarizes the findings of the article.



## 2 Referential properties of null possessives in Brazilian and European Portuguese

The referential properties of null possessives are determined by a set of structural and interpretative diagnostics. These diagnostics are presented for BP null possessives and discussed for the corresponding data in EP. In order to avoid reference to a specific analysis, the notation  $\emptyset$ -poss will be used to symbolize a null possessive element. No assumptions about its status as a syntactic object or about its position are made in this section.

The diagnostics for locality and c-command are presented in §2.1 and §2.2. The interpretative diagnostics in §2.3 and §2.4 distinguish between a bound and a free reading of a pronominal element contained in a VP-ellipsis site and in a sentence with the exclusive particle *only*. The split-antecedent diagnostic is presented in §2.5.

### 2.1 Locality

The locality requirement is illustrated by the examples in (14). In (14a) the relational noun containing the null possessive is in object position. In principle, there are two possible antecedents: the subject of the embedded clause, *o André*, and the subject of the matrix clause, *a Marcela*. But only the DP *o André* may be interpreted as the possessor. The DP *a Marcela* is outside the local domain (the embedded TP) and does not qualify as the antecedent for the null possessive.

(14) BP (F&N: 42, 45)

- a. A Marcela<sub>i</sub> disse que [TP o André<sub>k</sub> ligou para o  $\emptyset$ -poss<sub>[\*i/k]</sub>  
the M. said that the A. called to the  $\emptyset$ .POSS  
amigo].  
friend

‘Marcela said that André called his friend.’

- b. A Marcela<sub>i</sub> acha que [o João<sub>k</sub> disse que [TP o  $\emptyset$ -poss<sub>i/k</sub>  
the M. thinks that the J. said that the  $\emptyset$ .POSS  
irmão vai viajar]].  
brother goes travel

‘Marcela thinks that João said that his/her brother is going to travel.’

In (14b), the relational noun is the subject of the embedded clause and the null possessive may also take a non-local DP as antecedent. F&N argue that the local

dependency in (14a) falls out from movement of the DP *o André*. In (14b) the relational noun is in a position from which movement is not licit in BP. Hence, the null possessive is realized as (last resort) little *pro* allowing for a non-local referential dependency. As mentioned above, such a subject-object asymmetry is not found in European Portuguese, as shown by the examples in (15a) and (15b).

(15) EP

- a. A Marcela<sub>i</sub> disse que [TP o André<sub>k</sub> ligou para o  $\emptyset$ -poss<sub>[i/k]</sub>  
 the M. said that the A. called to the  $\emptyset$ .POSS  
 amigo].  
 friend

‘Marcela said that André called his/her friend.’

- b. A Marcela<sub>i</sub> acha que [o João<sub>k</sub> disse que [TP o  $\emptyset$ -poss<sub>[?i/k]</sub>  
 the M. thinks that the J. said that the  $\emptyset$ .POSS  
 irmão vai viajar]].  
 brother goes travel

‘Marcela thinks that João said that his/her brother is going to travel.’

In (15a) the null possessive is in object position and it may take both the local and non-local DP as antecedent. The same is true for (15b). Both DPs are possible antecedents for the null possessive.

## 2.2 C-command requirement

In the sentences in (16) there are again two possible antecedents for the null possessive: the DP *o amigo* and the DP *o João*. In (16a), only the DP *o amigo* is accepted as antecedent. The embedded DP *o João* cannot be the antecedent because it fails to c-command the null possessive.

(16) BP (F&N: 42, 50)

- a. [O amigo [d[o João]<sub>i</sub>]]<sub>k</sub> telefonou para [a  $\emptyset$ -poss<sub>[\*i/k]</sub> mãe].  
 the friend of.the J. called to the  $\emptyset$ .POSS mother  
 ‘João’s friend called his mother.’

- b. [O namorado d[a Maria]<sub>i</sub>]<sub>k</sub> saiu quando [um  $\emptyset$ -poss<sub>[i/k]</sub> parente]  
 the boyfriend of.the M. left when a  $\emptyset$ .POSS relative  
 entrou.  
 entered

‘Maria’s boyfriend left when a relative of hers/his came in.’

In case the null possessive is contained in a DP in subject position, as in (16b), it does not need to be c-commanded. Both DPs, *o namorado* and *a Maria*, can function as antecedent of the null possessor. Contrary to BP, the subject-object asymmetry is again not found in EP. The examples in (17a) and (17b) show that a non-c-commanding DP cannot be the antecedent of the null possessive, irrespective of the position of the relational noun.

(17) EP

- a. [ O amigo d[o João]<sub>i</sub>]<sub>k</sub> telefonou para [ a  $\emptyset$ -poss<sub>[\*i/k]</sub> mãe].  
 the friend of.the J. called to the mother  
 ‘João’s friend called his mother.’
- b. [ A mãe d[a Maria]<sub>i</sub>]<sub>k</sub> saiu quando [ um/o  $\emptyset$ -poss<sub>[\*i/k]</sub> amigo]  
 the mother of.the M. left when the friend  
 entrou.  
 entered  
 ‘Maria’s mother left when her friend came in.’

In EP, null possessors in both positions obey the c-command requirement, at least with embedded DPs. In §3.1, the c-command requirement will be discussed in more detail and it will be argued that c-command is not the relevant condition for ruling out co-reference between an embedded DP and a null possessor argument.

