Clitic doubling at the syntax-morphophonology interface
A-movement and morphological merger in Bulgarian

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Abstract

True clitic doubling involves multiple expression of a single argument in different structural positions. In clitic doubling configurations of this kind, a clitic expresses features of its full nominal phrase associate in argument position. True clitic doubling has traditionally been argued to arise via agreement, so that the clitic is the manifestation of an agreement relation between a verb and the associate. However, another possibility exists: the clitic could be a (pro)nominal element related to the associate via movement; then, clitic doubling involves the simultaneous realization of both the head and the foot of a movement chain. Here, I argue for the latter analysis, showing that true clitic doubling, at least in Bulgarian, has the properties of movement—i.e., it does not involve agreement, as is standardly assumed for this language. I provide support for this claim by considering a number of diagnostics which distinguish between clitics that reflect agreement processes and clitics that do not. Specifically, I argue that the clitic is a reduced articulation of the higher occurrence of a raised object. Thus, the proposed analysis treats clitic doubling as an interface phenomenon which results from the interaction of two independently motivated operations of the syntactic and morphophonological components of grammar: A-movement and morphological merger.

Keywords: clitic doubling, agreement, A-movement, morphological merger, Bulgarian.

1   Introduction

This paper focuses on one particular kind of repetition of information observed in natural language: true clitic doubling. In true clitic doubling, a phonologically bound morpheme (the clitic) expresses the agreement features ϕ (person, number, gender) of a full nominal phrase (henceforth, the associate), as in (1). Following Anagnostopoulou (2007), I assume that a crucial property of true clitic doubling is that the associate is base-generated in an argument position. Thus, true clitic doubling is to be distinguished from superficially similar but distinct phenomena which involve a clitic and a non-argument associate base-generated in an adjunct position.

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[0] Abbreviations: s – singular, p – plural, f – feminine, m – masculine, n – neuter, {1, 2, 3} – number, subj – subject, do – direct object, io – indirect object, om – object marker, acc – accusative, dat – dative, poss – possessive, refl – reflexive, past – past, pres – present, inf – infinitive, q – question particle, foc – focus, top – topic. Transliteration standard used in the Bulgarian examples: ISO 9 (1968).

(1) *True clitic doubling*

   … clitic$_{[\phi]}$+host … associate$_{[\phi]}$ …   (where the associate is in argument position)

True clitic doubling results in the double expression of the features of the associate—once in the full nominal phrase itself and once more in the clitic. This paper focuses on whether true clitic doubling in a given language is the semantically uninterpretable redundant expression of such features as agreement morphology or whether it makes its own additional contribution to interpretation.

   The analysis of configurations like (1) is usually complicated by the fact that the proper characterization of clitics across languages appears to require reference to both syntax and phonology. As far as their phonological behavior is concerned, clitics can be characterized by different degrees of phonological "closeness" to their host. For example, it is possible that a clitic does not allow its host to be parsed in a separate prosodic word (ω)—(2a), or that it instead adjoins to the prosodic word of its host, either becoming a segment in a larger prosodic word—(2b), or being directly dominated by a phonological phrase (φ)—(2c).

(2) *Clitics in phonology* (Selkirk 1995; Ito and Mester 2009)
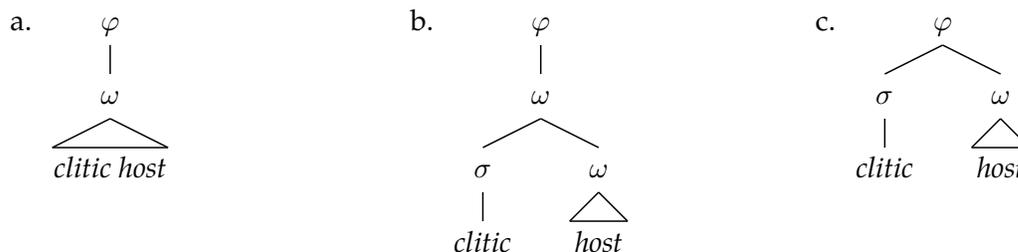
   Investigation of the typology of the prosodic attachment of clitics to their lexical hosts can, however, be seen as quite separate from questions about the syntactic behavior of clitics. Descriptively speaking, there appear to be (at least) two distinct syntactic routes to true clitic doubling: agreement and multiple spell-out. Agreement can be implemented in terms of an Agree relation between a functional head and a nominal phrase (Chomsky 2000, 2001). A probe (the functional head) with a particular type of unvalued feature searches within its c-command domain for a goal (the nominal phrase) with valued features of a matching type. An Agree relation is established between the probe and the goal, which results in the valuation of the relevant features on the probe. In the case of object agreement, illustrated in (3a), the probe v finds the ϕ-features of a DP in argument position and they are spelled out on v as a clitic (a phonologically bound object agreement marker). Since ϕ-features on v are uninterpretable, they receive no interpretation at LF (Chomsky 2000, p. 119)—i.e., agreement is semantically vacuous unless it is accompanied by movement of interpretable material (see Baker 1996, p. 32, and Rezac 2011, p. 14). It is the predictions generated by this treatment of agreement as the redundant expression of a set of ϕ-features that are explored below in the context of true clitic doubling. Analyses of clitic doubling that follow this general approach include Borer (1984) and Jaeggli (1986), among others.

   Multiple spell-out, on the other hand, arises when a nominal phrase is associated with more than one structural position and it is spelled out in more than one of these positions. A phrase can come to be associated with more than one position in syntactic structure as the result of syntactic movement, which can be implemented as the combination of Agree and Merge (Chomsky 2000, p. 101–102; Chomsky 2001, p. 10). If an Agree relation holds between a functional head and a nominal phrase, the nominal phrase can move to the specifier of the functional head—under

this view, while `Agree` does not force movement, it is a pre-condition for movement.[1] Thus, once `Agree` is established between v and DP, the DP can undergo movement to the specifier of v, as in (3b). I assume a multidominance approach to the structures created by `Merge` so that a moved element is immediately dominated by more than one node in syntactic structure.[2] The decision about which position(s) the displaced element is to be spelled out in is left to the morphophonological component of grammar. Clitic doubling is the outcome of syntactic movement in which the displaced element undergoes multiple spell-out: once (in its entirety) in the base position and again (as a clitic) in its derived position. Therefore, true clitic doubling is expected to affect interpretations involving, for example, scope and binding, and generally exhibit properties characteristic of movement and not agreement. Movement-based approaches to clitic doubling have been pursued by Sportiche (1996) and Anagnostopoulou (2003), among others.

(3) *Clitics in syntax*
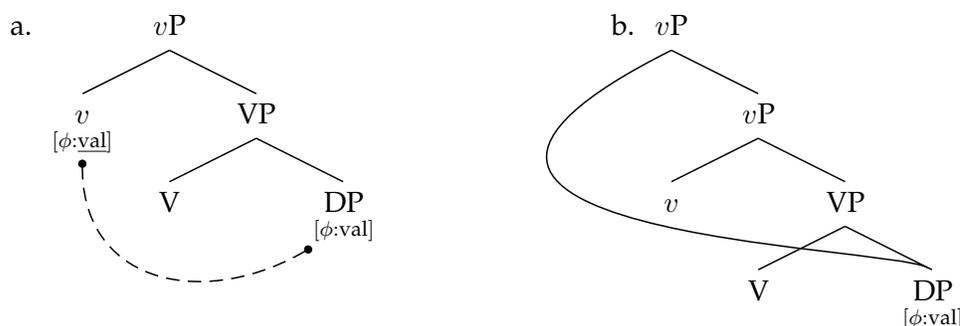
    The goal of the present paper is to explore the predictions of these two models with respect to the morphosyntactic properties and behavior of true clitic doubling. I test these predictions in Bulgarian, a South Slavic language which exhibits the phenomenon in question with both direct and indirect objects:[3]

(4) a. Decata   ja   običat neja.
      the.kids 3.s.f.do love   her

      'The kids love her.'

   b. Marija mu   izprati pismo na rabotnika.
      Maria 3.s.m.io sent   letter to the.worker

      'Maria sent a letter to the worker.'

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[1] More recently it has been argued that only some, but not all, syntactic movements are parasitic on `Agree`. For example, Chomsky (2008, p. 150–152; fn. 49) proposes that at least some kinds of $\overline{\text{A}}$-movement are triggered by an edge feature EF without `Agree` (see Roberts 2010, p. 208–209, for discussion). Additionally, Preminger (2011) (section 4) argues not only that the contingency of movement on `Agree` is not a property of all types of syntactic movement but that it is also subject to parametric variation. I thank an anonymous reviewer for this clarification.

[2] This is an expository choice and nothing essential hinges on it to the extent that the Multidominance Theory of Movement and the Copy Theory of Movement provide identical empirical coverage in the domain under discussion (consult Vicente 2009 for comparison of the two implementations in the context of $\overline{\text{A}}$-movement). Kramer (2014) develops an analysis of Amharic object markers which adopts the Copy Theory of Movement.

[3] Bulgarian is the author's native language. Unless otherwise noted, the majority of the data presented in this paper is based on the judgments of five native speakers of Bulgarian (including the author)—I gratefully acknowledge these consultants' assistance. In addition, I thank an anonymous reviewer for generous contribution of native speaker judgments. Another source of examples is the Bulgarian National Corpus, which consists of 950 million words from more than 200,000 texts from the middle of the 20th century to the present (`http://www.ibl.bas.bg/en/BGNC_en.htm`).

Object clitics in Bulgarian bear the ϕ-features of their associates and, while the language lacks case marking outside of the pronominal system, the forms of the clitics distinguish between direct and indirect object associates:

(5) *Object clitics in Bulgarian*

	1.S	2.S	3.S.M/N	3.S.F	1.P	2.P	3.P
DIRECT OBJECT	*me*	*te*	*go*	*ja*	*ni*	*vi*	*gi*
INDIRECT OBJECT	*mi*	*ti*	*mu*	*i*	*ni*	*vi*	*im*

Clitic doubling of direct objects in Bulgarian does not force the appearance of a preposition introducing the associate. This contrasts with what is usually assumed to be true for the Romance languages: that doubling is only possible if a particular kind of prepositional element is available to license a clitic-doubled associate. In other words, Bulgarian is a counterexample to Kayne's generalization (attributed to Kayne in Jaeggli 1982, p. 20). Non-clitic indirect objects, on the other hand, are uniformly marked by the dative preposition *na* regardless of their participation in clitic doubling.[4]

There is a long tradition of research on clitic doubling in the languages of the Balkans and Bulgarian in particular; recent examples include Guentchéva (1994, 2008), Vakareliyska (1994), Alexandrova (1997), Leafgren (1997), Rudin (1997), Dimitrova-Vulchanova and Hellan (1999), Franks and Rudin (2005), Pancheva (2005), Krapova and Cinque (2008) (see Franks and King 2000 for an overview). Much attention has been devoted to the information structural factors that license or require the co-occurrence of a clitic and a full nominal phrase associate—an area of language-specific and cross-linguistic research characterized by much debate in the literature. The general conclusion in the context of Bulgarian is that a number of factors interact in a fairly complex way in the licensing of clitic doubling; appropriate characterization of the relevant factors, however, has been difficult to achieve due, at least partly, to the elusive nature of the information structural notions involved and also to the observed dialectal and intra-speaker variation (Leafgren 1997, p. 121; Guentchéva 2008, p. 209). It has been proposed that clitic doubling in Bulgarian occurs when the associate is definite (Cyxun 1962), specific (Rudin 1997; Guentchéva 2008), topical (Leafgren 1997; Rudin 1997; Guentchéva 2008), or a combination of these (Rudin 1997). However, there are well-known exceptions to the most straightforward interpretations of all these requirements, involving doubling of indefinite objects (Leafgren 1997), non-specific generics (Guentchéva 1994; Alexandrova 1997) and focused (and presumably non-topical) *wh*-phrases (Dimitrova-Vulchanova and Hellan 1999). Furthermore, the existence of predicates which require the presence of a (doubling) clitic regardless of the associate's definiteness, specificity, or topicality has been taken as an indication that these notions are altogether irrelevant for the characterization of clitic doubling (Krapova and Cinque 2008). This paper will have little to contribute to the debate about the information structural conditions on clitic doubling and their proper characterization. Such an investigation is orthogonal to the paper's main concern, the morphosyntactic mechanisms behind clitic doubling (see Franks and King 2000, p. 250, on the independence of these two classes of questions). Combining the insights of both pursuits in the hopes of better overall understanding of the clitic doubling phenomenon should, however, be the goal of future work.[5]

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[4]Here, I use "preposition" in a pre-theoretic sense and do not make a claim about the analytical status of the element *na*. In fact, in section 5 I claim that it is a K head.

[5]It might be tempting to take this sensitivity to information structure as evidence against the agreement analysis of true clitic doubling in Bulgarian. However, although agreement does not canonically depend on information structural factors or the features of the controller of the agreement (Corbett 2006, p. 26–27), there are clear exceptions. For instance,

The remainder of this paper is organized as follows. Section 2 further narrows down the focus of the paper by elaborating on the assumed definition of true clitic doubling and the possible relation of the phenomenon to superficially similar constructions. After determining that Bulgarian exhibits true clitic doubling in section 3, I provide in section 4 converging evidence in support of treating the relation between the clitic and its associate as an instance of A-movement. In section 5, I argue that clitics in Bulgarian are reduced articulations of the higher occurrences of raised verbal complements. According to this analysis, clitic doubling of the kind found in Bulgarian is the result of the syntax of A-movement and the morphophonology of affixation, which involves the formation of a complex verbal head. Various consequences of this view are discussed in the remainder of section 5, as well as in the concluding section 6.

2   Clitic doubling vs. CLLD and CLRD

Given definition (1), the question arises of whether all examples in (4), where an associate follows its doubling clitic, instantiate true clitic doubling. Cross-linguistically, at least two distinct constructions with distinct syntactic properties have been implicated in examples with an anticipatory clitic. In one, the associate is introduced in the derivation in an argument position—this corresponds to true clitic doubling as defined above; in the other one, which has been dubbed Clitic Right Dislocation (henceforth, CLRD), the associate occupies an adjunct position on the surface (as the result of base-generation or movement). Anagnostopoulou (2007) identifies the following as distinctive properties of CLRD:

1. The associate in CLRD is necessarily parsed in a separate prosodic constituent but the associate in true clitic doubling is not (see also Philippaki-Warburton et al. 2004, p. 965; fn. 1).

2. CLRD is not subject to Kayne's generalization in the languages in which true clitic doubling is (e.g., Rioplatense Spanish).

Based on these differences it has been argued that true clitic doubling and CLRD deserve distinct syntactic treatments: the object is generated as a complement of the verb in the former but as a VP-external adjunct in the latter (Jaeggli 1982, 1986; Borer 1984, among others). Alternatively, CLRD could be characterized by the same base structure as true clitic doubling but differ from it on the surface (Kayne 1994, p. 82–83; Zubizarreta 1998, p. 198). According to the latter analysis, CLRD is derivationally related to clitic doubling via movement of the clitic-doubled associate to its right-adjoined surface position. CLRD is independently attested in Bulgarian and involves the special prosodic phrasing described as property 1 above (cf. (4a) and (4b) where no prosodic boundary is found in front of the associate; see Krapova and Cinque (2008) for a different characterization):

(6)   a.   decata   ja   običat ($_\varphi$ Marija)$_\varphi$
           the.kids 3.s.f.do love   Maria
           'The kids love her, Maria.'

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it has been argued that properties of the controller of agreement (specificity, definiteness, animacy, or a combination of these) determine object agreement morphology in languages such as the Potreño dialect of Spanish (Suñer 1988), Swahili (Suñer 1988), and Hungarian (Coppock and Wechsler 2012). Furthermore, Corbett (2006) discusses a number of languages in which agreement is sensitive to information structural factors such as topicality and/or focus (:197–204): Tsez, Khanty, Rural Palestinian Arabic. These exceptions can be taken as evidence that licensing conditions of this kind are not a reliable diagnostic of agreement vs. non-agreement processes. However, as an anonymous reviewer points out, it is possible that in these cases information structural factors do not directly affect agreement but the structural configurations that license agreement.

b. Marija mu   izprati pismo ($_\varphi$ na rabotnika)$_\varphi$
   Maria 3.s.m.io sent   letter   to the.worker

'Maria sent a letter to him, the worker.'

Another question that arises given the definition of clitic doubling in (1) is whether examples like (7a) and (7b) actually involve true clitic doubling. In other words, does an associate that precedes its doubling clitic on the surface occupy an argument position at an earlier derivational stage?

(7) a. Ivan go   tărsjat.
       lvan 3.s.m.do they.seek

       'They're looking for Ivan.'

   b. Na nego mu   văzložiha trudna zadača.
       to him   3.s.m.io they.gave difficult task

       'They gave him a difficult task.'

Such examples, where the clitic follows its associate, are instances of a phenomenon called Clitic Left Dislocation (henceforth, CLLD; Cinque 1990). CLLD is an unbounded dependency which is sensitive to locality constraints on movement (islands) and exhibits connectivity effects (e.g., case matching).[6] Given the co-occurrence of a clitic and a full nominal phrase, it is worth asking whether CLLD is related to true clitic doubling and CLRD. Based on the four observations below (Anagnostopoulou 2007), it has been argued that CLLD is not derivationally related to the constructions in which the clitic precedes the associate (Cinque 1990; Anagnostopoulou 1994; Iatridou 1995):

1. There are languages with CLLD but no clitic doubling (e.g., Italian).

2. There are languages in which clitic doubling is subject to Kayne's generalization but CLLD is not (e.g., Rioplatense Spanish).

3. There are languages in which clitic doubling is limited to nominal phrases but CLLD is not (e.g., Italian).

4. There are languages in which clitic doubling is limited to certain semantic classes of associates but CLLD is not.

The analysis that usually emerges from the claim that CLLD and true clitic doubling are unrelated is that CLLD involves base-generation of the nominal phrase in the left periphery—such an approach, however, must resort to special mechanisms in order to account for the aforementioned connectivity effects. It is the observed connectivity that has led others to conclude that CLLD and true clitic doubling are, in fact, derivationally related, with CLLD the result of fronting a clitic-doubled associate to the left periphery (Agouraki 1992; Kayne 1994; Sportiche 1996; Cecchetto 2000).

True clitic doubling has been defined in this paper in terms of the base position of the associate (argument). On the other hand, CLLD and CLRD have been defined in terms of the surface position of the associate (adjunct in both). This view allows, although it does not require, treatment of CLLD and CLRD as derivationally related to clitic doubling in any given language. As far as CLLD is concerned, I contend that relating it derivationally to clitic doubling is also possible in Bulgarian. First, observation 1 above cannot be an argument against treating (7a) and (7b) as involving clitic doubling because it relies on the assumption that Italian CLLD and Bulgarian

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[6]CLLD is to be distinguished from a superficially similar construction called Hanging Topic Left Dislocation, which is a root-only phenomenon that is not sensitive to islands and does not exhibit connectivity effects. It is discussed in section 3.2.

examples like (7a) and (7b) are derived via the same mechanism—an assumption in need of in-dependent motivation. Second, 2 is irrelevant in Bulgarian because the language is not subject to Kayne's generalization. Furthermore, 3 and 4 cannot be applied in Bulgarian either because both clitic doubling and CLLD are found with the same kinds of phrases in the language. Even if such differences existed, however, they could readily be captured by an analysis which treats CLLD as derivationally related to clitic doubling. Specifically, as long as CLLD involves an additional oper-ation, such as $\overline{\text{A}}$-movement fed by clitic doubling, for instance, it is this subsequent $\overline{\text{A}}$-movement that could be the locus of the differences between the two types of examples. The connection be-tween clitic doubling, as understood here, and CLLD is discussed in more detail in section 5.4, which explores the interaction of clitic doubling with $\overline{\text{A}}$-movement more generally. Below, I leave CLRD aside and focus on true clitic doubling examples like (4a) and (4b) where the associate is demonstrably (base-generated) in argument position, as argued on the basis of the extensive evi-dence provided in section 3.[7]

3 The status of the associate

The set of diagnostics discussed in this section attempts to determine whether Bulgarian exhibits true clitic doubling or not—i.e., whether the associate in clitic doubling configurations is a syn-tactic argument of the verb or an adjunct. The status of the associate has direct consequences for the analytical treatment of the doubling clitic. In particular, if the associate can be shown to occupy an argument position at some point in the derivation (Borer 1984; Jaeggli 1982, 1986; Anag-nostopoulou 1999; Alexiadou and Anagnostopoulou 2000), it can be concluded that the clitic is not an argument itself. Then the two possibilities discussed in section 1 arise: the clitic could be either the reflex of verbal agreement with the associate or the pronominal movement "copy" of the associate itself. If, instead, the associate can be shown to be an adjunct (see Aoun 1999 and Philippaki-Warburton et al. 2004, among others, for relevant discussion), the question arises of what the actual syntactic argument of the verb is.[8] This result may suggest a treatment of the clitic itself as a pronominal argument of the verb which is either base-generated in its surface position or raises to it.

This section catalogues a number of diagnostics which aim to determine the nature of the as-sociate in clitic doubling configurations in Bulgarian. The majority of them rely on the syntactic differences observed to hold between arguments and adjuncts in terms of extraction possibilities (section 3.1), case assignment (section 3.2), and word order (section 3.3). The results described below indicate that the associate in Bulgarian actually occupies an argument position, in agree-ment with Rudin (1997) and Franks and Rudin (2005). This is the kind of result that has been

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[7] Krapova and Cinque (2008) slice the terminological pie slightly differently. They reserve the term "clitic doubling" only for cases where the presence of a clitic is required (experiencers of psych and perception predicates); all other ex-amples where the clitic precedes the associate are considered instances of CLRD, which, in this case, cannot be defined on the basis of the associate's status as an argument or adjunct (Krapova and Cinque 2008, in fact, seem to treat it as an argument; e.g., Krapova and Cinque 2008, p. 257.) If the argument/adjunct status of the associate is, instead, taken as the defining characteristic of clitic doubling, as it is in the present paper, doubling with psych and perception predi-cates is simply an instance of obligatory true clitic doubling. This obligatoriness is independent of the morphosyntactic mechanism behind clitic doubling, however, and is plausibly tied to the predicate type involved, a possibility explored in more detail in section 5, after the present analysis has been fully laid out.

[8]This question arises only if one can reliably exclude the possibility that the associate is a semantic argument of the verb despite its syntactic status as an adjunct. If that is the case, and the associate is not a restrictive modifier, it would be sufficient to saturate the predicate. Chung and Ladusaw (2004, p. 94) present a number of tests to determine whether syntactic adjuncts behave like semantic arguments in Chamorro, which probe the semantic restrictions that the verb imposes on its internal argument(s).

obtained, for example, in languages like Macedonian (Franks 2009), Romanian, Modern Hebrew, and Lebanese Arabic. Modern Greek is a language for which mixed results have been reported (compare Alexiadou and Anagnostopoulou 2000 and Philippaki-Warburton et al. 2004).

3.1 Islandhood

Adjuncts are observed to often be islands for extraction and, specifically, prohibit $\overline{\text{A}}$-dependencies crossing their boundaries (e.g., Huang 1982 and Chomsky 1986a, but see Szabolcsi 2006 and Truswell 2011):

(8) a.   * Which concert did you sleep during?
   b.   * How did you leave before fixing the car?

Analytically, the status of adjuncts as islands could be made to follow from the Condition on Extraction Domains (Huang 1982; Chomsky 1986a) or its minimalist descendants. Adjuncts in Bulgarian disallow $\overline{\text{A}}$-movement, while elements in argument (complement) position do not. This contrast can serve as a diagnostic for the syntactic argumenthood of associates in clitic doubling configurations. First, I will establish that certain kinds of possessors can be extracted from nominal phrases in argument positions but not from nominal phrases in non-argument positions; second I will determine that associates pattern with arguments with respect to extractability: i.e., they are not islands for extraction.

Non-clitic possessors in Bulgarian (9a), which originate within nominal phrases in argument position and are introduced by the dative preposition *na*, can appear prenominally, as in (9b), and clause initially, as in (9c) and (9d).

(9) a.   Popravih dvigatelja na bežovija Moskvič.
          I.repaired the.engine of the.beige Moskvitch

          'I repaired the engine of the beige Moskvitch.'
     b.   Popravih na bežovija Moskvič   dvigatelja.
          I.repaired of the.beige Moskvitch the.engine
     c.   Na bežovija Moskvič   popravih dvigatelja.
          of   the.beige Moskvitch I.repaired the.engine
     d.   Na koj   avtomobil popravi   dvigatelja?
          of which automobile you.repaired the.engine

          'Of which automobile did you repair the engine?'

(9b) can be analyzed as derived from (9a) via movement of the possessor from its postnominal base position to the specifier of DP (or via left adjunction to DP); (9c) can be analyzed as derived by movement of the possessor to a clause-initial focus position (presumably, with (9b) as an intermediate stage); finally, in (9d) the possessor undergoes *wh*-movement. The movement analysis of these examples can be schematically represented as follows:

(10) *PP possessor raising: movement analysis*

     … PP … [$_{DP}$ … ~~PP~~]
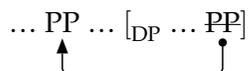
As expected, this movement observes the coordinate structure constraint. Movement of the possessor out of the first conjunct is impossible, as (11b) and (11c) show, while across-the-board movement of the possessor is possible, as in (11d) and (11e).

(11)   a.   Pročetoh stihosbirkata   na Botev i   romana na Vazov.
               I.read   the.collection.of.poems of Botev and the.novel of Vazov

               'I read Botev's collection of poems and Vazov's novel.'

     b.   * Na Botev pročetoh stihosbirkata   i   romana na Vazov.
               of Botev I.read   the.collection.of.poems and the.novel of Vazov

               'I read Botev's collection of poems and Vazov's novel?'

     c.   * Na kogo pročete stihosbirkata   i   romana na Vazov?
               of whom you.read the.collection.of.poems and the.novel of Vazov

               'Of whom did you read the collection of poems and the novel of Vazov?'

     d.   Na Vazov pročetoh novija   roman i   starata stihosbirka.
               of Vazov I.read   the.new novel   and the.old collection.of.poems

               'I read Vazov's new novel and old collection of poems.'

     e.   Na kogo pročete njakolko romana i   stihosbirki?
               of whom you.read several   novels   and collection.of.poems

   'Of whom did you read several novels and collections of poems?'

Further evidence for a movement analysis of prenominal possessors comes from a certain kind of intervention effect. Consider the sentences in (12) which showcase a configuration that prevents the possessor from appearing prenominally. What these sentences have in common is that the DP containing the possessor phrase contains a demonstrative as well; thus, it appears that prenominal possessors do not co-occur with demonstratives.

(12)   a.   Polzvah tazi čaša na Ivan.
               I.used   this cup of Ivan

               'I used this cup of Ivan.'

     b.   * Polzvah na Ivan tazi čaša.
               I.used   of Ivan this cup

     c.   * Na Ivan polzvah tazi čaša.
               of Ivan I.used   this cup

     d.   * Na kogo polzva   tazi čaša?
               of whom you.used this cup

               'Of whom did you use this cup?'

I claim that the demonstrative blocks the movement of the possessor PP. It is much less clear how this effect could be explained if prenominal possessor PPs were base-generated in their surface position. Under the movement approach, on the other hand, this blocking effect is expected under the following two plausible assumptions: (i) movement out of DP must proceed through Spec,DP (guaranteed if Bulgarian DPs are phases in the sense of Chomsky 2000), and (ii) demonstratives in Bulgarian occupy Spec,DP (see Dimitrova-Vulchanova and Giusti 1995; Giusti 1997). In other words, as illustrated in (13), PP extraction out of DP is possible only if an unoccupied Spec,DP is available, which serves as an escape hatch for movement out of the DP phase (Cinque 1980, 2011).[9]

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[9]I thank an anonymous reviewer for suggesting this analysis of the observed blocking effect. Another anonymous reviewer observes that, unlike demonstratives, the quantifier *vsički* 'all' does not intervene (cf. (12d)):

(i)   Na kogo polzva   vsičkite čaši?
         of whom you.used the.all   cups

         'Whose cups did you use all?'
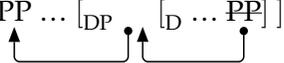
(13) a. … PP … [$_{DP}$ [$_D$ … ~~PP~~]]   b. … [$_{DP}$ demonstrative [$_D$ … PP]]
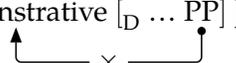
Having established that prenominal PP possessors undergo movement, the behavior of arguments and adjuncts with respect to this movement can now be compared. While possessor movement out of a DP is possible if the DP is in argument position (as the examples above showed), it is impossible out of an adjunct. In addition to the adjunct island violations in (14), consider the attempted possessor movement out of the adjunct *prijatelja na Sonja* 'Sonia's friend' in (15). Unsurprisingly, extraction of a possessor out of a DP argument contained within an adjunct is also impossible—(16). The observed ungrammaticality is expected under standard assumptions about the locality of movement in Bulgarian: i.e., adjuncts are islands for extraction.

(14) a. * Na kogo Marija si   trăgna sled kato podari kolelo?
          to whom Maria REFL left   after when she.gave bike

          'Who did Maria leave after she gave a bike to as a present?'

      b. * Kogo Marija si   trăgna predi da iznenadat?
          who Maria REFL left   before to they.surprised

          'Who did Maria leave before they surprised?'

      c. * Kakvo Marija otide na učilište nosejki na gărba si?
          what Maria went to school   carrying on back REFL

          'Who did Maria go to school carrying on her back?'

(15) a. * na Sonja reporteră   intervjuira Ivan, [prijatelja ~~na Sonja~~]
          of Sonia the.reporter interviewed Ivan   the.friend

          'The reporter interviewed Ivan, Sonia's friend.'

      b. * na kogo reporteră   intervjuira Ivan, [prijatelja ~~na kogo~~]
          of whom the.reporter interviewed Ivan   the.friend

(16) a. * Na bežovija Moskvič si   trăgnah sled kato popravih dvigatelja.
          of the.beige Moskvitch REFL I.left   after when I.repaired the.engine

          'I left after I repaired the engine of the beige Moskvitch.'

      b. * Na koj   avtomobil si   trăgna predi da popraviš   dvigatelja?
          of which automobil REFL left   before to you.repaired the.engine

          'Of which automobile did you leave before you repaired the engine?'

Turning now to the associate in clitic doubling configurations, notice that it patterns with arguments with respect to this diagnostic: possessors can properly exit the associate nominal phrases that they originate within, as demonstrated in (17).[10]

Given the analysis of intervention proposed above, that quantifiers like *vsički* 'all' do not intervene follows from the assumption that they are heads in the extended nominal projection and not phrasal in nature (see Dimitrova-Vulchanova and Giusti 1995 for argumentation). As such, they do not occupy the escape hatch that the *wh*-phrase in (i) moves through on its way out of the nominal phrase. Note that, as an anonymous reviewer points out, the fact that *all* can co-occur with *the* in English has sometimes been used to classify it as a maximal projection.

[10] An anonymous reviewer observes that *wh*-movement out of clitic-doubled associates is not always acceptable, providing the following example:

(i) * Na kogo ja   pročete knigata na studentite?
        of whom 3.S.F.DO you.read the.book to the.students

        'Whose book did you read to the students.'

In my experience four out of five native speakers judge (17c) and (17d) as fully acceptable. Movement of non-*wh*-phrases out of clitic-doubled associates, on the other hand, is always possible, as in (17a) and (17b). How exactly the two types of

(17) a. Na Sonja Marija go vidja prijatelja.
of Sonia Maria 3.s.m.DO saw the.friend
'Maria saw Sonia's friend.'

b. Na Ivan gi polzvah instrumentite.
of Ivan 3.p.DO I.used the.instruments
'I used Ivan's instruments.'

c. Na koi tvoi učenici gi poznavaš roditelite?
of which your students 3.p.DO you.know the.parents
'The parents of which of your students do you know?'

d. Na koj ot predstavenite na festivala avtori Marija ja beše pročela naj
of who of the.introduced at the.festival authors Maria 3.s.f.DO was read most
novata kniga?
the.new book
'The newest book of which of the authors introduced at the festival had Maria already read?'

This evidence confirms that associates in clitic doubling configurations in Bulgarian pattern with elements in argument (complement) position, and not adjuncts, in permitting extraction.

3.2 Case assignment

In Bulgarian, arguments and adjuncts contrast with respect to case assignment. Specifically, while the verb assigns case to nominal phrases in argument position, it cannot assign case to any nominal phrases in adjunct position. Thus, arguments are expected to be obligatorily case marked by the verb while adjuncts are not. Bresnan and Mchombo (1987) use this diagnostic in Chicheŵa to distinguish between object agreement markers and object pronouns that are incorporated into the verb. They observe that in Chicheŵa the verb cannot assign case to full nominal phrases that are anaphorically linked to incorporated pronouns. Their conclusion is that these incorporated pronouns are the actual arguments of the verb and not the full nominal phrases. This diagnostic can be applied in the context of clitic doubling as well: if the associate is dependent on the verb for case assignment, it must be an argument; if it is not, it must be an adjunct. This conclusion follows under the assumption that nominal phrases in argument positions must bear the case assigned to them by the verb while nominal phrases in adjunct positions are assigned case in a different way (for example, they might bear default case).[11]

Relying on the results of Krapova and Cinque (2008), I will examine Hanging Topic Left Dislocation in Bulgarian (henceforth, HTLD; Riemsdijk and Zwarts 1997, among others) and compare it with clitic doubling. HTLD will be argued to involve adjunction of the hanging topic in a clause-peripheral position; crucially for present purposes, no case connectivity effects are observed with this type of left dislocation in Bulgarian.[12] For example, (18a) demonstrates that the left-dislocated nominal phrase can appear in the default nominative case even though it is anaphorically linked

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movement differ and what factors determine the acceptability of *wh*-movement is far from clear. Yet, the fact that there are grammatical instances of both *wh*-movement and non-*wh*-movement out of clitic-doubled associates lends support to the hypothesis that the associates occupy an argument position.

[11]Crucially, for the conclusion to hold, case cannot be allowed to be assigned "freely" to adjuncts under some matching requirement. This solution is suggested by Philippaki-Warburton et al. (2004, p. 976), for certain adjuncts in Modern Greek, which they argue do receive nominative case but not via government or spec-head agreement.