### 2.3 Sloppy and strict identity under ellipsis

It was observed by Ross (1967; 1969) that a pronoun inside an elided VP may have two readings. These are exemplified for the sentence in (18). The strict identity reading is shown in (18b) and the sloppy and strict identity reading in (18c).

(18) (Ross 1967: 207)

- a. John scratched his arm and Mary did so, too.  
 b. Strict identity  
 Mary scratched his (= John’s) arm.  
 c. Sloppy identity  
 Mary scratched her arm.

Since Sag (1980), the ambiguous interpretation of the pronoun has been attributed to the possibility of two distinct LF representations. The strict reading is the result of a coreferential or free variable interpretation and the sloppy reading is the result of a bound variable interpretation. It has been observed that reflexive

pronouns (in complement position) are interpreted as bound variables in these contexts (Sag 1980; Hicks 2009). Thus, the restriction to a sloppy reading is taken to be an anaphoric referential property. This is also true for EP, as shown in (19).

(19) EP

- a. A Maria ama-se a si própria e o Rui também.  
the M. loves.SE.CL to herself and the R. also  
'Maria loves herself and Rui does so, too.'
- b. Strict identity  
\*Rui loves Maria.
- c. Sloppy identity  
Rui loves himself.

Applying this test to null possessives, F&N show that null possessives are restricted to a sloppy reading, but only if the relational noun is in object position, as in (20). But both readings are available if the relational noun is in subject position (a position from which movement cannot take place), as in (21). Once again, in EP there is no subject-object asymmetry. The strict reading is not available either in object or in subject position.

(20) EP/BP (F&N: 44 for BP)

- a. O João vai telefonar para a mãe e a Marcela também  
the J. goes call to the mother and the M. also  
vai.  
goes  
'João will call his mother and Marcela will do so, too.'
- b. Strict identity: \*BP/\*EP  
Marcela will call João's mother.
- c. Sloppy identity: BP/EP  
Marcela will call her mother.

(21) EP/BP (F&N: 51 for BP)

- a. A Maria vai recomendar a pessoa que um amigo entrevistou  
the M. goes recommend the person that a friend interviewed  
e o João também vai.  
and the J. also goes  
'Maria is going to recommend the person that a friend of hers  
interviewed and João will do so, too.'

- b. Strict identity: BP/\*EP  
João is going to recommend the person that a friend of Maria's interviewed.
- c. Sloppy identity: BP/EP  
João is going to recommend the person that a friend of his interviewed.

The diagnostic shows that in EP a null possessive is interpreted as a bound variable in both positions.

## 2.4 *Only*-contexts

The same opposition between a bound and a free/co-referential reading of a pronoun is found in contexts in which the antecedent is modified by the exclusive particle *only*. The interpretation of pronouns in this context is discussed in Horn's (1969) analysis of *only*. In his account, the terms *presupposition* and *assertion* are terms of pragmatics (cf. Pagin 2016). From a semantic perspective, Horn's assertion corresponds to the notion *entailment*. Irrespective of the perspective, the sentence in (22a) (pragmatically) presupposes (22b) and asserts or entails (22c). The examples are represented in the notation of Horn (1969).

- (22) Horn (1969: 98–99)
- a. Only Muriel voted for Hubert.  
vote(m,h)  
'Muriel voted for Hubert.'
- b.  $\neg(\exists y) (y \neq m \wedge \text{vote}(y,h))$   
'Nobody else voted for Hubert.'

If the sentence contains a pronoun, as in (23a), there are two distinct assertions, depending on the interpretation of the pronoun. The entailment in (23b) contains a pronoun translated into a free/co-referential variable and the entailment in (23c) contains a bound variable.

- (23) Horn (1969: 98–99)
- a. Only Muriel voted for her brother.
- b.  $\neg(\exists y) (y \text{ voted for } m\text{'s brother}) (y \neq m)$   
Nobody else voted for Muriel's brother.
- c.  $\neg(\exists y) (y \text{ voted for } y\text{'s brother})$   
Nobody else voted for his own brother.

Horn (1969: 102) accepts only the bound reading of (23c), but Boeckx et al. (2010: 197) accept both the bound and co-referential readings of the possessive pronoun. With respect to the interpretation of null possessives in BP, there is once again an asymmetry between object and subject position. And once again there is no such asymmetry in EP. The judgements for null possessives in object position are given in (24) and for null possessives in subject position in (25).

(24) EP/BP (F&N: 44 for BP)

- a. Só o João ligou para a  $\emptyset$ -poss mãe.  
only the J. called to the  $\emptyset$ .POSS mother  
'Only João called his mother.'
- b. Bound reading: BP/EP  
Nobody else called his own mother.
- c. Co-referent reading: \*BP/\*EP  
Nobody else called João's mother.

In (25), the relational noun is in subject position and both readings are available in BP, but not in EP. In EP the empty possessor can only receive a bound interpretation.

(25) EP/BP (F&N: 52 for BP)

- a. Só o João leu o livro que [a  $\emptyset$ -poss mãe] indicou.  
only the J. read the book that the  $\emptyset$ .POSS mother recommended  
'Only João read the book that his mother recommended.'
- b. Bound reading: BP/EP  
Nobody else read the book his own mother recommended.
- c. Co-referent reading: BP/\*EP  
Nobody else read the book João's mother recommended.

In EP, there is no difference in the interpretation of the null possessive with respect to its position inside an object or subject DP. In both positions only the bound reading is acceptable.