[12]As discussed in section 2, CLLD and CLRD show connectivity effects unlike HTLD. Based on this fact, they could be argued to involve movement of the dislocated constituent to its surface position as opposed to base generation (though

to a dative argument. In addition, (18b) and (18c) make the same point for left-dislocated nominal phrases that are anaphorically linked to accusative arguments: the left-dislocated pronoun is in the nominative case (cf. Krapova and Cinque 2008, p. 260).[13]

(18)   a.   Ivan, Marija mu   podari kolelo za koleda.
              Ivan Maria 3.s.m.io gave   bike   for Christmas

              'Ivan, Maria gave him a bike for Christmas.'

     b.   Toj do kolkoto znam sa   go   videli včera.
              he   as far as I.know   they.have 3.s.m.do seen   yesterday

              'Him, as far as I know, they saw him yesterday.'

     c.   Tja i   bez   tova ne moga da ja   nakaram da jade.
              she and without that not I.can to 3.s.f.do make   to eat

              'Her, I can't make her eat anyway.'   (Krapova and Cinque 2008, p. 257)

The absence of case connectivity effects can be accounted for if hanging topics are assumed not to have occupied an argument position at any point in the derivation, i.e., they are base-generated in the left periphery of the clause. As a result, they surface in the default nominative case.

(19)   *Hanging Topic Left Dislocation: base-generation analysis*

     hanging-topic^i [$_{CP}$ … clitic$^i_{[\phi]}$+verb … associate$^i_{[\phi]}$ …]

One piece of evidence for a base-generation analysis of hanging topics is that a full tonic pronoun or an epithet coindexed with the hanging topic can appear as the associate doubled by the clitic (cf. Krapova and Cinque 2008, p. 261):

(20)   a.   Ivan, Marija mu   podari kolelo na nego za koleda.
              Ivan Maria 3.s.m.io gave   bike   to him   for Christmas

              'Ivan, Maria gave him a bike for Christmas.'

     b.   Ivan, az go   predupredih toja glupak ošte   minalata godina.
              Ivan I   3.s.m.do warned   this fool   already last   year

              'Ivan, I warned the fool last year already.'

The possibility of clitic doubling in the presence of a hanging topic would be unexpected if the hanging topic occupied an argument position and underwent movement to its surface position. Insensitivity to (strong) islands furnishes additional evidence that the hanging topic is base-generated in a clause peripheral position (cf. Krapova and Cinque 2008, p. 263):

(21)   a.   Ivan, ne znam kakvo mu   podari Marija za koleda.
              Ivan not I.know what 3.s.m.io gave   Maria   for Christmas

              'Ivan, I don't know what Maria gave him for Christmas.'

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see section 2 for discussion of alternatives). This possibility, in turn, renders CLLD and CLRD unhelpful with respect to determining whether clitic-doubled associates are adjuncts or not.

    [13] I assume that the argument of the verb in the examples of (18) is a null pronoun and not the clitic itself—note that this pronoun may actually receive pronunciation as a strong pronoun: (20a). Therefore, all clauses in which a verb-argument relation is signaled only by the presence of a clitic, in fact, involve clitic doubling of a null pronominal associate. Since this kind of object pro-drop is only possible in the presence of a doubling clitic, it must be concluded that clitic doubling of null pronouns is obligatory—as is also true of overt strong pronouns (unless they are contrastively focused).

    b.   Ivan, poznavam ženata,   kojato mu   podari kolelo za koleda.
        Ivan I.know   the.woman who   3.s.m.io gave   bike   for Christmas
        'Ivan, I know the woman that gave him a bike for Christmas.'

    c.   Ivan, Marija si   trăgna sled kato mu   podari kolelo.
        Ivan Maria REFL left   after when 3.s.m.io gave   bike
        'Ivan, Maria left after she gave him a bike as a present.'

This behavior of (this particular kind of) adjuncts is to be compared with the behavior of associates in clitic doubling configurations. Such nominal phrases do exhibit case connectivity effects and cannot appear in the default nominative case. For example, the dative preposition *na* is required in (22a). Similarly, (22b) demonstrates that a direct object associate requires accusative case.

(22)   a.   Marija mu   podari kolelo *(na) Ivan za koleda.
            Maria 3.s.m.io gave   bike   to   Ivan for Christmas
            'Maria gave Ivan a bike for Christmas.'   (cf. (18a))

    b.   Do kolkoto znam, sa   go   videli nego/*toj včera.
            as far as I.know   they.have 3.s.m.io seen   him/*he   yesterday
            'As far as I know, they saw him yesterday.'   (cf. (18b))

The associate in clitic doubling configurations cannot surface in the nominative case; instead, it must bear the case assigned to it by the verb. Since such behavior is characteristic only of arguments, not adjuncts, clitic-doubled associates must occupy argument positions.[14]

3.3 Word order

A final difference between the behavior of arguments and adjuncts that will be examined here has to do with word order at the right edge of VP. Since direct and indirect object arguments occupy VP-internal positions, they are expected to precede any material that marks the right edge of VP. Right-adjuncts (to VP or vP), on the other hand, are expected to follow such material. I will use this contrast to argue that the associates in clitic doubling configurations behave like arguments and cannot be (right) adjoined to VP or vP.

    The markers of the right edge of VP that will be used here are embedded clause complements to object control verbs. The relative order of a clitic-doubled associate and a complement clause has been used as a diagnostic for the nature of the associate in Greek by Schneider-Zioga (1994) and Sportiche (1996). They argue that clitic-doubled elements in Greek occur in positions where adjuncts are not tolerated: i.e., as exceptionally case-marked (ECM) subjects and as objects in object control constructions (see also Anagnostopoulou 1999, p. 766, and Alexiadou and Anagnostopoulou 2000 for a similar argument).

(23)   a.   O Jannis tin   ekane tin Maria na klapsi.
            the Jannis 3.s.f.do made the Maria to cry
            'Yannis made Maria cry.'   Modern Greek (Schneider-Zioga 1994)

    b.   O Jorgos tin   perimene tin Maria na paraponiete.
            the Jorgos 3.s.f.do expected the Maria to complain
            'Yorgos expected Maria to complain.'   Modern Greek (Sportiche 1996)

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[14]Case connectivity is also observed in CLLD and CLRD, which can be taken as evidence that the dislocated constituent is case licensed as an argument and undergoes movement to its adjoined surface position (see section 2 and references therein).

Franco (2000) provides a parallel argument involving ECM constructions in Spanish. He uses the grammaticality of clitic doubling in ECM contexts to argue that the associate in these constructions does not occupy an adjunct position:

(24) Le   dejó a Pedro terminar el   asunto.
      3.s.m.do let   Pedro finish   the issue

      'He let Pedro finish the issue.'   Spanish (Franco 2000, p. 154)

These authors take the possibility of clitic doubling of an ECM subject or an object controller as evidence that the associate in clitic doubling configurations is not an adjunct. The claim is that the associate cannot be right-adjoined (to VP or vP) because, then, it would have to follow the VP-internal complement clause (but see Philippaki-Warburton et al. 2004, p. 977–978, for an alternative view).

In Bulgarian, an object control verb takes a nominal object argument followed by a complement clause containing the subjunctive particle *da* and a fully inflected embedded verb.[15] In these circumstances, clitic doubling of the nominal object is possible:

(25) a. Ivan ja   pomoli Marija da posviri na pianoto.
          Ivan 3.s.f.do asked Maria to play   on the.piano

          'Ivan asked Maria to play the piano.'

      b. Učitelja   go   ubedi   Ivan da se   javi   na izpita.
          the.teacher 3.s.m.do persuaded Ivan to refl appear at the.exam

          'The teacher persuaded Ivan to show up at the exam.'

      c. Narediha   im   na vojnicite   da se   strojat v redica.
          they.ordered 3.p.io to the.soldiers to refl order   in row

          'They ordered the soldiers to line up in a row.'

      d. Učitelja   mu   razreši na Ivan da zavărši izpita.
          the.teacher 3.s.m.io allowed to Ivan to finish the.exam

          'The teacher allowed Ivan to finish the exam.'

Assuming that the embedded clause complement in object control constructions marks the right edge of VP, as schematized in (26), the fact that the clitic-doubled associate precedes it indicates that the associate is VP-internal. This, in turn, eliminates the possibility that the associate is (right) adjoined to VP or vP.

(26) *Object Control VP structure*

      clitic$^i_{[\phi]}$ [$_{VP}$ verb associate$^i_{[\phi]}$ [embedded complement]]

As expected, given this analysis, right-adjoined VP adverbs modifying the matrix VP cannot intervene between an associate and a non-extraposed clausal complement:

(27) a. ?? Kakvo kazaha, če sa   go   pomolili Ivan ljubezno da napravi?
            what they.said that have 3.s.m.do asked   Ivan politely to do

            'What did they say they have politely asked Ivan to do?'

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[15]There is no non-finite complementation in Bulgarian and the embedded verb always bears ϕ-feature agreement. The subjunctive particle *da* is glossed as *to*; the term "subjunctive" is somewhat controversial but this is inconsequential here.

b. ??S   kogo kazaha, če sa ja   ubedili   neja bărzo da se   sreštne?
with whom they.said that have 3.s.f.do persuaded her quickly to refl meet

'Who did they say they have quickly persuaded her to meet up with?'

A possible objection to the analysis in (26) could be that the observed word order results instead from right adjoining the clitic-doubled associate to VP or vP and extraposing the complement clause to its right:[16]

(28) *Object Control VP structure (alternative version)*

clitic$_{[\phi]}^{i}$ [$_{VP}$ verb] associate$_{[\phi]}^{i}$ [embedded complement]

If (28) were the underlying structure of the object control examples in (25), the following two expectations arise. First, (28) is a CLRD structure, which, as discussed in section 2 and illustrated in (6), should be characterized by special prosodic phrasing yielding intonational boundaries around the associate. No such prosodic boundaries are observed in (25) around the clitic-doubled associate or at the left edge of the embedded clause complement—the same prosodic profile has been claimed to characterize this type of example in at least two other Balkan languages: Modern Greek (Anagnostopoulou 1999) and Romanian (Cornilescu and Dobrovie-Sorin 2008). Second, according to (28), the embedded complement clause has been dislocated to the right and extraction out of it should be impossible as an instance of the Freezing Principle (Wexler and Culicover 1977, 1983). Such extraction, however, is possible, as the following examples demonstrate:

(29) a. Kakvo kazaha, če sa go   pomolili Ivan da napravi?
what   they.said that have 3.s.m.do asked   Ivan to do

'What did they say they have asked Ivan to do?'

b. S   kogo kazaha, če sa ja   ubedili   neja da se   sreštne?
with whom they.said that have 3.s.f.do persuaded her   to refl meet

'Who did they say they have persuaded her to meet up with?'

The grammaticality of such extraction in the presence of a clitic-doubled associate indicates that the embedded clause is not adjoined to VP and must be in its base argument position.[17] Thus, neither of the predictions of (28) is borne out in Bulgarian, suggesting that the underlying structure of

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[16]This is, presumably, the analysis of sentences like (i), which exhibit the "clitic—verb—associate—clausal complement" order, in Italian, a language claimed not to exhibit true clitic doubling with an associate in argument position. The direct object *Maria* participates in CLRD, as evidenced by the presence of a clitic (Cardinaletti 2002), which, in turn, means that the clausal complement *piángere* has itself been moved to a VP-external position.

(i) Io non l'   ho   mai lasciáta/vísta, Maria, piángere.
I not her I.have ever let/see   Maria cry

'I never let/saw Maria cry.'   [Italian; Krapova and Cinque (2008, p. 273)]

In light of the existence of such examples in a language without true clitic doubling, Krapova and Cinque (2008, p. 272) argue that their existence in Bulgarian cannot be taken as conclusive evidence that the language exhibits true clitic doubling. However, while equivalent in terms of surface word order, the relevant examples in Italian and Bulgarian have distinct properties suggesting that distinct underlying structures must be involved. In particular, an analysis of the Italian (i) as an instance of the structure in (28) generates the following two predictions. First, (i) will be characterized by the intonation typical of CLRD (see section 2). This seems to be the case, taking the commas in (i) as indicative of the expected prosodic boundaries (see also Cornilescu and Dobrovie-Sorin 2008, p. 302; fn. 16, for a similar point). Second, extraction out of the clausal complement in (i) should be impossible, as it is from any right-dislocated clause in Italian (Cardinaletti 2002). Crucially, these predictions are not borne out in Bulgarian, suggesting it instantiates the structure in (26)—see the main text. Thus, the existence of structure (28) in Italian does not bear directly against the existence of (26) in Bulgarian.

[17]In contrast, extraction is impossible when the complement clause is dislocated, as expected:

the object control examples in (25) is (26), where the complement clause is VP-internal and marks the right edge of VP. Therefore, the observed word order confirms the VP-internal position of the clitic-doubled associate.

3.4 Summary

In short, the associate in clitic doubling configurations in Bulgarian is a syntactic argument of the verb, exhibiting none of the characteristic behaviors of adjuncts—see (30). First, $\bar{\text{A}}$-movement of material within the associate is possible, as it is with material within arguments in general. Second, like arguments, clitic-doubled associates are dependent on the verb for case assignment. Finally, since it can appear to the left of subjunctive complement clauses in object control constructions, the associate cannot be (right) adjoined to VP or vP. In other words, Bulgarian exhibits true clitic doubling.[18]

(30)   *Results*

DIAGNOSTIC	ASSOCIATES	ARGUMENTS	ADJUNCTS
allow extraction	yes	yes	no
are assigned case by V	yes	yes	no
can be object controllers	yes	yes	no

4   The status of the clitic–associate relation

Clitic doubling of the Bulgarian type, then, involves a relation between a clitic and a full nominal phrase associate in argument position in its c-command domain. Given this much, there are at least two initially plausible analyses of the clitic. First, the clitic could be the morphophonological reflex of an Agree relation between the v head and an associate in argument position. Second,

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(i)   *[na kakǎv intrument]$_i$ ti   kazaha, če   mu   narediha na Ivan spešno predi koncerta   [da sviri t_i]?
      on what   instrument   you they.told that 3.S.M.IO made   to Ivan urgently before the.concert to play

'What instrument did they tell you they made Ivan play urgently before the concert?'

However, an anonymous reviewer reports that this varies across speakers and that extraction out of dislocated complement clauses is possible at least for some speakers. I have confirmed this in my own fieldwork: about half of the native speakers I have consulted consistently reject examples of extraction out of dislocated complement clauses while the others consistently accept them. For speakers who find such extraction grammatical regardless of the surface position of the dislocated complement clause, examples like (29) cannot be used as an argument for the VP-internal surface position of the complement clause and the prosodic evidence discussed above becomes much more relevant. However, for those who accept (29) but reject (i), both types of evidence suggest that the embedded complement clause is VP-internal.

[18] There are at least a couple of diagnostics that can be useful in principle but could not be fruitfully utilized in the present investigation. For instance, prosodic and intonational evidence, often taken to be quite revealing of the argument vs. adjunct status of phrases, could not be reliably used in the context of Bulgarian due to the lack of deep understanding of the prosodic characteristics of arguments in the language. Another diagnostic, inapplicable in Bulgarian, relies on the assumption that, since anaphors must be A-bound, if the clitic-doubled associate can serve as the antecedent of an anaphor, it must occupy an A-position. However, anaphors are uniformly subject-oriented in Bulgarian, rendering this diagnostic uninformative in the context of object clitic doubling. Relatedly, reflexive binding cannot be utilized either, since in all clitic doubling configurations, it would always be possible to maintain that it is the clitic that licenses the appearance of the reflexive and not the associate (assuming the clitic c-commands the associate). Thus, this type of diagnostics will not reveal much about the status of the associate. Finally, clitic-doubled associates can undergo (island-sensitive) *wh*-movement under certain conditions. While this does not rule out adjunction in general as an analysis of the associate in clitic doubling configurations, it does indicate that the associate is not an appositive or an extra-clausal base-generated adjunct (e.g., a hanging topic; see section 3.2), which cannot be extracted.

the clitic could be the result of multiple spell-out of an argument that has undergone movement. Determining what mechanism is instantiated in Bulgarian is the focus of this section.

The existence of true clitic doubling in a given language has often been taken as an unequivocal indication that the clitic is an object agreement marker. That is, the non-complementarity of an associate in argument position and a clitic is assumed to make implausible an analysis of the clitic according to which it is a (pro)nominal element itself. This kind of reasoning assumes that, if the clitic is a pronoun co-occurring with an associate that is an argument of the verb, the Theta Criterion (or the principles of Full Interpretation and Economy of Representation) would be violated. However, this is not necessarily the case. If the relation between the clitic and the nominal argument is one of movement, there would be no violation of the Theta Criterion: only one θ-role would be assigned to the resulting two-link "movement chain" (to the foot of the chain, i.e., the associate, upon first Merge).[19] Moreover, relating the clitic and its associate via movement explains the absence of a Condition C violation which is otherwise expected if the clitic is assumed to be a (pro)nominal element c-commanding the associate.[20]

This section explores the predictions of the agreement and movement analyses of clitic doubling, adding to a growing body of recent literature on the issue (e.g., Preminger 2009; Nevins 2011; Kramer 2014). I give arguments that an A-movement relation holds between the clitic and the associate, concluding that, at least in Bulgarian, contrary to what is standardly assumed for this language (Rudin 1997; Franks and King 2000; Pancheva 2005), clitic doubling does not involve agreement (but see Franks and Rudin 2005 for a movement analysis, and section 5.6 for a discussion of their analysis). The major syntactic arguments rely on well-established differences between movement and agreement relations with respect to binding (section 4.1) and the licensing of stranded quantifiers (section 4.2).[21]

This result replicates the findings of Anagnostopoulou (2003) who argues that clitic doubling in Modern Greek has the properties of an A-movement chain where the clitic spells out the head of the chain and the associate spells out the foot of the chain. On the other hand, this behavior should be contrasted with that of doubling clitics in Macedonian, which Franks (2009) argues are (becoming) agreement markers. The constellation of properties characteristic of Bulgarian clitic doubling is, in addition, similar to, although distinct in important ways from, that of Germanic Object Shift where the head of the A-movement chain is a branching phrase, not a clitic (see Sportiche 1996 and Alexiadou and Anagnostopoulou 1998 for explicit attempts at unifying this type of object clitic doubling with the Germanic type of Object Shift, and section 5.5 for further discussion).

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[19]Throughout this paper, the term "chain" is used for descriptive purposes only and no analytical content is attributed to it; i.e., chains are not considered to be part of the representational vocabulary available to the grammar (see Chomsky 2001, p. 41).

[20]If one is to maintain that the clitics, like (pro)nominal elements, carry interpretable ϕ-features, another analytical option is available besides relating the clitic to its associate via movement. Note that clitic doubling configurations would not violate the Theta Criterion if the clitic does not saturate, but restricts the internal argument position in the sense of Chung and Ladusaw (2004). Under this view, the clitics would be treated as interpretable features on a functional head which receive semantic interpretation (unlike pure agreement, which involves semantically inert uninterpretable features) but do not saturate an argument position. Legate (2012) entertains a similar proposal for "agent agreement" in Acehnese. While the numerous intriguing questions that such a proposal raises should be investigated in future work, it finds little empirical motivation in the context of Bulgarian where, as shown in the rest of section 4, doubling clitics do not simply restrict.

[21]Additional evidence, which relies on the application of various morphosyntactic diagnostics to the clitic itself, is offered in the Appendix. It is highly suggestive that the clitics are not agreement markers, as they are shown to exhibit behaviors that are cross-linguistically uncharacteristic of agreement.

4.1 Binding

Here I demonstrate that the relation between the clitic and its associate involves expansion of binding possibilities of a kind that is characteristic of A-movement. This behavior is unexpected of an object agreement marker. The crucial observation is that pronouns can be bound from the landing site of A-movement but not by an agreement marker which is the morphophonological reflex of `Agree` (or from the landing site of $\overline{\text{A}}$-movement if only argument positions are assumed to be possible binding antecedents).[22]

Consider the creation or repair of weak crossover (WCO) violations in English. Movement to an $\overline{\text{A}}$-position induces a WCO violation, as in (31a), where coreference between *who* and *his* is impossible. On the other hand, movement to an A-position (the matrix clause subject position), as in (31b), does not induce such a violation. In other words, pronouns can be bound only from the landing site of the kind of movement observed in (31b).

(31) a. * who$_i$ does [his$_i$ mother] love ~~who$_i$~~

      b. who$_i$ ~~who$_i$~~ seems to [his$_i$ mother] [~~who$_i$~~ to be intelligent]

In this section, I first establish that binding violations of the relevant kind do exist in Bulgarian, and then use them to probe the nature of the relation that holds between the clitic and its associate. This kind of approach has been used for similar purposes in other languages. For instance, Mahajan (1990) argues that clause-internal scrambling in Hindi is an instance of A-movement based on the fact that it does not show WCO effects. (32a) shows that the quantified direct object induces WCO effects when it follows an indirect object containing a coindexed pronoun. (32b) shows that scrambling of the direct object to the clause-initial position and over the indirect object suppresses the WCO violation.

(32) a. * raajaa-ne [unke$_i$ pitaa-ko] [sab daasiyaaN]$_i$ loTaa diiN
         king   their father   all maids   return give

         'The king returned all the maids$_i$ to their$_i$ father.'   Hindi (Mahajan 1990, p. 27)

      b. [sab daasiyaaN]$_i$ raajaa-ne [unke$_i$ pitaa-ko] loTaa diiN
         all maids   king   their father   return give

         'The king returned all the maids$_i$ to their$_i$ father.'   Hindi (Mahajan 1990, p. 28)

The grammaticality of (32b) can be explained if the scrambled indirect object *sab daasiyaaN* comes to occupy the same kind of position that *who* occupies in (31b), i.e., an A-position. Alexiadou and Anagnostopoulou (1998) analyze Germanic scrambling in a similar manner and draw a parallel between Germanic scrambling and clitic doubling in Modern Greek based on the parallel behavior of the two constructions with respect to the repair and creation of WCO effects.

Turning to Bulgarian, consider first that in the two kinds of passives in Bulgarian, the quantified surface subject is able to bind a pronoun contained within an internal argument of the main verb.[23] However, a pronoun within the subject cannot be bound by a quantified VP-internal object:

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[22]This is, of course, the expected behavior only of object agreement markers that are the morphophonological reflex of an `Agree` relation which values the uninterpretable features on a v head (see discussion in section 1 and references therein). It is, however, conceivable that other kinds of "agreement" behave differently. In particular, no claim is made here about the phenomenon of "anaphoric agreement" in the sense of Bresnan and Mchombo (1987) whereby the agreement marker on the verb is an incorporated pronominal argument of the verb, while the coreferential full nominal phrase is a non-argument. For some discussion of the possible diachronic link between anaphoric agreement and true clitic doubling of the Bulgarian kind, see section 6.

[23]One type of passive features the *be*-auxiliary and the past passive participle, both of which show agreement with the surface subject; the other type of passive features the reflexive *se* (non-active morphology in the sense of Embick 2004) and an agreeing form of the verb.

(33) a. [vsjaka kola]$_i$ beše vărnata [na nejnija$_i$ sobstvenik] včera.
           every car   was returned to its   owner   yesterday
           'Every car was returned to its owner yesterday.'

      b. [vsjaka kola]$_i$ se   vărna   [na nejnija$_i$ sobstvenik] včera.
           every car   REFL returned to its   owner   yesterday

(34) a. *[nejnija$_i$ ček   ] šte băde izpraten [na vsjaka žena   ]$_i$ utre.
            her   check will be sent   to every woman   tomorrow
           'Her check will be sent to every woman tomorrow.'

      b. *[nejnija$_i$ ček   ] šte se   izprati [na vsjaka žena   ]$_i$ utre.
            her   check will REFL send   to every woman   tomorrow

These facts could be understood by assuming that a quantified antecedent in Bulgarian must c-command a pronoun coindexed with it. The same facts hold in double object constructions in which the two objects can be reordered: (35) features a quantified direct object and a pronoun inside the indirect object; (36) features a quantified indirect object and a pronoun inside the direct object. In both cases, the quantified nominal expression must c-command the pronoun that it binds (assuming that c-command maps directly to precedence).

(35) a. Petăr vărna   [vsjaka kola]$_i$ [na sobstvenika i$_i$] včera.
           Peter returned every car   to the.owner   its   yesterday
           'Peter returned every car to its owner yesterday.'

      b. *Petăr vărna   [na sobstvenika i$_i$] [vsjaka kola]$_i$ včera.
            Peter returned to the.owner   its   every car   yesterday
           'Peter returned every car to its owner yesterday.'

(36) a. Ivan izprati [na vsjaka žena   ]$_i$ [nejnija$_i$ ček   ] včera.
           Ivan sent   to every woman   her   check   yesterday
           'Ivan sent every woman her check yesterday.'

      b. *Ivan izprati [nejnija$_i$ ček   ] [na vsjaka žena   ]$_i$ včera.
            Ivan sent   her   check   to every woman   yesterday
           'Ivan sent every woman her check yesterday.'

In short, pronominal binding by a quantificational element is sensitive to the relative structural positions of the pronoun and its antecedent at the relevant level of representation. We are now in a position to examine how clitic doubling interacts with this kind of binding. First, note that if the quantified object participates in clitic doubling, it can bind a pronoun even if it does not itself c-command the pronoun:[24]

(37) Petăr ja$_i$ vărna   [na sobstvenika i$_i$] [vsjaka kola]$_i$ včera.
       Peter 3.S.F.DO returned to the.owner   its   every car   yesterday

---

[24] An anonymous reviewer reports that some speakers do not find (37) and (38) acceptable. In my experience, four out of five native speakers judge these, and other similar examples, as fully acceptable with the intended interpretation. Thus, the pattern described in the main text can be robustly documented (see, in addition, Slavkov 2008 for further corroboration based on related data) but there does appear to be inter-speaker variation. The unacceptability of (37) and (38) for those speakers that do not accept them may indicate (at least) a difference in the binding patterns in double-object constructions or a difference in the behavior of cliticization. The latter possibility seems less likely given that all consulted speakers agree on the judgments of (41) and (42) discussed below in the main text (see also footnote 26). An anonymous reviewer points to the potentially relevant discussion in Slavkov (2008).

'Peter returned every car to its owner yesterday.' (cf. (35b))

(38) Ivan i$_i$ izprati [nejnija$_i$ ček   ] [na vsjaka žena   ]$_i$ včera.
      Ivan 3.s.f.io sent   her   check   to every   woman   yesterday

      'Ivan sent every woman her check yesterday.' (cf. (36b))

Apparently, the presence of the clitic in a position c-commanding the indirect object in (37) or the direct object in (38) repairs what would otherwise be a binding violation. This is the expected outcome if the clitic-doubled associate comes to occupy a higher A-position at the relevant level of representation, creating a configuration where the quantified object c-commands the pronoun that it binds.[25] A parallel situation occurs in English where movement of a quantified embedded subject to an A-position allows it to bind the pronoun inside the indirect object:

(39) a. * It seems to [his$_i$ mother] that [every child]$_i$ is intelligent.
      b.   [Every child]$_i$ seems to [his$_i$ mother] [every child]$_i$ to be intelligent.

An A-movement analysis of clitic doubling (as shown below) according to which the associate moves to the position of the clitic allows us to understand the fact that clitic doubling repairs the binding violations observed above. A sentence like (37) involves movement of the quantified direct object to a position c-commanding the indirect object that contains the pronoun. This movement yields (40a) resulting in successful binding. It is then the morphophonological component which triggers the pronunciation of the higher occurrence of the direct object as a clitic, as in (40b), which represents the relevant substructure for (37). (For details, see section 5.)

(40) a.   [vsjaka kola]$_i$ vărna [na nejnija$_i$ sobstvenik] [vsjaka kola]$_i$

      ⌞———————————— Move ————————————⌝

      b.   ja$_i$ vărna [na nejnija$_i$ sobstvenik] [vsjaka kola]$_i$ =(37)

Note, in addition, that the reverse effect is also observed in Bulgarian: the pronoun contained in the direct object in (41a) can be bound by the quantified indirect object unless the direct object is clitic doubled, as in (41b). The same behavior is observed with a quantified direct object in (42b).[26]

(41) a.   Ivan predstavi [na vsjaka žena   ]$_j$ [nejnija$_j$ bădešt săprug]$_i$ minalata godina.
            Ivan introduced to every   woman   her   future husband   last   year

            'Ivan introduced to every woman her future husband last year.'
      b.   * Ivan go$_i$ predstavi [na vsjaka žena   ]$_j$ [nejnija$_j$ bădešt săprug]$_i$ minalata
            Ivan 3.s.m.do introduced to every   woman   her   future husband   last
            godina.
            year

            'Ivan introduced to every woman her future husband last year.'

---

[25]This A-movement is assumed to target a specifier in which the object, once moved, is reduced to a clitic—an interaction discussed explicitly in section 5. So, in a certain sense, the clitic marks the A-position from which a clitic-doubled object c-commands the other object. The conclusions presented here hold regardless of whether the Bulgarian binding facts are explained in terms of c-command or precedence. What seems unquestionable is that in clitic doubling configurations, the associate is interpreted higher for the purposes of binding. Whether conditions on binding in Bulgarian need to be stated in terms of c-command or precedence does not affect the argument that the relation between the clitic and its associate is one of movement. (See Gerassimova and Jaeger 2002 for discussion of the conditions on binding in Bulgarian, and Williams 1997 for a potentially relevant linear condition.)

[26]All consulted speakers agree on the reported judgments for these, and other similar examples.

(42) a. Ivan predstavi [vsjaka žena   ]$_j$ [na nejnija$_j$ bădešt săprug]$_i$ minalata godina.
          Ivan introduced every woman   to her   future husband   last   year

          'Ivan introduced every woman to her future husband last year.'

      b. * Ivan mu$_i$ predstavi [vsjaka žena   ]$_j$ [na nejnija$_j$ bădešt săprug]$_i$ minalata
          Ivan 3.s.m.io introduced every woman   to her   future husband   last
          godina.
          year

          'Ivan introduced every woman to her future husband last year.'

This contrast shows that the presence of the clitic in a position c-commanding the direct object gives rise to a binding violation, i.e., (41b) has the same status as (35b). Again, this is expected if the associate undergoes A-movement to a higher c-commanding position and is parallel to the pattern found in English:

(43) a. It seems to [every mother]$_j$ that [her$_j$ child]$_i$ is intelligent.
      b. * [Her$_j$ child]$_i$ seems to [every mother]$_j$ [her$_j$ child]$_i$ to be intelligent.

The A-movement analysis of clitic doubling attributes the following representation to example (41b) and explains its ungrammaticality in terms of the constraints on binding in Bulgarian:

(44) a. * [nejnija$_j$ bădešt săprug]$_i$ predstavi [na vsjaka žena]$_j$ [nejnija$_j$ bădešt săprug]$_i$
          └──────────────────────────── Move ────────────────────────────┘

      b. * go$_i$ predstavi [na vsjaka žena]$_j$ [nejnija$_j$ bădešt săprug]$_i$ =(41b)

    The evidence provided so far shows that clitic doubling in Bulgarian creates new binding possibilities by forcing the clitic-doubled associate to be interpreted in a higher c-commanding position marked by the clitic. Thus, the relation between the associate and the clitic is taken to be one of A-movement. The ungrammaticality of examples (41b) and (42b) is particularly strong evidence against an agreement analysis of clitics: for a binding violation to arise in these examples as the result of clitic doubling, what gets spelled out as a clitic must be underlyingly associated with the fully articulated internal structure of the nominal phrase associate, as indicated in (44a).[27]

4.2   Quantifier stranding

Quantifiers that appear separated from the nominal phrase they quantify over (henceforth, stranded quantifiers) can be brought to bear on the nature of clitic doubling in Bulgarian. I will address two questions using facts about quantifier stranding: first, is the clitic an agreement marker or a (pro)nominal element that has undergone movement to its surface position? And, second, what kind of movement relates the position of the clitic and the base position of its associate?
    Observe that agreement does not license stranded quantifiers while (pro)nominal elements in A-position do (Rezac 2010):

(45) a. Portraits of Picasso had[3.p] all hung over the fireplace.
      b. * There had[3.p] all hung over the fireplace portraits of Picasso.

---

[27]Moreover, examples (41b) and (42b) provide evidence against other movement accounts of clitic doubling, which do not assume that the complete internal structure of doubled associates is preserved in the position of the clitic. For discussion of this shortcoming in the context of the "stranding" analysis of clitic doubling, see section 5.6.

In (45a) the quantifier *all* appears separated from the nominal phrase it quantifies over, *portraits of Picasso*, which occupies the surface subject position (an A-position). The grammaticality contrast between this example and (45b) indicates that the agreement on the auxiliary is not sufficient to license the appearance of the quantifier in the immediately preverbal position. The fact that clitic doubling in Bulgarian licenses stranded quantifiers will be taken as evidence that the clitic occupies an A-position as the result of movement of the quantified nominal phrase (the associate).

Given this finding, the second question above can be raised and answered relying on the contrasting behavior of A- and Ā-movement with respect to quantifier stranding: only the former kind of movement appears to license stranded quantifiers cross-linguistically (see Bobaljik 2003 for an overview and McCloskey 2000 for a counterexample). Consider the following examples (Déprez 1989):

(46) a. * These students, John has all met.
      b. * Which books did John all buy?

The generalization is that stranded quantifiers are incompatible with Ā-movement, as in (46), but compatible with A-movement, as in (45a). Thus, whether quantifier stranding is licensed in a language or not has been used as an A-movement diagnostic for control (Hornstein 2001) and for object shift and clitic doubling (Alexiadou and Anagnostopoulou 1998).

Turning to the relevant Bulgarian data, the quantifier *vsički* 'all' appears stranded, i.e., not immediately followed by the nominal phrase it quantifies over, under two scenarios: (i) A-movement, and (ii) clitic doubling. The following examples show that quantifiers can be stranded under A-movement in passives (see also Dimitrova-Vulchanova and Giusti 1995):

(47) a. Marija pročete vsičkite *(knigi).
          Maria read   the.all   books
          'Maria read all the books.'
      b. Knigite   bjaha pročeteni vsičkite.
          the.books were   read   the.all
          'All the books were read.'
      c. Knigite   se   pročetoha vsičkite.
          the.books REFL read   the.all
          'All the books were read.'

However, Ā-movement does not license stranded quantifiers in Bulgarian, as the following examples of topicalization, relativization, and *wh*-questions show:

(48) a. * Knigite,   Marija pročete vsičkite.
            the.books Maria read   the.all
            'The books, Maria read all (of them).'
      b. * Tova sa knigite,   koito Marija pročete vsičkite.
            this are the.books which Maria read   the.all
            'These are the books which Maria read all (of them).'
      c. * Koi   učenici vidja Marija vsičkite?
            which students saw   Maria the.all
            'Which students did Maria see all (of them)?'