## 2.5 Split antecedents

Rodrigues (2010) provides a diagnostic testing for so-called split antecedents. This diagnostic was first introduced by Lebeaux (1985) for locally and non-locally bound reflexives. In (26a) the reflexive is inside a *picture*-NP (an exempt position)

and may take the subject and object of the main clause as a plural antecedent. In this position the reflexive is free to pick out a plural referent. But if the reflexive is in a local configuration with the subject and the object, as in (26b), split antecedents are not acceptable; it has to be bound by a unique antecedent.

(26) (Lebeaux 1985: 346) [indices by AW]

- a. John<sub>i</sub> told Mary<sub>k</sub> that there were some pictures of themselves<sub>[i+k]</sub> inside.
- b. \*John<sub>i</sub> told Mary<sub>k</sub> about themselves<sub>[i+k]</sub>.

In BP, null possessives cannot take split antecedents, as shown in (27), which corroborates the movement analysis: if the null possessive is the copy of the antecedent, two independent DPs cannot be its antecedent. Also in EP, null possessives do not allow for split antecedents. But as shown above, the structural requirements for a movement analysis are not met.

(27) \* EP/BP (Rodrigues 2010: 130)

A Maria<sub>i</sub> disse que o Paulo<sub>k</sub> encontrou o  $\emptyset$ -poss<sub>[i+k]</sub> amigo.  
 the M. said that the P. met the  $\emptyset$ .POSS friend  
 Intended meaning: ‘Maria said that Paulo met their friend.’

It is worth mentioning that EP differs from English with respect to this diagnostic. Even if a reflexive pronoun occurs in an exempt position, it may not take split antecedents. Only (personal) pronouns can do so. The EP examples are given in (28a) and (28b), respectively.

(28) EP

- a. \* O Rui<sub>i</sub> contou à Maria<sub>k</sub> que algumas fotos de  
 the R. told to.the M. that some photos of  
 si próprios<sub>[i+k]</sub> estão á venda.  
 themselves are for sale
- b. O Rui<sub>i</sub> contou à Maria<sub>k</sub> que algumas fotos deles<sub>[i+k]</sub> estão  
 the R. told to.the M. that some photos of.them are  
 á venda.  
 for sale  
 ‘Rui told Maria that some photos of themselves are for sale.’

The diagnostic has to be evaluated differently for EP. It seems that this result is better related to the feature composition of the nominal elements. In English, the third person reflexive pronoun is composed of *them* + *selves*, and the pronominal part (*them*) overtly realizes a referential plural feature. In EP, the pronominal form *si* does not overtly realize either referential number or gender. Although these features are present as concord features on the intensifying adjective *próprios*, they are not referential in the sense that they restrict the set of possible referents. The pronoun *ele* in (28b) is marked for referential number and gender, just like the English reflexive pronoun, and both are capable of taking split antecedents.

I will return to this diagnostic in §3.4.4, showing that the (3<sup>rd</sup> person) simple possessive also disallows split antecedents and has a similar feature composition to the 3<sup>rd</sup> person reflexive pronoun: it does not overtly realize number and gender features. The diagnostic shows that reflexive pronouns and possessive elements behave alike, not because they belong to the class of anaphoric elements, but because they are defective with respect to the same (referential) features.

## 2.6 Preliminary conclusion

The interpretative and structural diagnostics have shown that the subject-object asymmetry of BP null possessives is not present in EP. The results are summarized in Table 1 below.

The interpretative diagnostics clearly show that null possessives in EP are interpreted as anaphors or bound variables. Given the lack of locality restrictions, the referential dependency between a null possessive and its antecedent cannot be derived by a syntactic operation such as movement as in F&N and Rodrigues (2010) or by Agree as in Hicks (2009). As for the structural diagnostics, EP null possessives are non-local but subject to c-command. Lebeaux (1985) has shown that anaphoric elements that allow for a non-local antecedent also do not require a c-commanding antecedent. From this perspective, the results for EP are contradictory; I will return to the c-command requirement in the next section.

## 3 Additional diagnostics and comparison with the referential properties of simple and complex possessives

In this section, the referential properties of null possessives are compared with the referential properties of simple and complex possessives. In §3.1, the c-command requirement is discussed in more detail. In §3.2 and §3.3, the diagnostics of



Table 1: Summary of the structural and referential properties of null possessives in BP and EP

Diagnostic	Position of null possessive	Language	
		BP	EP
Local domain	object	yes	no
	subject	no	no
C-command	object	yes	yes
	subject	no	yes
Reading under ellipsis	object	sloppy only	sloppy only
	subject	sloppy and strict	sloppy only
Reading in <i>only</i> -contexts	object	bound only	bound only
	subject	bound and co-referential	bound only
Split antecedents		no	no

quantifier binding and sentence-external antecedents are introduced. In §3.4, the structural and interpretative diagnostics of §2 are applied to simple and complex possessives. The results are summarized in §3.5.

### 3.1 C-command revisited

The sentences in (17a) and (17b), repeated here as (29), show that the null possessive needs a c-commanding antecedent.