Minimally different examples which involve clitic doubling of the Ā-moved constituents are grammatical, as expected if clitic doubling necessarily involves A-movement:

(49) a. Knigite, Marija gi   pročete vsičkite.
          the.books Maria 3.P.DO read   the.all

          'The books, Maria read them all.'

      b. Tova sa knigite, koito Marija gi   pročete vsičkite.
          this   are the.books which Maria 3.P.DO read   the.all

          'These are the books which Maria read them all.'

      c. Koi   učenici gi   vidja Marija vsičkite?
          which students 3.P.DO saw   Maria   the.all

          'Which students did Maria see them all?'

The conclusion from the data above must be that clitic doubling configurations behave like A-movement with respect to the licensing of stranded quantifiers in Bulgarian. (See Tsakali 2008 for discussion of clitic doubling and stranded quantifiers in other Balkan languages.) This would be the expected outcome if the position of the quantified nominal phrase (overt or not) and the clitic are related via A-movement, as shown in (50). Here, I assume a "stranding" approach to the phenomenon (originated by Sportiche (1988) and further developed by others), which posits that the quantifier forms a constituent with the corresponding nominal phrase. The nominal phrase undergoes A-movement out of this larger constituent, stranding the quantifier:

(50) *Quantifier stranding: A-movement analysis*

      a. *Passives*   b. *Clitic doubling*

          … DP … verb … [all [~~DP~~]] …   … clitic verb … [all [associate]] …
              └──── Move ────┘   └──── Move ────┘

Thus, I assume that the quantifier *vsički* 'all' initially combines with a nominal phrase, which may subsequently undergo A-movement to the preverbal position where it is pronounced as a clitic. (For the details of these derivations, see section 5 and, in particular, section 5.4 on the interaction between clitic doubling and the $\overline{\text{A}}$-movement in (49).)[28]

An anonymous reviewer observes that, while quantifier stranding may involve double expression of the definiteness marker, once on the quantifier and once on the moved nominal (e.g., (47b) and (47c)), it is spelled out just once in non-stranding contexts as (47a). In other words, we never find the order *[Q-DEF DP-DEF] where Q is the quantifier (e.g., *vsički-te knigi-te* 'all the books'). The unavailability of the *[Q-DEF DP-DEF] orders as legitimate surface structures, however, is fully consistent with a movement account of quantifier stranding, which, in fact, is independently supported by examples where the definite nominal and the definite quantifier do surface as a constituent. More specifically, assume that Q takes a definite DP complement and that the expression of the definiteness marker on Q is a reflex of raising of the DP, as suggested by Dimitrova-Vulchanova and Giusti (1995). Then, we do not expect to find double definiteness marking without movement of the DP complement. Dimitrova-Vulchanova and Giusti (1995) assume, in particular, that the definiteness marker on the quantifier Q is the morphophonological realization of definiteness

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[28]The "adverbial" approach to quantifier stranding is another major way of understanding the phenomenon. It treats the quantifier as an adjoined element that requires the constituent it adjoins to to contain a trace of movement (Kayne 1984, Ch. 4): [the children]$_i$ must [all] [~~the children~~$_i$ have gone to bed]. For concreteness, here I assume the stranding approach although further investigation might be required to determine its validity in the case of Bulgarian (see Dimitrova-Vulchanova and Giusti 1995 and Tsakali 2008). What is significant for present purposes, however, is that both the stranding and the adverbial approaches could be construed as involving A-movement.

agreement/concord triggered by movement of its DP complement through Spec,QP. This movement transforms the base structure (51a) into (51b):

(51) a. $[_{QP}$ Q DP[DEF] $]$ b. $[_{QP}$ DP[DEF] $[$ Q[DEF] ~~DP[DEF]~~ $]$ $]$

At this point, either the DP in Spec,QP or the container nominal phase can raise if attracted by a higher head, as they are equidistant to any such head. Movement of just the DP in Spec,QP produces the quantifier stranding patterns in (47) and (49); movement of the container nominal phrase, on the other hand, derives the following examples:

(52) a. Knigite   vsičkite bjaha pročeteni.
       the.books the.all   were   read
       'All the books were read.'

     b. Knigite   vsičkite se   pročetoha.
       the.books the.all   REFL read
       'All the books were read.'

     c. Knigite   vsičkite, Marija gi   pročete.
       the.books the.all   Maria 3.P.DO read
       'The books, Maria read them all.'

Thus, while there might be much that remains mysterious about quantifier stranding in Bulgarian and cross-linguistically, the unavailability of the *[Q-DEF DP-DEF] orders does not undermine the conclusion that clitic doubling patterns with A-movement with respect to the licensing of stranded quantifiers, especially in light of the existence of the [DP-DEF Q-DEF] orders. Such behavior is unexpected if the clitics were the reflex of an Agree relation between a probe and a goal.

4.3 Summary

The aim of this section was to diagnose whether the relation between the clitic and the associate in Bulgarian clitic doubling configurations is one of movement, or whether it could be characterized just as an Agree relation. It was determined that clitic doubling behaves like A-movement with respect to the expansion of the binding possibilities of the associate and the licensing of stranded quantifiers—the results are summarized in (53). I take the evidence presented in this section and in the Appendix as a whole to require A-movement as a component of the analysis of clitic doubling, which is developed next.[29]

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[29]Two other hypotheses can be rejected based on the locality conditions on clitic doubling. First, "clitic climbing" out of a clausal complement into the matrix clause (as in Italian, Spanish, Serbo-Croatian) is impossible in Bulgarian: (i); however, *wh*-movement and topicalization out of clausal complements is generally possible: (ii). The unavailability of clitic climbing of doubling clitics demonstrates that the relation between a doubling clitic and its associate is subject to different (stricter) locality conditions from those that constrain $\overline{\text{A}}$-movement—an expected result if clitic doubling involves clause-bounded A-movement.

(i)   * Az mu   iskam da dam knigata   na Ivan.   (ii)   Kakvo iskaš   da mu   dadeš na Ivan?
       I   3.S.M.IO want to give the.book to Ivan   what   you.want to 3.S.M.IO give   to Ivan
       'I want to give the book to Ivan.'   'What do you want to give to Ivan?'

Second, clitic doubling of only one of the conjuncts in a coordinate structure, as in (iii), is impossible. Therefore, the relation between the clitic and the associate cannot just involve (stipulated) coreference whereby the clitic and the associate

(53) *Results*

DIAGNOSTIC	CLITIC DOUBLING	A-MOVEMENT	AGREEMENT
affects binding	yes	yes	no
licenses Q-stranding	yes	yes	no

5 Analysis of clitic doubling

An analysis of clitic doubling in Bulgarian must capture the A-movement properties of the relation between the clitic and its associate. Assuming that verbal arguments are A-chains with one or more members (Chomsky 1986b; Chomsky 2001, p. 33), the clitic and its associate in a clitic doubling configuration must then constitute a single argument of the verb. The position of first Merge (the foot of the chain) determines interpretation with respect to θ-role assignment while the movement derived position (the head of the chain) determines interpretations involving scope, binding, and information structure. Further questions arise, however: if these two positions are related via movement, why is a single argument of the verb expressed more than once (both by the clitic and by the associate)? In addition, and related to this, how is the pronominal nature of the higher occurrence of the argument (the clitic) to be explained?

I assume that what gives rise to clitic doubling in Bulgarian is the A-movement of a nominal argument of the verb to a VP-external position (section 5.1). It is then the morphophonological component that determines the particular pronunciation of the resulting non-trivial movement chain: reduced pronunciation of the higher occurrence, and full pronunciation of the lower one—the details are made precise in sections 5.2 and 5.3. Thus, the analysis of true clitic doubling developed here treats the phenomenon as the result of an interaction between syntax and morphophonology (cf. Matushansky 2006; Kramer 2014; Nevins 2011). Its main ingredients are syntactic movement and complex head formation (affixation). Since A-movement is a crucial component of clitic doubling (cf. Sportiche 1996 and Anagnostopoulou 2003), sections 5.4 and 5.5 explore the relation between clitic doubling and other types of syntactic movement ($\overline{\text{A}}$-movement, head movement), as well as Object Shift, another phenomenon often claimed to involve A-movement. Finally, section 5.6 compares the present analysis to other treatments of clitic doubling.

5.1 Syntactic movement

I assume that nominal arguments of the verb are of category KP where K is a feature bundle containing (unvalued) Case- and (valued) ϕ-features (cf. Franks and Rudin 2005). In (54a), the external-argument introducing little v head contains unvalued ϕ-features and probes into its c-command

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simply refer to the same entity. This hypothesis could be rejected based on the coordination data, since coreference is not expected to be sensitive to the syntax of coordination and the ungrammatical examples in (iii) should be grammatical. If the clitic simply corefers, there is no reason why it should not be able to refer to an entity that one of the conjuncts also refers to. This fact, however, is predicted by the A-movement analysis of clitic doubling.
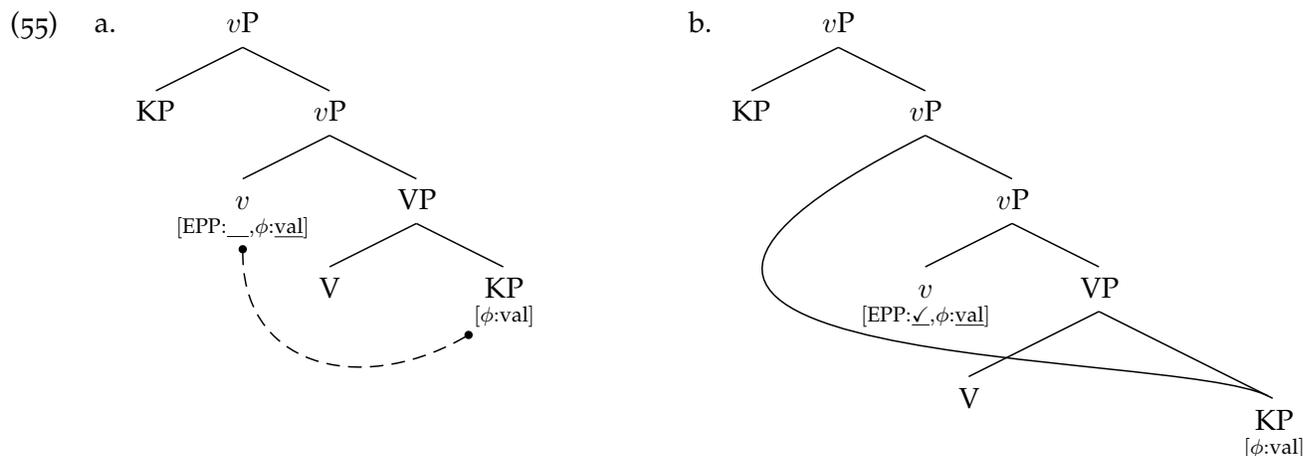
(iii) Vidjah gi/*go/*ja   Ivan i   Marija.
       I.saw 3.P.DO/3.S.M.DO/3.S.F.DO Ivan and Maria

       'I saw Ivan and Maria.'

While these locality-based diagnostics rule out $\overline{\text{A}}$-movement and coreference as the mechanisms behind true clitic doubling, in general, they cannot tease apart the movement and agreement analyses. To the extent that A-movement is parasitic on the successful establishment of an Agree relation (see the discussion in section 1 and footnote 1), the locality constraints on A-movement are expected to be a subset of those that agreement is subject to.

domain for a valued set of features of a matching type. It finds the verbal complement KP, which has valued ϕ-features, and they enter into an Agree relation. As a result, the ϕ-features of the probe are valued:

(54) a.

```
            vP
          /    \
        KP      vP
              /    \
            v       VP
      [EPP:__,φ:__]  /  \
                   V    KP
                       [φ:val]
```

b.

```
            vP
          /    \
        KP      vP
              /    \
            v       VP
      [EPP:__,φ:val] /  \
                   V    KP
                       [φ:val]
```
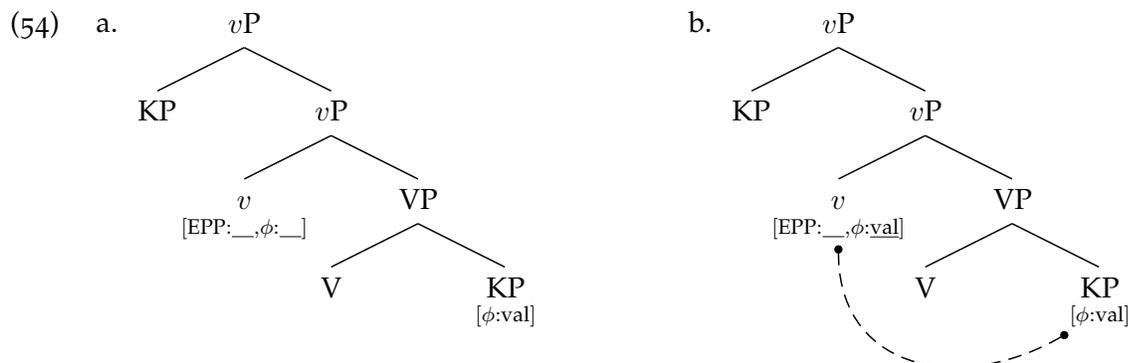
In addition, the little v head can optionally be endowed with an EPP-feature (occ(urrence) in Chomsky 2004, p. 24), which encodes the c-selection of a specifier which can potentially be targeted by movement. This feature triggers movement of the KP to the specifier of v creating the representation in (55b).[30,31] Following Chomsky 2001, p. 34–35, I assume that optional operations, such as the one that assigns an EPP-feature to v, can apply only if they have a semantic effect on the outcome. In this case, v can optionally be assigned an EPP-feature, since it has an effect on the information structural interpretation of the associate by triggering its movement to the VP-external Spec,vP (see section 1). In other words, the complex interaction of clitic doubling with specificity and topicality can be derived from independent principles governing the mapping of syntax to information structure (see Diesing 1992; Rizzi 1997; Neeleman and van de Koot 2008; Kechagias 2011; Neeleman and Vermeulen 2013) and no special marking on the moved constituents themselves seems necessary (Chomsky 2008, p. 151).

(55) a.

```
            vP
          /    \
        KP      vP
              /    \
            v       VP
      [EPP:__,φ:val] /  \
                   V    KP
                       [φ:val]
```

b.

```
            vP
          /    \
        KP      vP
                /    \
              vP
            /    \
          v       VP
   [EPP:✓,φ:val]  / \
                 V    KP
                     [φ:val]
```

---

[30] An alternative, suggested by Anagnostopoulou (2003), involves feature movement of the formal features of the in-situ argument. While I assume, along with Chomsky (2000, p. 119), that feature chains do not exist, the present analysis preserves the insight of Anagnostopoulou's (2003) account. An empirical argument against feature movement in the case of clitic doubling in Bulgarian comes from examples (41b) and (42b) in section 4.1, which demonstrate that the clitic is associated not just with the features of its associate but with the full internal structure of the associate.

[31] On the possibility of multiple A-specifiers, required by this analysis, see Ura (1996). The details of verb movement have been omitted in (55b) (but see section 5.4).

I also assume that the thematic requirements of v are satisfied prior to its morphosyntactic requirements. Therefore, the external argument KP is merged first as a specifier of v, receiving its θ-role in this position, while the object KP becomes the additional EPP specifier of v as a result of "tucking in" in the sense of Richards (2001). Alternative approaches that yield the same results are also viable—see Chomsky (1995, p. 358–359), for discussion.

Some predicates (e.g., psych and perception predicates) require the obligatory clitic doubling of their dative or accusative experiencers regardless of the information structural factors that appear to license it otherwise (for discussion, see Krapova and Cinque 2008). In such cases the verb bears the ϕ-features of the nominative argument or is 3.s in the absence of a nominative argument:

(56) a. Filmite   *(i)   haresaha   na Marija.
     the.movies 3.s.f.io they.pleased to Maria

     'Maria liked the movies.'

    b. Mnogo li *(te) e jad   tebe?
     much   Q 2.s.do is anger you

     'Are you very angry?'

The obligatory presence of a clitic coindexed with the experiencer argument of such predicates is ubiquitous across clitic doubling languages. In addition to Bulgarian (Krapova and Cinque 2008), it has been reported at least in Albanian (Kallulli 2000), Amharic (Kramer 2014), Greek (Anagnostopoulou 2003), Macedonian (Krapova and Cinque 2008), and Romanian (Dobrovie-Sorin 1994). According to the definition of clitic doubling assumed in this paper, such examples are genuine instances of true clitic doubling, as there is no reason to suppose the associate is not an argument.[32]

Given that in the present analysis clitic doubling results from A-movement of an argument to Spec,vP, it must be the case that psych and perception predicates obligatorily participate in experiencer raising derivations. In other words, these predicates involve obligatory introduction of an EPP-bearing little v which forces A-movement and subsequent clitic doubling of the experiencer argument. Since the presence of this EPP feature is obligatory with the predicates in question, it cannot encode any interpretive distinctions, e.g., in terms of information structure (Chomsky 2001, p. 34–35). This explains why true clitic doubling only has information structural consequences in cases when it is not required.[33] A deeper understanding of the connection between the obligatory presence of an EPP feature and psych and perception predicates cannot be pursued in the context of the present paper but one possibility will be mentioned. It is based on Anagnostopoulou's (2003) observation that clitic doubling (in Modern Greek) is obligatory whenever a lower argument undergoes A-movement across a higher one. This relies on Anagnostopoulou's (2003) claim that, since clitic doubling establishes an A-movement chain and only the head of an A-chain is visible for Agree, clitic doubling of an argument allows another, lower argument to interact with probes at or below the position of the doubling clitic. In this context, Anagnostopoulou (2003) and Kramer (2014) suggest that clitic doubling of a higher experiencer allows the lower argument to interact with a higher head. The agreement with the lower nominative argument found on the verb in (56) might provide independent evidence for such an interaction.