(29) EP

- a. [ O amigo d[o João]<sub>i</sub>]<sub>k</sub> telefonou para [ a  $\emptyset$ -poss<sub>k/\*i</sub> mãe].  
the friend of.the J. called to the  $\emptyset$ .POSS mother  
‘João’s friend called his mother.’
- b. [ A mãe d[a Maria]<sub>i</sub>]<sub>k</sub> saiu quando [ o  $\emptyset$ -poss<sub>\*i/k</sub> amigo]  
the mother of.the M. left when the  $\emptyset$ .POSS friend  
entrou.  
entered  
‘Maria’s mother left when her friend came in.’

The simple possessive also needs a c-commanding antecedent, as shown in (30).

(30) EP

- a. [ O amigo d[o João]<sub>i</sub>]<sub>k</sub> telefonou para [ a sua<sup>[\*<sub>i/k</sub>]</sup> mãe].  
the friend of.the J. called to the his mother  
'João's friend called his mother.'
- b. [ A mãe d[a Maria]<sub>i</sub>]<sub>k</sub> saiu quando [ o seu<sup>[\*<sub>i/k</sub>]</sup> amigo]  
the mother of.the M. left when the her friend  
entrou.  
entered  
'Maria's mother left when her friend came in.'

Only the complex possessive allows for both interpretations. The examples are given in (31). In fact, there is even a preference to interpret the embedded DP *o João* as antecedent of the pronoun *ele*.

(31) EP

- a. [ O amigo d[o João]<sub>i</sub>]<sub>k</sub> telefonou para [ a mãe dele<sub>[i/k]</sub>].  
the friend of.the J. called to the mother of.him  
'João's friend called his mother.'
- b. [ A mãe d[a Maria]<sub>i</sub>]<sub>k</sub> saiu quando [ o amigo dela<sub>[i/k]</sub>]  
the mother of.the M. left when the friend of.her  
entrou.  
entered  
'Maria's mother left when her friend came in.'

According to Rule I, the covalued interpretation between the embedded DP and the possessives should also be possible. But this option is only allowed for the complex possessive. What blocks the covaluation interpretation with null and simple possessives? Are they obligatorily bound, as indicated by the results of the diagnostics of VP-ellipsis and *only*-contexts in (20/21) and (24/25), respectively? If this is true, null possessives should be excluded from contexts that only allow a coreferential interpretation, as in the English example (12) above. This prediction is not borne out, as shown by the examples in (32).

(32) EP

- a. Os  $\emptyset$ -poss<sub>i</sub> filhos não gostam [ do João e da Maria]<sub>i</sub>.  
 the  $\emptyset$ .POSS children not like of.the J. and of.the M.  
 ‘Their children don’t like João and Maria.’
- b. O João<sub>i</sub> adorou o presente que a  $\emptyset$ -poss<sub>[i/k]</sub> amiga deu à  
 the J. adored the gift that the  $\emptyset$ .POSS friend gave to.the  
 Maria<sub>k</sub>.  
 M.  
 ‘João adored the gift that a friend of his/hers gave to Maria.’

In both examples, the null possessive is interpreted as coreferential with a DP that does not c-command it at any stage of the derivation: the conjunct [*o João e a Maria*] in (32a) and the DP *a Maria* in (32b). With simple possessives, a covaluation interpretation is not possible, although this should be allowed according to Rule I in (11). In both sentences of (33), coreference between the simple possessive and the non-c-commanding (sentence-internal) antecedent is not accepted.

(33) EP

- a. [ Os seus<sub>?-\*i</sub> filhos ] não gostam [ do João e da Maria]<sub>i</sub>.  
 the their children not like of.the J. and of.the M.  
 ‘Their children don’t like João and Maria.’
- b. O João<sub>i</sub> adorou o presente que a sua<sub>[i/\*k]</sub> amiga deu à  
 the J. adored the gift that the his friend gave to.the  
 Maria<sub>k</sub>.  
 M.  
 ‘João adored the gift that a friend of his gave to Maria.’

Interestingly, the complex possessive is also unacceptable in these contexts, as shown in (34).

(34) EP

- a. [ Os filhos deles<sub>??i</sub> ] não gostam [ do João e da Maria]<sub>i</sub>.  
 the children of.them not like of.the J. and of.the M.  
 ‘Their children don’t like João and Maria.’
- b. O João<sub>i</sub> adorou o presente que a amiga dele<sub>[i/\*k]</sub> deu ao  
 the J. adored the gift that the friend of.him gave to.the  
 Pedro<sub>k</sub>.  
 P.  
 ‘João adored the gift that a friend of his gave to Pedro.’

These results are quite puzzling, because covaluation should be permitted in these contexts. Furthermore, if a possible antecedent is embedded in an inanimate DP which is not in competition for interpretation as possessor of a kinship noun, c-command does not play a role, as shown in (35).<sup>11</sup>

(35) EP

- a. A falta do respeito da Maria<sub>i</sub> chateia a mãe?<sub>i</sub>  
the lack of.the respect of.the Maria upsets the mother  
'Maria's lack of respect upsets the mother.'
- b. A falta do respeito da Maria<sub>i</sub> chateia a sua<sub>i</sub> mãe.  
the lack of.the respect of.the Maria upsets the her mother  
'Maria's lack of respect upsets her mother.'

Thus, for the null and simple possessive, binding is preferred over coreference in case two antecedents are inside the same DP. If binding is not possible, the null possessive permits a coreferential interpretation. As for the simple possessive, it seems that precedence, which is one way to render an antecedent salient, is necessary for its interpretation. This could account for the difference between (33) and (35a). The same is true for the complex possessive. For covaluation of null possessives, the sentence structure seems not to be relevant.