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[32]This terminology differs from the one espoused in Krapova and Cinque 2008, where the defining characteristic of clitic doubling is obligatoriness and insensitivity to information structural factors. Thus, for these authors (56) are instances of "clitic doubling" while the examples in which the presence of the clitic is not required are instances of CLRD (or CLLD).

[33]Compare this situation to Object Shift in Icelandic. When Object Shift is available, it correlates with specificity/non-specificity (or definiteness/indefiniteness). However, when Object Shift is blocked, an unshifted object is compatible with both a specific and a non-specific interpretation (or a definite and an indefinite interpretation).

The configurations discussed so far involve a transitive little v and a single internal argument of a verb. However, the account can be easily generalized to double object constructions—here I offer a sketch of what the analysis might look like pending further work on Bulgarian double object constructions. I assume that ditransitive verbs in Bulgarian select a phrase headed by a (low) Applicative Head (Appl) which introduces the indirect object (goal) as its specifier and the direct object (theme) as its complement (Pylkkänen 2002; see Slavkov 2008 on Bulgarian):[34]

(57) a.

```
              vP
            /    \
      KP_SUBJ     vP
                /    \
              v       VP
                    /    \
                  V       ApplP
                        /     \
                   KP_IO       Appl'
                             /     \
                         Appl       KP_DO
```

b.

```
              vP
            /    \
      KP_SUBJ     vP
                 /   \
                     vP
                    /   \
                        vP
                       /   \
                      v     VP
                          /    \
                        V       ApplP
                              /     \
                         KP_IO       Appl'
                                   /      \
                               Appl        KP_DO
```
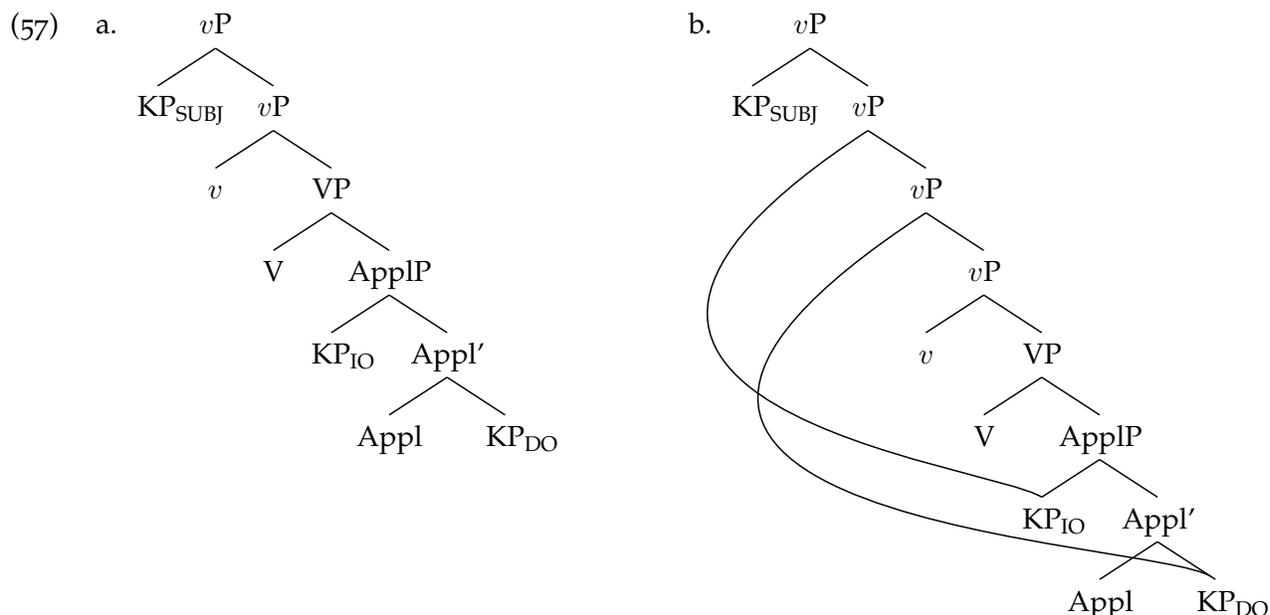
First, when both objects raise, as in (57b), I assume that they target specifiers of the same v head and their pre-movement order is preserved as a result of "tucking in" (if we take the surface order of the clitics to be indicative of the order of the underlying KPs). This is a case of a single probe interacting with multiple goals—a phenomenon extensively explored in the context of movement of more than one phrase to multiple specifiers of the same head, as in Bulgarian *wh*-movement, for instance (e.g., Bošković 1999). Such interactions have received various formal treatments in terms of, for example, Multiple Agree/Move (Ura 1996; Hiraiwa 2001, 2004; Nevins 2007) or Attract-All (Bošković 1999). For present purposes I will simply assume that ditransitive v can have a property which forces any goals within its c-command domain (subject to additional locality constraints, of course) to undergo movement into its specifier. Note, in addition, that, since both objects in these constructions check features against v simultaneously, Person-Case Constraint effects are expected to arise under the assumption that such constraints arise in "two arguments against one head" contexts (Anagnostopoulou 2003, 2005). As discussed in the Appendix, Bulgarian does exhibit the Strong PCC, lending further support to the proposal.

Second, each of the objects must also be able to move on its own, since clitic doubling does not have to involve both objects. When only the indirect object moves, v attracts the closest argument it c-commands. When only the direct object moves, the question arises of why the indirect object does not intervene and block this movement. This question can be answered in at least two ways that are consistent with the binding patterns in double-object constructions detailed in section 4.1—see Anagnostopoulou (2003, p. 166–167), and Preminger (2010), for discussion of the absence

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[34]Bulgarian patterns with low applicative languages with respect to Pylkkänen's diagnostics; the low applicative structure has also been adopted for double object constructions in other Balkan languages such as Romanian (Diaconescu and Rivero 2007) and Modern Greek (Kupula 2011).

of intervention of A-movement with certain kinds of ditransitives. First, a different base-structure could be involved where the direct object is, in fact, closer to the probe (Slavkov 2008). Second, the direct object could undergo movement to an intermediate Spec,ApplP (attracted by an EPP-feature which ensures successive A-movement) which places it in a position from which it can enter an Agree relation with v (see Doggett 2004, p. 19, for an outline). Determining the right way to treat double object constructions in Bulgarian and their interaction with clitic doubling awaits future work. The purpose of the present discussion is to show how the present analysis of clitic doubling can be extended to these constructions and to offer possible directions for further inquiry. I only consider transitive v with a single internal argument for the rest of the discussion.

5.2 Morphological merger

The output of syntax, i.e., the configuration created by A-movement, is interpreted by the post-syntactic component. I claim that clitic doubling involves the post-syntactic formation of a complex head that includes the v-V complex and the higher occurrence of the raised object in Spec,vP. This results in the pronunciation of a reduced version of the object as the clitic (i.e., only the Case- and ϕ-features of the object). It is this step in the derivation that gives rise to the multiple expression of a single argument and to the apparent head movement characteristics of clitic doubling that have been documented crosslinguistically (see Anagnostopoulou 2007, section 3.3.2.3, for an overview, and Chomsky 1995, p. 249, for discussion). The rest of this section details the mechanism responsible for this.

I assume that a complex head of the relevant kind is the output of an operation like Matushansky's (2006) m-merger, which adjoins a maximal projection to a head. This operation is part of Matushansky's proposed model, which rethinks the role and mechanics of head movement in syntax. Specifically, head movement is reduced to movement of a phrase to a specifier of some head, followed by m-merger of the head and the specifier. I follow Matushansky (2006) and Nevins (2011) in assuming that, since m-merger is part of the morphophonological component, the complex head that it produces is atomic with respect to further syntactic manipulation: it remains accessible to syntax as a whole (e.g., it can undergo further movement) but its internal structure is syntactically opaque and frozen (e.g., no excorporation is allowed). This reanalysis of head movement ensures that the effect of such movement is achieved without violating the Extension Condition (Chomsky 1995). According to Matushansky's (2006) proposal, m-merger applies to a head and a non-branching maximal projection in its specifier, in essence, re-bracketing two heads that are in specifier-head relation:

(58) *M-merger* (cf. Matushansky 2006)

   a. *Input*   b. *Output*

Clearly, the structural description of Matushansky's m-merger is not necessarily met in the configurations that arise as the result of A-movement of an object to Spec,vP in Bulgarian. In particular,

the displaced KP in (55b) could be a branching maximal projection. Thus, m-merger needs to be reformulated so that it can apply not just to non-branching maximal projections but to branching ones as well. Assuming Bare Phrase Structure (Chomsky 1995), I propose that m-merger adjoins labels:[35]

(59)   *M-merger* (revised version)
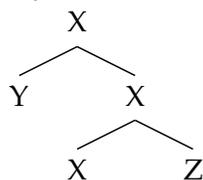
     a. *Input*   b. *Output*
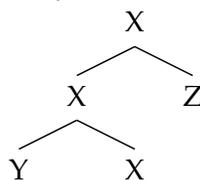
This formulation of m-merger allows the operation to apply in the context of non-branching specifiers, as intended in Matushansky (2006), as well as to branching specifiers—i.e., it is not constrained with respect to its input.[36] This is a welcome conclusion, since to restrict the input of m-merger to a particular kind of specifier (in the way Matushansky 2006 does) would be a stipulative. The output of m-merger, regardless of its input, is consistently a complex head containing the label of the specifier and the label it is adjoined to, as in (59b). Thus, when a branching projection undergoes m-merger, a reduced version of the branching projection—its label—is adjoined to the head:[37,38]
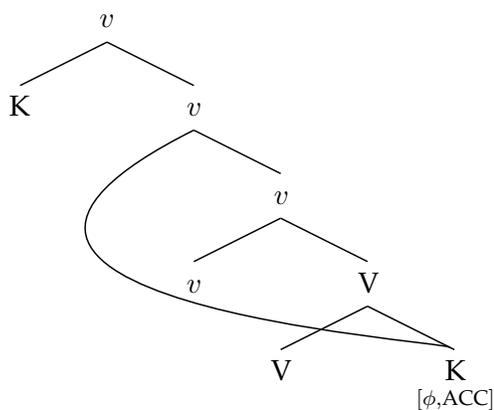
(60)   a. *Input*   b. *Output*

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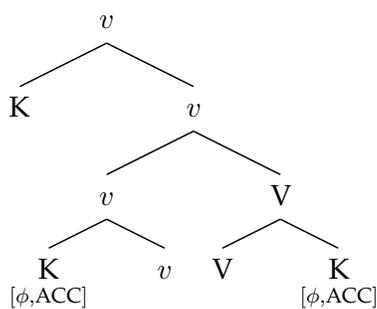
[35]Syntactic objects are either (i) lexical items, or (ii) sets K constructed from given syntactic objects α and β. The label of a lexical item is the lexical item itself; the label of a syntactic object constructed from α and β is the label of either α or β (Chomsky 2000, p. 133).

[36]Given this formulation of m-merger, the question arises of whether other instances of apparent head movement can be viewed as XP movement followed by the application of m-merger to the moved XP. For discussion of this issue, see section 5.4.

[37]An anonymous reviewer points out that, since m-merger reduces potentially branching phrases to their labels, a condition might be necessary that ensures the recoverability of the "lost" material. In clitic doubling configurations, this material is recoverable by virtue of its overt expression in the base θ-position by the fully pronounced associate. Thus, the recoverability constraint that restricts m-merger could be related to the general mechanism that regulates pronunciation of multiple occurrences of a constituent. These issues are explored in section 5.3 (see footnote 42 in particular.)

[38]The representation in (60b) does not contain information about the linear order of terminals, which may be determined later in the derivation or simultaneously with the application of m-merger. Nothing hinges on this choice for present purposes—see Harizanov (2011) for a recent discussion.

It is then the label K of the associate that is pronounced as the clitic in clitic doubling configurations in Bulgarian. To model this aspect of the mapping from syntax to phonology I assume a realizational piece-based theory such as Distributed Morphology (Halle and Marantz 1993, 1994 *et seq*). In this framework, morphology interprets syntax; i.e., phonological material is not present in the syntactic structure but is supplied post-syntactically by the insertion of Vocabulary Items (VIs) into terminal nodes. For a VI to be inserted into a terminal node, the identifying features of the VI must be a subset of the features comprising the terminal node. Since VIs can be underspecified in this way, it is possible for more than one VI to compete for insertion at a given terminal node. In cases of such competition, the most highly specified VI gets inserted (a form of the Elsewhere Principle). I assume the following kind of VIs to be associated with the spell-out of K in Bulgarian:

(61) a. /me/ $\leftrightarrow$ [1, sg, acc]/__ v
      b. /gi/ $\leftrightarrow$ [3, pl, acc]/__ v
      c. $\emptyset$ $\leftrightarrow$ [acc]
      d. /mi/ $\leftrightarrow$ [1, sg, dat]/__ v
      e. /im/ $\leftrightarrow$ [3, pl, dat]/__ v
      f. /na/ $\leftrightarrow$ [dat]

When the structure in (60b) undergoes vocabulary insertion, the K which is adjoined to v is spelled out as the clitic while the K in the branching maximal projection in the argument's θ-position receives the "elsewhere" spell-out as null (if accusative) or as *na* (if dative). This follows from the VIs above, as the clitics (61a, 61b, 61d, 61e) are more highly specified than the case markers on full nominal phrases (61c, 61f).

This step in the derivation is intended to explain not only the pronominal nature of the higher occurrence of the displaced argument but also how the clitic and the verb form a complex head that undergoes further (head) movement. With respect to the latter concern, recall that m-merger renders the internal structure of the derived head syntactically opaque while the head as a whole remains accessible to syntax. This is a desirable result in the context of Bulgarian clitics, since there is independent motivation for the claim that the derived complex head containing the clitic(s) and v-V syntactically atomic. For example, no prosodically independent material is able to intervene between a clitic (or a clitic cluster) and the verb:

(62) a. Včera   Mimi mu   go   dade.
          yesterday Mimi 3.s.m.io 3.s.m.do gave
          'Mimi gave it to him yesterday.'
      b. * Mimi mu   go   včera   dade.
          Mimi 3.s.m.io 3.s.m.do yesterday gave
      c. * Včera   mu   go   Mimi dade.
          yesterday 3.s.m.io 3.s.m.do Mimi gave

In addition, the complex head that is the output of m-merger in Bulgarian can undergo further head movement in questions and imperatives:

(63) a. *Yes/no question with the question particle* li *in C and V-to-C movement*[39]
          Dade li mu   Maria knigata?
          gave q 3.s.m.io Maria the.book

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[39]The question particle *li* intervenes between the verb and the object clitic in (63a). I assume that it is an enclitic element of category C whose placement is prosodically driven. Specifically, it inverts with the prosodic word to its right, which in (63a) happens to contain only the verb (see Rudin et al. 1999 and Franks 2006, among others).

        'Did Maria give him the book?'

  b.   Wh-*question with* wh-*movement to Spec,CP and V-to-C movement*

        Kakvo mu   dade Maria?
        What 3.s.m.io gave Maria

        'What did Maria give him?'

  c.   *Positive and negative imperatives with V-to-C movement*

        Donesi mi   go   bǎrzo!
        bring   1.s.io 3.s.m.do quickly

        'Bring it to me quickly!'

Finally, as noted by Matushansky (2006), it is quite possible that the operation described above is equivalent to (a sub-case of) Marantz's (1984; 1988) Morphological Merger:

(64)   *Morphological Merger* (Marantz 1988, p. 261)

     At any level of syntactic analysis (D-Structure, S-Structure, phonological structure), a relation between X and Y may be replaced by (expressed by) the affixation of the lexical head of X to the lexical head of Y.

This possibility is quite clear in the present context. In the analysis proposed above, the specifier-head relation between v and its argument introduced as the result of movement is traded for the formation of a complex head which contains v and the label of the argument, i.e., affixation in a certain sense. In addition, Marantz himself accounts for the distribution of head-adjacent clitics in terms of Morphological Merger in conjunction with the Mapping Principle (Marantz 1988, p. 263). The mechanism proposed here could then be seen as a particular implementation of Marantz's general idea, which preserves his insight into the nature of the mapping from syntactic to morphophonological structures.

5.3 Multiple spell-out

In the analysis presented here, the nominal argument first merges in its θ-position and then merges again as the specifier of v if attracted by an EPP-feature. Then, the higher occurrence of the argument is reduced to its K head (i.e., Case- and ϕ-features) by the application of m-merger, while the lower occurrence (which may be a null pronoun as discussed in footnote 13) is pronounced in full.[40] As a result, clitic doubling of the kind found in Bulgarian involves, descriptively speaking, spelling out both the head and the foot of a movement chain. This approach to clitic doubling bears a certain similarity to analyses of resumption in languages where the resumptive pronoun behaves as a trace of movement that receives phonetic realization (e.g., Engdahl 1985; Demirdache 1991; see Anagnostopoulou 2003, p. 211, for further discussion). Berent (1980), in fact, analyzes all pronominal clitics in Macedonian as phonetically realized traces.[41] This class of approaches to such doubling phenomena places the burden of explaining the phonological shape of the multiple occurrences of the same phrase (full vs. clitic) on the mechanism of spell-out. Thus, the decision about which occurrence gets pronounced in a reduced form, the head or the foot of the chain

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[40]The opposition between "full pronunciation" and "reduced pronunciation" concerns the phrase structural status of constituents and, intuitively, how much of them is subject to association with phonological material. The building of prosodic constituents and the assignment of intonational contours, however, operate on the output of operations like m-merger and are affected by various other factors. Thus, a fully pronounced occurrence of some constituent can be associated with distinct intonational and prosodic properties. I thank an anonymous reviewer for raising this issue.

[41]An anonymous reviewer points, in addition, to relevant discussion in Toman (1999).

(in doubling vs. resumption, respectively), is made post-syntactically, by the morphophonological component. This section discusses the conditions which bring about the multiple pronunciation of a single verbal argument.

In general, only one link of a movement chain is pronounced. Chomsky (1995) and Nunes (1999, 2004) suggest this is so because the phonological component requires a strict total order on any set of terminals and, thus, structures in which a single element both precedes and is preceded by another element simply cannot be linearized. However, there are cases when more than one link of a movement chain appears to be phonetically realized. Chomsky (1995, p. 337) suggests that in these cases the morphophonological component has rendered one or more occurrence of some constituent invisible to the linearization algorithm. Following this suggestion, Nunes (1999, 2004) attempts to account for the pronunciation of intermediate occurrences of *wh*-phrases in some varieties of German:

(65) a. Wen   glaubt Hans wen   Jakob gesehen hat?
          whom thinks Hans whom Jakob seen   has

          'Who does Hank think Jakob saw?'   German, Cologne area (McDaniel 1989, p. 569)

      b. Welchen Mann denkst du wen er kennt?
          which   man   think   you who he knows

          'Which man do you think he knows?'

                                          German, Lower Rhine area (Fanselow and Cavar 2001, p. 133)

For Nunes (1999, 2004) the intermediate *wh*-phrase in German is realized because it undergoes morphological restructuring with the embedded $C_{[-WH]}$, which converts the structure into a phonological word not subject internally to linearization:

(66) $[_{CP}$ *wh*-phrase $[\,[_C Q\,]$ … $[_{CP}$ $\boxed{\textit{wh}\text{-phrase} \,[\,[_C C_{[-WH]}\,]\,}}$ $[_{TP}$ … *wh*-phrase … $]\,]\,]\,]\,]\,]$

The linearization algorithm does not have access to the internal structure of the boxed complex head and eliminates only one of the remaining two occurrences of the *wh*-phrase (the lower one), allowing the intermediate occurrence to be phonetically realized.[42] This treatment makes the prediction that the additional occurrences that are spelled out must be parts of complex heads and, thus, heads themselves. In other words, the prediction is that a branching maximal projection will never double another branching maximal projection. This is the case in German:

(67) a. * Wessen Buch glaubst du wessen Buch Hans liest?
            whose   book think   you whose   book Hans reads

            'Whose book do you think Hans is reading?'   German (McDaniel 1986)

      b. * Welchen Mann glaubst Du welchen Mann sie liebt?
            which   man   believe you which   man   she loves

            'Which man do you believe that she loves?'   German (Fanselow and Mahajan 2000)

If clitic doubling is to be understood in a parallel way, the higher occurrence of a clitic-doubled associate must be rendered invisible to the linearization algorithm by morphological restructuring.

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[42] Linearizability imposes an upper bound on the number of occurrences of a constituent that can be pronounced. However, a lower bound is necessary in addition, so that information is not actually lost. Thus, the interpretation of movement chains by the morphophonological component and the concomitant non-pronunciation of movement occurrences must be subject to a recoverability constraint, which ensures that at least one occurrence is pronounced. This constraint could, perhaps, be assumed to also restrict m-merger, which involves partial non-pronunciation of movement occurrences, and to prevent its over-application (see footnote 37). For discussion of how to appropriately characterize such a constraint, see Nunes 2004 and Landau 2006, among others.

I propose that the relevant kind of morphological restructuring is the result of m-merger, which re-brackets a head and its specifier to create a complex new head.[43] The derived complex head is not subject internally to linearization. Thus, in the case of clitic doubling, the occurrence of the argument that occupies the base θ-position is phonologically realized, since it is the only occurrence visible to the linearization algorithm.

5.4 Clitic doubling and other movements

A full nominal phrase that co-occurs with a coindexed clitic does not always surface in an argument position, as in the examples discussed so far. The associate of the clitic in CLLD (e.g., (7a) and (7b) in section 1), quantifier stranding contexts (e.g., (49) in section 4.2), and *wh*-questions (e.g., (i) in footnote 18, section 3.4) appears in a fronted position. So does the associate in the following examples of these constructions. (All such examples are sensitive to islands and exhibit connectivity effects.)

(68) a. Šejnata az ja   nosih na răce.
          the.sled I 3.s.f.do carried on arms

          'The sled, I carried in my arms.'   (Bulgarian National Corpus)

      b. Želanijata mu gi   prenebregnaha vsičkite.
          the.wishes his 3.p.do they.ignored   the.all

          'They ignored all his wishes.'

      c. Če kogo ne go   pritiskat?
          but who   not 3.s.m.do they.pressure

          'But who don't they put pressure on?'   (Bulgarian National Corpus)

How are these sentences to be derived under the assumption that they involve an associate base-generated in argument position, which undergoes clitic doubling (i.e., A-movement and m-merger) and $\overline{\text{A}}$-movement to a clause-peripheral position (Agouraki 1992; Kayne 1994; Sportiche 1996; Cecchetto 2000)? First, recall that m-merger applies as soon as an EPP specifier of v is merged (see section 5.2 and Matushansky 2006, p. 95); this ensures that once an argument undergoes A-movement to Spec,vP, subsequent m-merger renders the resulting head atomic for further syntactic movement operations, leaving no trace of the constituent that occupied Spec,vP. Therefore, when a higher $\overline{\text{A}}$-probe F searches its c-command domain, it only finds the KP in the base θ-position. It is then that occurrence of the KP that undergoes $\overline{\text{A}}$-movement:

(69)   [$_{FP}$ KP [F … [$_{vP}$ K(P) [v] [$_{VP}$ V KP]]]]]
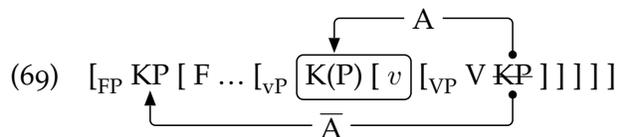
When linearization applies to (69), it has access to the KP occurrence in Spec,FP and to the one in the base θ-position, but not to the head of the A-movement chain, which has been subjected to m-merger. As a result, of the two KP occurrences visible to the linearization algorithm, only the c-commanding one (in Spec,FP) is pronounced, in accordance with the general principles governing morphophonological interpretation of movement chains in Bulgarian (cf. (66)). This derivation

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[43]Another option proposed and discussed by Nunes (2004) and Kandybowicz (2007), among others, is that the complex head is formed as the result of the Distributed Morphology operation fusion (Halle and Marantz 1993, p. 136; Halle and Marantz 1994, p. 277) which produces a single terminal node out of two sister terminal nodes prior to Vocabulary Insertion.

requires the formation of two parallel movement chains: a uniform A-chain and a uniform $\overline{\text{A}}$-chain, which share the same tail (see Cecchetto 2000 for a similar derivation of CLLD in Italian, and Chomsky 2008, p. 146–154, for arguments against non-uniform movement chains). Additionally, assuming phase-based spell-out, the lowest occurrence of KP must be visible to the $\overline{\text{A}}$-probe F, which means that either v or F is not a phase head in Bulgarian (see Vicente 2007, p. 111–115, on the accessibility of lower copies of movement to higher probes in general). If v is not a phase head, no phase boundary intervenes between the VP-internal KP occurrence and the higher $\overline{\text{A}}$-probe F. (In this case, the phasehood of F does not matter.) If, on the other hand, v is a phase head but F is not, F should still have access to the contents of the vP phase under the assumption that spell-out of a phase is delayed until the next phase head is merged (Chomsky 2001, p. 13–14, for discussion, see Anagnostopoulou 2003, p. 225 and Kandybowicz 2007, p. 107, 114, among others). Thus, the interaction between the VP-internal KP occurrence and the $\overline{\text{A}}$-probe F is precluded just in case both v and F are phase heads. Finally, some environments (such as questions, (63) in section 5.2) involve head movement of the verb which brings the clitic along. Given the present analysis, this is expected, since m-merger has already applied at the point when head movement is triggered by a higher probe (C or T) and the K is already part of the complex head that is attracted by the probe.[44]

An anonymous reviewer asks whether other instances of apparent head movement can be re-analyzed as XP movement followed by m-merger, given that no constraints have been imposed on the input of m-merger and the operation can reduce a branching XP to its label X. For example, is there a legitimate derivation of V-to-v movement as XP movement of the whole VP to Spec,vP followed by m-merger which reduces the VP to just V? One possibility is that, as dictated by anti-locality (Abels 2003, among others), such a derivation is impossible because the movement of a complement of a head to the head's specifier is "too local".[45] Therefore, V-to-v movement must be an instance of true head movement. On the other hand, an XP that skips at least one specifier will be able to move unproblematically in its entirety, with possible m-merger reducing it to X in its derived position. It might be hypothesized, then, that true head movement only applies if phrasal movement (followed by m-merger) is impossible for some reason, such as anti-locality. This echoes Pesetsky and Torrego's (2001) conclusion that head movement is possible where phrasal move-ment is not, and vice versa (see also Matushansky 2006, p. 74). As to why phrasal movement is, in a sense, the default, see for example Roberts (2010), where pied-piping is enforced by the A-over-A principle, which requires any operation targeting A to target the maximal phrase of category A.

According to this view, clitic doubling is not subject to the Head Movement Constraint because it involves phrasal movement that crosses more than one specifier in accordance with the anti-locality constraint. On the other hand, true head movement only applies when anti-locality pro-hibits phrasal movement: such movement, therefore, necessarily targets the next c-commanding head up. Consequently, the Head Movement Constraint is a side effect of the complementarity between XP and X movement (and its dependence on anti-locality). In conjunction with a ban on excorporation, this predicts that all apparent violations of the Head Movement Constraint (so-called "long head movement") involve not true head movement but phrasal movement followed by m-merger. Exploring the empirical consequences of this conjecture and whether true and apparent head movement are subject to different locality conditions is left for future work.

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[44]It is possible to construct an alternative analysis which assumes that the A-movement which yields clitic-doubling feeds subsequent $\overline{\text{A}}$-movement whereby a non-uniform movement chain is formed. However, such an analysis requires counter-cyclic application of m-merger and head movement within a phase under the assumption that the two operations belong to distinct components of grammar.
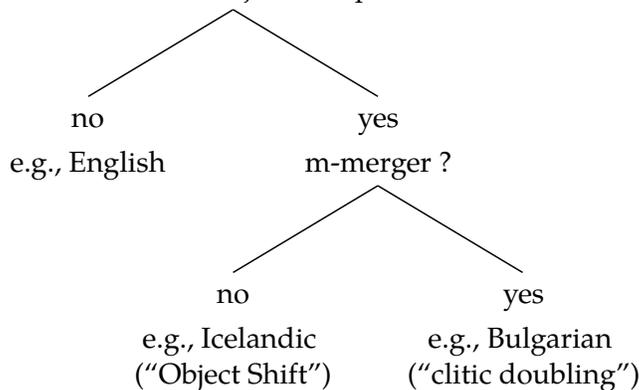
[45]I thank the anonymous reviewer for this suggestion and many relevant observations.

5.5 Clitic doubling vs. Object Shift

Syntactic accounts of Object Shift in the Germanic languages assume that Object Shift involves the A-movement of an internal argument to a VP-external position (e.g., Holmberg 1986; Chomsky 2001). The assumption that clitic doubling, as advocated in the analysis presented here, involves A-movement to Spec,vP might explain a number of similarities between the interpretive consequences of the two phenomena, which have to do with binding and the specificity/definiteness of the affected nominal phrase (Diesing 1992). Such similarities have motivated explicit attempts to unify the syntax of clitic doubling with that of Object Shift (e.g., Sportiche 1996; Alexiadou and Anagnostopoulou 1998; Suñer 2000).[46]

The present analysis decomposes clitic doubling of the Bulgarian kind into the syntax of A-movement and the morphophonology of complex head formation. Pursuing the parallel between the two phenomena further, assume that Object Shift involves the same type of syntactic movement as clitic doubling (Kramer 2014; Nevins 2011). Such decomposition of clitic doubling, then, locates the difference between Object Shift languages and clitic doubling languages in the morphophonology: in the former, `m-merger` does not apply. Thus, it appears that there are two interacting parameters: (i) the assignment of an EPP-feature to v which triggers A-movement of objects, and (ii) the application of `m-merger` to EPP specifiers of v. The interaction of these two parameters slices the typological space as follows:

(70)   A-movement of objects to Spec,vP ?

$$
\begin{array}{cc}
\text{no} & \text{yes} \\
\text{e.g., English} & \text{m-merger ?} \\
& \begin{array}{cc}
\text{no} & \text{yes} \\
\text{e.g., Icelandic} & \text{e.g., Bulgarian} \\
\text{(“Object Shift”)} & \text{(“clitic doubling”)}
\end{array}
\end{array}
$$

Under this view, the difference between clitic doubling languages and Object Shift languages has to do with morphophonology, as pointed out earlier. The difference between non-Object Shift languages like English (assuming it does not exhibit Object Shift) and Object Shift languages has to do with the assignment of an EPP-feature to v (which triggers A-movement of the relevant type; see Chomsky 2001).[47]

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[46] An anonymous reviewer points out that the same issues may arise in connection not just with Object Shift but with object scrambling more generally.

[47] A familiar area of variation with respect to Object Shift in the Germanic languages has to do with the nature of the nominal phrases that undergo Object Shift (see Thráinsson 2001 for an overview). Icelandic is usually considered to be the only modern Germanic language which exhibits Object Shift with both pronouns and full nominal phrases. On the other hand, the Mainland Scandinavian languages (Danish, Norwegian, Swedish) do not permit Object Shift with full nominal phrases. Interestingly, a comparison between the behavior of cliticization in Bulgarian and French reveals that this kind of variation is not limited to the "Object Shift" languages in (70) but extends to the "clitic doubling" languages as well. French clitics undergo `m-merger` and become part of a complex head containing both them and the verb (Matushansky 2006, p. 84). Yet, French has been argued to exhibit clitic doubling of the Bulgarian kind only with pronouns but not with full nominal phrases (Kayne 2000, p. 164–165, see Anagnostopoulou 2007, p. 523, for an overview). This fact could be explained if A-movement of the relevant type in French does not affect full nominal phrases

Yet, there are certain obstacles to the complete analytical assimilation of the two phenomena.[48] First, recall that in a double object construction in Bulgarian, either of the arguments can be clitic doubled and, in particular, an object can be clitic doubled across an intervening, hierarchically higher object (see section 5.1). On the other hand, Object Shift cannot raise a lower argument across a higher one (Collins and Thráinsson 1996). Thus, the application of m-merger cannot be the only relevant difference between the Object Shift and the clitic doubling languages, and any attempt to unify the syntax of Object Shift and clitic doubling must account for such empirical differences.

Second, the analysis of clitic doubling as the combination of A-movement and m-merger with a functional head allows a certain flexibility with respect to what the relevant functional head might be—a desirable property given the existence of clitic doubling of non-objects. In particular, if clitic doubling of objects involves m-merger with v, the present analysis can be extended to clitic doubling of subjects and possessors by positing m-merger with different functional heads (e.g., T and D) with no modifications to other aspects of the analysis (see section 5.6 for further discussion). Tying clitic doubling more generally to Object Shift, on the other hand, would preclude extension of the analysis to the phenomenon as it is instantiated across distinct syntactic domains.

5.6   A comparison with two alternatives

Historically, the complementarity between clitics and coindexed full nominal phrases in languages without clitic-doubling has been taken as a compelling argument for movement of the clitic from an argument position to its surface position. On the other hand, the base generation of the clitics in their non-argument surface position has seemed more suitable for clitic doubling languages, since the doubled associate is the one that occupies an argument position which, therefore, cannot be the source of the clitic. The present analysis belongs to a strand of research initiated by Sportiche (1996), which attempts to combine the movement and base-generation approaches to cliticization. According to Sportiche (1996), clitics are heads of phrases (ClP) in the extended projection of the verb; an XP associate in argument position moves to Spec,ClP and enters into a spec-head agreement relation with the clitic. This XP-movement can be either covert or overt, resulting in clitic doubling or CLLD, respectively. In an attempt to unify the syntax of object shift/scrambling and clitic doubling, Sportiche (1996) further assumes that the clitic head and the moving XP can be either covert or overt: object shift/scrambling is overt movement of an overt XP to the specifier of a null clitic head while clitic doubling is covert movement of an overt XP to the specifier of an overt clitic head.

A major difference between Sportiche's analysis and the one developed here is that the former attributes little to morphophonology in its account of the behavior of clitics, relying exclusively on syntactic mechanisms and, in particular, the distinction between overt and covert syntactic movement. In the present analysis, this distinction is not one of derivational timing and, thus, overt and covert movement do not differ in terms of syntax—instead, the difference lies in the interpretation of movement chains by the morphophonological component. More specifically, the present analysis relies on the m-merger operation whose application explains two properties of clitic doubling simultaneously: (i) the presence of a clitic (i.e., the multiple spell-out of a moved object), and (ii) the formation of a complex head containing the clitic and the verb. Thus, no additional mechanisms are required to account for the prosodic and syntactic atomicity of the complex heads that contain

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but only pronouns. Thus, the difference between Bulgarian and French is in the kind of nominal phrases attracted to v—the same area of crosslinguistic variation observed among the Scandinavian languages. Similar observations about the crosslinguistic distribution of clitic doubling and object shift are independently made by (Anagnostopoulou, 2003, p. 163–164); see also Anagnostopoulou 2012, p. 25–27 for actual examples from various relevant languages.