### 3.2 Binding by a quantifier

Another diagnostic for referential properties is binding by a quantifier, as mentioned by Barker (2011) and Mateus et al. (2003). The interpretations of null, simple and complex possessives are given in (36), (37) and (38) respectively:

(36) EP

- a. Todos os pais gostam dos filhos.
- b. All  $x$  ( $x$  = parents)  $x$  like children of  $x$ .
- c. \* All  $x$  ( $x$  = parents)  $x$  like children of  $y$ .

(37) EP

- a. Todos os pais gostam dos seus filhos.
- b. All  $x$  ( $x$  = parents)  $x$  like children of  $x$ .
- c. All  $x$  ( $x$  = parents)  $x$  like children of  $y$ .

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<sup>11</sup>Thanks to an anonymous reviewer for pointing out this configuration.

(38) EP

- a. Cada menino pensa no pai dele.
- b. \* Every x (x=kid) x thinks about the father of x.
- c. Every x (x=kid) x thinks about the father of y.

The null possessive must be bound, the simple possessive allows for both a free and a bound reading, and the complex possessive is restricted to a free reading. In Barker (2011: 1112), the interaction between null possessor arguments and quantifiers was interpreted as evidence that the possessor argument is grammatically present. Furthermore, this diagnostic corroborates the claim that null possessives are only present with relational nouns, but not with non-relational nouns. This is shown in (39).

(39) EP

- a. Bound/possessive reading  
Cada menino pensa que o seu bici é fixe.  
every kid thinks that the his bike is cool
- b. No bound/possessive reading  
Cada menino pensa que o bici é fixe.  
every kid thinks that the bike is cool

The difference in interpretation between simple and complex possessives in (37) and (38) is similar to what have been called “Montalbetti’s facts”. Montalbetti (1984) and Alonso-Ovalle & D’Introno (2001) observed for Spanish that overt and covert pronouns can be interpreted as a free variable, but only the covert pronoun can be bound by a quantifier. For EP, similar facts have been reported in Lobo (2013). In the case of EP possessives, it is the simple possessive that shows the properties of *pro* and the complex possessive that shows the properties of overt pronouns. As mentioned in §2.5, and as will be discussed in more detail in §3.4.4, the simple possessive has only a referential person feature, which may explain this difference. But what is the property that explains the obligatory bound reading of null possessives? In this article I will assume that it is the lack of phonetic content, as it is with argumental subject *pro*. This diagnostic is then taken to support the assumption that the null possessor is present in EP syntax as null possessive *pro*.

### 3.3 Sentence-external antecedents

Pronominals are able to pick out a referent in the discourse context, a sentence-external antecedent. Anaphors lack this ability. For example, reflexive pronouns,

even in exempt positions, cannot take a sentence-external antecedent, as discussed by Campos (1995), among others. The following examples from the CRPC corpus show that the null possessive is capable of taking a sentence-external antecedent.<sup>12</sup>

(40) EP CRPC [last access 08-04-16]

“A questão da luta interna do partido é empolada. Os problemas são discutidos nas reuniões do partido e é a decisão da maioria que temos que respeitar”, refere **Maria João Barradas**, de 26 anos, membro da JCP. O interesse pelo PCP foi prematuro. **O pai** foi trabalhador na Lisnave e isso marcou a sua infância e adolescência.

“‘The issue of party-internal conflicts is complicated. The problems are discussed at the party conferences and it is the decision of the majority that we have to respect,’ reports Maria João Barradas, 26 years old, member of JCP. Her interest in the party began early. Her father was a worker at Lisnave and this influenced her childhood and adolescence.’

The fact that null possessives can take a sentence-external antecedent seems to contradict the other diagnostics presented so far, because null possessives should not be capable of taking a sentence-external referent. A first approximation to this puzzling result could be along the following lines. The text passage in (40) is about *Maria João Barradas*, and the interpretation of the DP *o pai* as father of Maria is the only possible interpretation. The context does not allow for any other interpretation; thus, the interpretation of *o pai* could be the result of an existentially saturated possessor argument plus a definite determiner. The DP *o pai* would be interpreted as a kind of *definite associative anaphor*.<sup>13</sup>

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<sup>12</sup>The Reference Corpus of Contemporary Portuguese (CRPC) can be accessed at <http://alfclul.clul.ul.pt/CQPweb/>.

<sup>13</sup>The term definite associative anaphora in the sense of Hawkins (1978) describes the interpretation of the definite DP *the battery* in (i).

- (i) I found a watch under the tent. It was fine except for the battery.

The DP *the battery* is understood as belonging to the previously mentioned watch, even if the battery itself has not been explicitly mentioned before. If the watch is mentioned, all of its parts are also in the common ground and can be referred to by a definite DP; cf. Heim (1991). Similarly, if a person is mentioned, the parents are also part of the common ground.

### 3.4 Comparison with the referential properties of simple and complex possessives

For the sake of completeness, the diagnostics of §2 are briefly presented for simple and complex possessives.

#### 3.4.1 Locality

With respect to locality, both simple and complex possessives may refer to a local or a non-local antecedent, as shown in (41) and (42).