[48]I thank an anonymous reviewer for this observation.

clitics—a central property of cliticization. Furthermore, both A-movement and m-merger of an object to a VP-external position, the two crucial ingredients of the present analysis, are independently motivated operations of the syntactic and morphophonological components of grammar, respectively. As a result, there is no need to resort to any special mechanisms or properties of phrase structure specific to clitic doubling.

Another difference between the present set of assumptions and Sportiche's (1996) is that nothing essential hinges on the specific syntactic structure that gives rise to doubling. In particular, as long as there is an argument KP and a head that attracts this KP and triggers m-merger, the present analysis predicts the emergence of clitic doubling. In the case study presented here, the head in question happens to be little v but it might conceivably be another functional head, such as D, T, or C, for instance. In fact, D is a particularly likely candidate in Bulgarian, since the language exhibits clitic doubling of DP-internal possessors where the clitic surfaces adjacent to the definiteness marker, presumably the spell-out of a D head:

(71) nova-ta mu   kăšta na učitelja
       new-the 3.s.m.DAT house to the.teacher
       'the new house of the teacher'

As pointed out in section 5.5, the flexibility afforded by the present analysis is a desirable property, as it would allow for an understanding of different types of clitic doubling in terms of the same syntactic and morphophonological mechanisms simply applying in different domains. On the other hand, Sportiche's (1996) analysis crucially relies on a set of assumptions about clausal structure and the functional heads in the extended verbal projection.[49] In such a framework, any attempt to unify the treatment of doubling phenomena across different syntactic domains will require the postulation of phrase structural parallels across the domains (in addition to the application of the same operations)—see Kallulli and Tasmowski (2008, p. 8–9), for a similar point.

Finally, related to the reliance of the present analysis on just A-movement and m-merger are the restrictive typological predictions that it makes. As discussed in section 5.5, only two parameters might be enough to describe some of the major differences between Object Shift and clitic doubling. A system of three independent binary parameters such as Sportiche's (1996) is certainly equipped to handle much of the observed variation but, perhaps, risks predicting a larger variety of language types, at least some of which might pose learnability issues (e.g., overt movement of covert phrases).[50]

Another type of analysis has often been put forward to account for various kinds of doubling phenomena. It claims that what appear to be multiple occurrences of a single constituent on the surface actually start out as one larger constituent containing all of the visible occurrences (e.g., Kayne 1994; Uriagereka 1995; Torrego 1998; Papangeli 2000; Nevins 2011). According to one interpretation of this type of approach to clitic doubling, the clitic is a K head that forms a constituent with its DP associate and undergoes movement to its verbal host, stranding the rest of this constituent, which appears as the associate (for a specific implementation in the context of Bulgarian, see Franks and Rudin 2005).

(72) … K V … [_KP K [_DP …]] …
            └── Move ──┘

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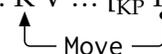
[49] An independent objection to the representational assumptions of Sportiche's (1996) analysis voiced in Matushansky (2006, p. 84), is that the postulated clitic heads (i) are part of the extended verbal projection but have nonverbal semantics, and (ii) are morphosyntactically and phonologically very similar to nominals.

[50] In addition to the three parameters, Sportiche's (1996) analysis requires some ancillary assumptions: (i) relaxation of the Mirror Principle, (ii) relaxation of the Head Movement Constraint, (iii) lowering of clitics in certain circumstances.

This analysis is clearly quite similar to the stranding analysis of quantifier stranding discussed in section 4.2, according to which the quantifier and its associate form a constituent which is broken up by movement. While the stranding approach to cliticization and clitic doubling might be adequate for Romance, it is unclear that it is empirically supported in Bulgarian. The specific empirical issue that arises in Bulgarian is that the K head which is spelled out as the clitic when adjoined to the verb is, in fact, spelled out twice. This is most clearly seen in the context of the dative *na* K head where K receives double expression, once as the clitic and once as *na*:

(73) Marija mu   izprati pismo na nego.
      Maria 3.s.m.io sent   letter to him
      'Maria sent a letter to him.'

Therefore, it cannot be maintained that the clitic has been separated from some constituent via movement.[51] Additional questions arise about the syntactic mechanism behind this kind of stranding. For example, it is unclear how the A-movement properties of clitic doubling would be accounted for, since those require the clitic to form a chain with the stranded associate and not just with itself. Relatedly, if the clitic is simply a K head, it remains mysterious why clitic doubling would create binding violations as in examples (41b) and (42b)—it was established in section 4.1 that such examples provide particularly strong evidence that the clitic is underlyingly associated with the complete internal structure of its associate. Furthermore, an explanation is necessary of how a head (the clitic) in (72) can move out of a phrase (that it is adjoined to or the head of)—is this the result of head movement, phrasal movement, or some hybrid type of movement? As pointed out by an anonymous reviewer, this issue is resolved in Franks and Rudin (2005) by adopting the base structure in (72) and assuming that the DP complement of the clitic K vacates the KP first (although it is unclear where the DP moves to). Only then, is the clitic, now a non-branching K/KP, free to undergo head movement to its verbal host. However, such an analysis faces a novel difficulty: why does the DP move in clitic doubling configurations rather than the KP that contains it? More generally, according to the stranding approach, what undergoes movement is a subpart of the nominal phrase containing the clitic and the associate. But what prevents movement of the whole nominal phrase constituent; i.e., why is pied-piping not an option?[52]

6   Concluding remarks

This paper has investigated the relation between the clitic and its full nominal phrase associate in clitic doubling configurations in Bulgarian, a language that exhibits true clitic doubling (section 3). Evidence was provided for treating this relation as an instance of A-movement (section 4) whereby an verbal complement raises to a VP-external position (section 5.1). This movement creates two occurrences of the raised object and it is left to the morphophonological component to determine their pronunciation. Thus, multiple spell-out of the raised object, once in its base θ-position and once in Spec,vP (as the clitic), is the result of interactions between the syntactic and the morphophonological components. Clitic doubling was claimed to arise in languages where

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[51] An anonymous reviewer points out that this empirical fact can be handled successfully by more recent implementations of the stranding approach to clitic doubling (e.g., Nevins 2011; see Roberts 2010 for discussion). In particular, the clitic K would be base-generated either as adjoined to a KP forming a larger KP or as a head of a KP with another KP as its complement: [$_{KP}$ K [$_{KP}$ K DP]]. Consequently, KP-internal agreement/concord would ensure the two K heads match in Case (and ϕ) features, which results in the double expression of case after movement of the higher K in examples like (73).

[52] See Franks and Rudin 2005 and Nevins 2011 for discussion of this issue; on the shortcomings of a stranding analysis in the context of Amharic, see Kramer 2014.

a morphological merger operation reduces the higher occurrence of the object to its Case- and ϕ-features (i.e., the clitic) giving rise to the expression of the same element in multiple structural positions (sections 5.2 and 5.3). According to the proposed analysis, clitic doubling is an interface phenomenon which emerges as the result of the interaction between A-movement and a certain kind of complex head formation, two independently motivated mechanisms of the syntactic and morphophonological components of grammar, respectively. The analysis captures, without recourse to any additional mechanisms, both the A-movement properties of clitic doubling and the bound-morpheme properties of the clitic. It should be noted that this analysis is only intended to be valid in languages where clitic doubling exhibits the set of properties identified in Bulgarian. It is possible, and highly likely, in fact, that crosslinguistic instances of what is usually termed clitic doubling are the result of quite disparate underlying syntactic and morphophonological mechanisms (potentially even within a single language), so that "clitic doubling" is nothing more than a descriptive umbrella term. The goal of this paper was to explore one of the ways in which true clitic doubling, a particular instance of doubling in general, may come about.

The two parametric options whose interaction gives rise to true clitic doubling are: the presence of an EPP-feature on v (triggering A-movement in the syntax) and the option for m-merger to apply to the raised object adjoining its label to v (i.e., affixing it in the morphology). Section 5.5 discussed how the interaction between these two parameters can explain certain similarities and differences between clitic doubling languages and Object Shift languages. Furthermore, if the application of m-merger is taken to depend on some property of v, it might be expected that other heads can be characterized by the same property and cause clitic doubling in other syntactic domains—an area future research could explore. In Bulgarian, for example, D might be involved in clitic doubling of possessors within nominal phrases, as seen in 5.6. The hypothesis that T can also be endowed with the m-merger triggering property could be tested in languages which exhibit clitic doubling of subjects: some Northern Italian dialects (Brandi and Cordin 1989; Suñer 1992; Poletto 2000), Rhaeto-Romance (Haiman and Benincà 1992), and Basque (Arregi and Nevins 2008; Preminger 2009); or, more generally, in consistently null-subject languages. Similarly, in addition to languages with partial *wh*-movement, m-merger in the domain of C could be investigated in the context of certain instances of *wh*-expletives. Future work along these lines could reveal the extent to which these, or any other phenomena, can be understood in terms of the mechanism that was argued to give rise to clitic doubling in Bulgarian.

In addition, relating A-movement and m-merger in the way outlined above could allow for an understanding of the diachronic path that takes a language from a stage featuring scrambling of objects through a later stage featuring (true) clitic doubling to a still later stage featuring object agreement. Consider the possibility that, even in the history of Bulgarian, object shift/scrambling was independent of complex head formation of the kind found in the present-day language. Based on data from 10–19 c. Bulgarian, Pancheva (2005, p. 148) shows that movement of clitic pronouns to the left of the verb did not need to be followed by the formation of a complex head with the verb. Evidence for this claim involves material intervening between the clitics and the verb such as various XPs or adverbials (p. 133–134):

(74) Počto mi   trudy   daeši?
      why   1.s.DAT hardship give

      'Why are you giving me hardship?'   Bulgarian, 10th century (EJ[53])

Examples like these could be seen as involving movement of the clitic, which at this stage was a true

pronominal argument of the verb and not the result of `m-merger`, and failure of `m-merger` to apply (see the discussion in Pancheva 2005).[54] Thus, treating the syntactic movement of objects as separate from `m-merger` may allow for an understanding of the transition from object shift/scrambling to cliticization and true clitic doubling (see Matushansky 2006, p. 85–86, for a similar point in the context of Classical French). Finally, under the present analysis the clitic is a K head with interpretable content (ϕ-features) which forms a prosodic word with the verb. Agreement markers, on the other hand, are the phonetic realization of uninterpretable, and thus semantically inert, ϕ-features on the verb. Therefore, echoing Bresnan and Mchombo's (1987) and Rezac's (2010) conclusions, the final step in the diachronic path from clitic doubling to agreement appears to involve the loss of the interpretable content of the clitic. What is, at one point, analyzed as multiple pronunciation of some constituent later becomes the redundant expression of features of some constituent on another one.

A Appendix: The morphosyntactic status of clitics

The two types of analysis of true clitic doubling considered in this paper (see sections 1 and 4) attribute different properties to the clitics and these different properties should be detectable. According to the agreement analysis, the clitics are the phonological reflex of the valuation of uninterpretable ϕ-features on a functional head via an `Agree` relation. According to the multiple spell-out analysis, on the other hand, the clitics are (pro)nominal elements (e.g., of category D or K) and, as such, are endowed with interpretable ϕ-features of their own. This difference between agreement markers and (pro)nominal elements has several consequences. The aspects of the behavior of clitics explored here include their feature content and sensitivity to the feature content of nearby elements, certain co-occurrence restrictions, and behavior in coordination. While at least some of these diagnostics prove inconclusive in the context of Bulgarian, the results presented here are generally highly suggestive that object clitics are not agreement markers.

A.1 Feature content

The form of the object clitics in Bulgarian varies with the person, number, and gender of their associate (ϕ-features) and the status of the associate as a direct or indirect object—see the paradigm in (5). This state of affairs is consistent with viewing the clitics as pronominal elements which are endowed with ϕ-features and are assigned Case in the course of the derivation but it is also consistent with the clitics being the reflex of an `Agree` relation. Distinct direct and indirect object agreement marking is observed, for example, in Georgian (Harris 1981, p. 29).

A.2 Tense (in)variance

Nevins (2011) notes that if the clitics are the phonological realization of uninterpretable ϕ-features on functional heads, they are expected to be sensitive to the overall featural composition of the relevant head, i.e., to any other features of that head (see also Baker 1996, p. 31). For a clitic which spells out uninterpretable ϕ-features on a T head such sensitivity could, for example, amount to allomorphic variation triggered by tense, which is presumably encoded by another feature on T—see (75a). Pronouns, on the other hand, being bundles of interpretable features with a particular syntactic

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[54]Note that true clitic doubling with full nominal phrases is not encountered until much later 17 c. texts which is expected if the clitics are arguments (Pancheva 2005, p. 121).

category, are claimed not to be expected to show such allomorphic sensitivity—see (75b).[55] Thus, if the clitics show allomorphy dependent on tense, aspect, mood, etc., it could be concluded that they are the reflex of Agree (see Kramer 2014, for an application of this diagnostic in the context of Amharic).

(75) a.
```
        TP
       /  \
      T    VP
 [+PAST,uφ]
```
b.
```
           TP
          /  \
         T    VP
        /  \
       T   D/K
   [+PAST]  [iφ]
```

To illustrate the usefulness of this diagnostic, consider subject agreement in English, which is null in the past tense but non-null in non-past (third person singular). According to this diagnostic, subject agreement in English cannot be pronominal in nature because it varies with tense. Note that this diagnostic is informative only if the putative clitic/agreement marker does vary with tense in which case it must be concluded that it spells out the ϕ-features that coexist with other features (e.g., tense) on the same functional head. In contrast to agreement markers, pronouns are claimed to be tense-invariant. The examples below show that object clitics in Bulgarian do not vary with tense while subject agreement does (neither do they vary with aspect). Therefore, this diagnostic does not prove informative with respect to the status of the clitic as a pronoun or a reflex of Agree.

(76) a. viždam   go
        see.1.s.PRES 3.s.m.DO

    b. viždaš   go
        see.2s.PRES 3.s.m.DO

    c. vižda   go
        see.3.s.PRES 3.s.m.DO

    d. viždah   go
        see.1.s.PAST 3.s.m.DO

    e. viždaše   go
        see.2.s.PAST 3.s.m.DO

    f. viždaše   go
        see.3.s.PAST 3.s.m.DO

A.3 Person complementarity effects

The Person-Case Constraint (PCC) is a co-occurrence restriction on combinations of phonologically weak arguments of ditransitive verbs attested in a wide range of genetically unrelated languages. Two versions of the constraint have been recognized:

(77) *The Person-Case Constraint* (Bonet 1991, p. 181–182)

   In a combination of a direct object and an indirect object,
   a. *Strong*: the direct object has to be third person.
   b. *Weak*: if there is a third person, it has to be the direct object.

Nevins (2011) argues that the presence of PCC effects in a language indicates that the elements involved are the reflexes of an Agree relation. He observes that PCC effects are never found with tense-sensitive person markers in Romance, Greek, Kashmiri, Albanian, Mohawk, Nahuatl, Southern Tiwa, Kambera, and Warlpiri. All these languages exhibit PCC effects banning third person indirect object markers from occurring together with first person direct object markers and in none of them do the markers vary with tense. This finding would be unsurprising if it is assumed that

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[55]This conclusion only seems to follow under the additional assumption that pronominal elements cannot show contextual allomorphy sensitive to the features of another (adjacent) head.

(i) tense-sensitive markers must be the result of `Agree` and (ii) the PCC only affects pronominal elements.[56]

Bulgarian object clitics are affected by the PCC (see also the discussion in section 5.1). First and second person direct object clitics do not co-occur with indirect object clitics:

(78) a. * Ivan im/mu   ni/te   preporăča.
         Ivan 3.P.IO/3.S.M.IO 1.P.DO/2.S.DO recommended

         'Ivan recommended us/you to them/him.'

     b. * Marija vi   ni   preporăča.
         Maria 2.P.IO 1.P.DO recommended

         'Maria recommended us to you.'

     c. * Toj mi   te   preporăča.
         He 1.S.IO 2.S.DO recommended

         'He recommended you to me.'

On the other hand, third person direct object clitics can co-occur with first, second, and third person indirect object clitics:

(79) a. Ivan mi   go   predstavi.
         Ivan 1.S.IO 3.S.M.DO introduced

         'Ivan introduced him to me.'

     b. Marija vi   ja   preporăča.
         Maria 2.P.IO 3.S.F.DO recommended

         'Maria recommended her to you.'

     c. Az im   gi   prodadoh.
         I   3.P.IO 3.P.DO sold

         'I sold them to them.'

These co-occurence patterns suggest that the direct object clitic has to be third person. In other words, the possible combinations of object clitics in Bulgarian are constrained by the strong version of the PCC.

These facts, in conjunction with the assumptions above, would lead to the conclusion that the Bulgarian object clitics are pronouns and not agreement. While this conclusion is only as accurate as the claim that the PCC only affects pronominal elements, it is highly suggestive that the Bulgarian clitics are not agreement markers. Note that Nevins' (2011) investigation yields no languages in which the PCC affects more than just pronominal elements.

Acknowledgements

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[56]Note that Nevins (2011) reanalyzes the object agreement markers in these languages as pronominal elements, contrary to previous analyses (e.g., Baker 2008, p. 98–99). I thank an anonymous reviewer for this clarification.

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