- (41) a. A Marcela<sub>i</sub> disse que o André<sub>k</sub> ligou para o seu<sub>[i/k]</sub> amigo.  
 the M. said that the A. called to the his friend  
 ‘Marcela said that André called his friend.’  
 b. A Marcela<sub>i</sub> disse que a Luisa<sub>k</sub> ligou para o amigo dela<sub>[i/k]</sub>.  
 the M. said that the L. called to the friend of.her  
 ‘Marcela said that Luisa called her friend.’
- (42) a. A Marcela<sub>i</sub> acha que o João<sub>k</sub> disse que o seu<sub>[i/k]</sub> amigo vai  
 the M. thinks that the J. said that the his friend goes  
 viajar.  
 travel  
 ‘Marcela thinks that João said that his/her friend is going to travel.’  
 b. A Maria<sub>i</sub> acha que a Luisa<sub>k</sub> disse que o amigo dela<sub>[i/k]</sub> vai  
 the M. thinks that the L. said that the friend of.her goes  
 viajar.  
 travel  
 ‘Maria thinks that Luisa said that her friend is going to travel.’

#### 3.4.2 Ellipsis

The readings under ellipsis are shown in (43) for simple possessives and in (44) for complex possessives. Under ellipsis, the simple possessive only allows for the sloppy reading:

- (43) EP  
 a. O João vai telefonar para a sua mãe e a Marcela também  
 the J. goes call to the his mother and the M. also  
 vai.  
 goes  
 ‘João will call his mother and Marcela will do so, too.’

- b. Sloppy reading  
Marcela will call her mother.
- c. Strict reading  
\*Marcela will call João's mother.

The complex possessive allows both the sloppy and the strict reading:

(44) EP

- a. O João vai telefonar para a mãe dele e a Marcela  
the J. goes call to the mother of.him and the M.  
também vai.  
also goes  
'João will call his mother and Marcela will do so, too.'
- b. Sloppy reading  
Marcela will call her mother.
- c. Strict reading  
Marcela will call João's mother.

### 3.4.3 *Only*-contexts

The simple possessive does not show anaphoric properties in *only*-contexts. Both simple and complex possessives allow for a bound and a coreferential reading, as shown in (45) and (46).

(45) EP

- a. Só o João ligou para a sua mãe.  
only the J. called to the his mother  
'Only João called his mother.'
- b. Bound reading  
Nobody else called his own mother.
- c. Co-referential reading  
Nobody else called João's mother.

(46) EP

- a. Só o João ligou para a mãe dele.  
only the J. called to the mother of.him  
'Only João called his mother.'



- b. Bound reading  
Nobody else called his own mother.
- c. Co-referential reading  
Nobody else called João's mother.

#### 3.4.4 Split antecedents

As mentioned in §2.5, the simple possessive disallows split antecedents and only full pronouns can take this kind of antecedent. The relevant examples are given in (47).

(47) EP

- a. \* A Maria<sub>i</sub> disse que o Paulo<sub>k</sub> encontrou o seu<sub>(i+k)</sub> amigo.  
the M. said that the P. met the his friend  
'Maria said that Paulo met his friend.'
- b. A Maria<sub>i</sub> disse que o Paulo<sub>k</sub> encontrou o amigo deles<sub>(i+k)</sub>.  
the M. said that the P. met the friend of.them  
'Maria said that Paulo met their friend.'

The ability to take split antecedents is better attributed to the morphophonological realization of features than to the labels "pronominal" or "anaphoric". The overt personal pronoun has a full set of referential phi-features (including case assigned by the preposition) that agree with those of its antecedent. The simple possessive has two types of features: referential features agreeing with the antecedent and concord features, like other adjectives, agreeing with the possesum NP. Crucially, possessives in the 3<sup>rd</sup> person lack overt number and gender marking, as shown in (48).

(48) EP

- a. [A Maria]<sub>i</sub> encontrou o seus<sub>i</sub> amigos.  
the M. met the her friends
- b. [A Maria e o Paulo]<sub>k</sub> encontraram o seu<sub>k</sub> amigo.  
the M. and the P. met the their friend.

Both the simple possessive and the reflexive pronoun lack overt number and gender marking and both disallow split antecedents. An example showing this for reflexives is given in (28) above.

### 3.5 Summary of referential properties

The lack of locality constraints does not affect the application of semantic binding. Semantic binding in the sense of Reinhart (2006) is detectable by diagnostics (v) and (vi) and can account for the interpretation of all possessives with a local and non-local antecedent. As for null possessives, the diagnostics in (iii) and (v–viii) even indicate that binding is the only option. Simple and complex possessives allow for both interpretations, bound and coreferential. What is puzzling is their behaviour in those contexts that should allow a covaluation interpretation. According to Rule I in (11), covaluation should be possible if the possessive precedes its (intended) referent. Given the results of diagnostics (v–viii), it is surprising that simple and complex possessives disallow covaluation in this context, but null possessives allow for it. As mentioned in the introduction, a null possessive can be related to the speaker (similarly to the 1<sup>st</sup> person possessive in singular and plural) and to a sentence-internal 3<sup>rd</sup> person. Null (and simple) possessives appear to have contradictory properties. They have a particular mode of interpretation, something in between a bound variable interpretation and an indexical interpretation, or even an interpretation similar to proper names. It seems that the semantic value of a null possessive is determined by the given state, the kinship relations given by the speaker or the kinship relations that are known by the discourse participants to hold for a 3<sup>rd</sup> person. In this sense, they can be tentatively classified as possessive logophors reflecting the relations given by the speaker or by the person talked about. Table 2 below summarizes the interpretative properties of the three types of possessive.

## 4 The EP null possessive is *pro*

Given that a possessive *pro* exists in the grammar of EP, a null possessive would consist only of a covert person feature. Admittedly this would make it a very strange element. But as it contributes to determining the referent of the relational noun, its existence would be justified. In §4.1, the syntactic distribution of simple possessives inside the DP is briefly reviewed. In §4.2, an idea is presented concerning how the restriction of a possessive *pro* to relational nouns could be derived.

### 4.1 Distribution of possessive elements

In the surface syntax, the distribution of the simple possessive is not affected by the type of NP (relational and non-relational nouns). Rather, the distribution

Table 2: Summary of the referential properties of the three types of possessive

	Diagnostic	Null	Simple	Complex
(i)	Local domain	no	no	no
(ii)	C-command with embedded NP	yes/no	yes/no	no
(iii)	Precedence	no	yes	yes
(iv)	Extra- sentential antecedent	yes	yes	yes
(v)	Under ellipsis	only sloppy	only sloppy	sloppy and strict
(vi)	<i>Only</i> -contexts	only bound	bound and co-referential	bound and co-referential
(vii)	Split antecedents	no	no	yes
(viii)	Quantifier binding	only bound	bound and free	only free

of simple possessives in EP is affected by definiteness. In EP, the simple possessive occurs prenominal with a definite determiner and postnominal with an indefinite determiner, as shown in (49).

(49) EP

- a. a minha cadeira / amiga  
the my chair / friend
- b. uma cadeira / amiga minha  
a chair / friend my

Brito (2007), Castro & Costa (2003), Castro (2005; 2007), and Miguel (2002a; 2002b; 2004) study the placement of EP possessives and the variation in EP dialects. The pattern presented here corresponds to the pattern classified as the dominant grammar in Brito (2007). Some varieties permit the indefinite article and a prenominal possessive, but no dialect has a postnominal possessive with a definite article. With respect to grammatical category, Brito (2007) and Miguel

(2002a; 2002b) assume that the possessive pronoun is an adjective phrase. In some varieties, the prenominal possessive tends to become a determiner head, as assumed in Castro & Costa (2003).

## 4.2 Restriction to relational nouns

The syntactic analysis presented here is inspired by the account of Partee (1997) regarding the interpretation of genitives. She proposes two different structures for non-relational nouns (plain one-place predicates of type  $\langle e, t \rangle$ ) and relational nouns (two-place predicates of type  $\langle e, \langle e, t \rangle \rangle$ ). Both types of nouns combine with a possessive pronoun or a genitive PP, but differ with respect to the way they combine with it. Relational nouns lexically determine the type of relation that is established between its arguments. For example, the noun *amigo* establishes the relation of *being-friend-of*. Partee (1997) labels this relation “inherent R” and it is represented for the noun *amigo* as in (50).

(50) [amigo ( $y, x$ )]

The variable  $y$  stands for the referent of the possessive pronoun and the variable  $x$  for the referent of the DP *o amigo*. The possessive is thus conceived of as an argument. If a plain noun combines with a possessive, the possessive relation is not lexically determined. In the sentences in (51), the relation established between the DP *Rui* and the stone is not necessarily that of possession. It can be any relation given in the utterance context; e.g. *the stone Rui found* or *the stone that is in Rui’s garden*.

(51) EP  
O Rui desenha uma pedra sua.  
the R. draws a stone his  
‘Rui is drawing a stone of his.’

Such a relation is labeled “free R” in Partee (1997). The relational interpretation of a one-place predicate is due to its combination with a possessive pronoun or genitive PP. The possessor DP is conceived of as a nominal modifier. The representation in (52) shows that the “free R” is added to the DP *pedra* as a conjunct.

(52) [pedra ( $x$ ) & R( $y$ )( $x$ )]

The arguments of relational nouns are present in the syntactic and semantic representation of a sentence. But nothing has been said about why the possessives cannot be null (without phonetic content) with non-relational nouns. If this

distinction is reflected in syntax, the restriction of null possessives to relational nouns could be derived from the internal syntax of this type of DP.

With respect to the placement of the possessive within the DP, there are two types of structures that have been discussed in the literature. The structures are represented in Figure 3 as type A (Kupisch & Rinke 2011; Alexiadou 2005) and type B (Parodi 1994; Brito 2007).

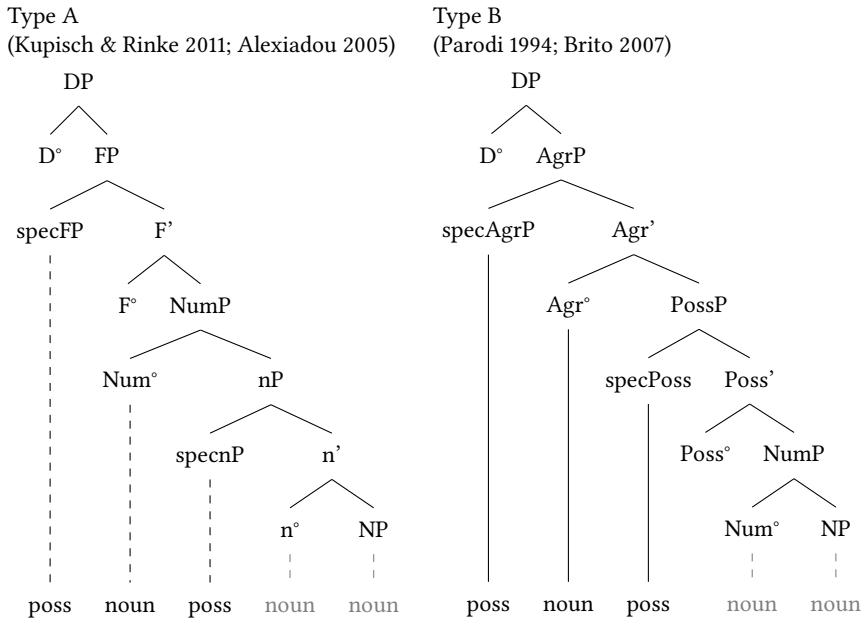


Figure 3: Position of the possessive pronoun in EP

In both types of accounts, it is assumed that DPs have an internal structure analogous to IP/TP, with lexical/thematic layers (NP/*n*P) and functional layers (NumP, FP or NumP, AgrP). The last/highest projection is the determiner phrase. In type A, the possessive is generated as the “external argument” in SpecnP. In type B, the possessive is generated as specifier of its own projection, between NumP and AgrP. In both types, the prenominal position is derived by movement of the possessive to a higher functional position, FP and AgrP respectively. All these accounts give a derivational explanation for the pre- and postnominal positions. But I want to focus on the different positions proposed for base-generation of the possessive. In type A, the possessive is generated as the “external argument” of *n*° in the SpecnP position. By definition, an XP is a specifier of a head if it satisfies the EPP of that head via internal merge, or if it is semantically selected by the head and merged externally (cf. Demonte 2005: 95). In type B, it

is the specifier of its own projection. From a derivational perspective, it is  $\text{Poss}^\circ$  that selects for NumP as its complement.

I would like to propose an account for the restriction of null possessives to relational nouns along the lines of Demonte's (2005) account of adjectives in Spanish. She elaborates on the idea that non-predicative (prenominal) adjectives are selected by  $\text{N}^\circ$  to a specifier position and that non-predicative (postnominal) adjectives select for  $\text{N}^\circ$  "in a certain sense" (cf. Demonte 2005: 95). I propose that relational nouns, whose semantics is an inherent R in the sense of Partee (1997), select a possessive pronoun in the specifier of  $n\text{P}$ . The selected possessive realizes the argument of the relational noun. This idea is shown in the tree structure in Figure 4.

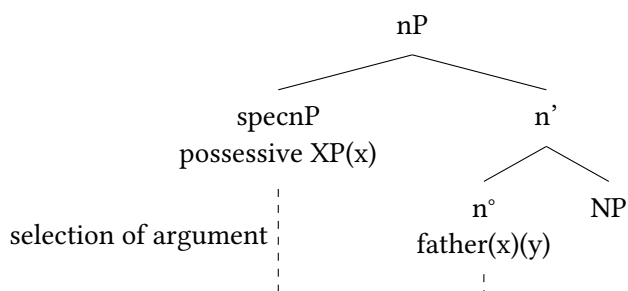


Figure 4: Selection of possessive argument

Non-relational nouns can receive a relational interpretation only when they are combined with an overt possessive pronoun or a genitive DP that induces the free R interpretation. It is the possessive that provides the relation. I propose that the free R is realized in syntax in the form of the possessive phrase that selects for a  $n\text{P}/\text{NumP}$ . The possessor is generated in SpecPoss, as shown in the tree structure in Figure 5.

Possibly, the free R is associated with  $\text{Poss}^\circ$  and merger with an NumP or  $n\text{P}$  generates the conjunction structure as presented in (52). The possessor can only be null/phonetically empty in the structure shown in Figure 4, but not in the structure represented in Figure 5. The idea is that a null possessive can be licensed in the sense of Rizzi (1986) in the specifier of a relational  $n^\circ$  because it is not only the selecting head but also the head with which the possessor DP agrees and by which it gets case-marked. In (48), the possessor also agrees with the noun, but the noun is not its selecting head. Hence, the null possessive cannot be licensed. This analysis treats relational and functional nouns alike. As mentioned in the introduction, there is an interaction between concept types and determination.



reading. Due to these properties, it has been concluded that a syntactic analysis in terms of movement (or Agree) is not feasible in EP. In order to shed more light on the phenomenon of null possessives in EP, the referential properties of simple and complex possessive have been taken into account. It has been shown that the (semantic) approach of Reinhart (2006) neither covers the interpretation of null possessives nor the interpretation of simple and complex possessives. Null possessives are interpreted in a different manner. They are classified as possessive logophors, which are not sensitive to discourse principles like salience, but they reflect the given states and their use is closer to that of proper names and indexicals. In §4, a syntactic explanation for the restriction of null possessives to relational nouns was proposed. What remains open is the role of determination and a more detailed analysis of contexts in order to distinguish between the anaphoric and indexical uses of null possessives.

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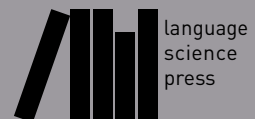
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# Agreement, case and locality in the nominal and verbal domains

This book explores the Agree operation and its morphological realisations (agreement and case), specifically focusing on the connection between Agree and other syntactic dependencies such as movement, binding and 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 that underlie them. The phenomena discussed include backward control, passivisation, progressive aspectual constructions, extraction from nominals, possessives, relative clauses and the phasal status of PPs.

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