Transparency of inflectionless modifiers for Bulgarian definite marker placement

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ABSTRACT

The current work offers an analysis of definite marker placement in Bulgarian, deriving it through postsyntactic movement of D to a head bearing nominal features, with locality defined in terms of feature-relativized closest c-command. In addition to capturing previous observations about the distribution of the definite marker, the analysis is supported by novel evidence from exceptionally inflectionless modifiers in the language. The account is in line with a more general formulation of postsyntactic movement in terms of c-command, and highlights the relevance of exceptionally inflectionless elements to morphosyntactic theory.

KEYWORDS definite · locality · inflectionless · agreement

1 INTRODUCTION

Placement of the definite marker (henceforth D[DEF]) in Bulgarian has played a substantial role in the theoretical literature on affixation (Sadock 1991, Halpern 1995, Franks 2001, Embick & Noyer 2001, Dost & Gribanova 2006, Koev 2011, Spencer & Luís 2012, Harizanov & Gribanova 2015, Gribanova & Harizanov 2017, Harizanov 2018, Rudin 2018, Adamson 2019, see Franks 2021 for an overview). The current work contributes to our understanding of D[DEF] affixation through a novel investigation of modifiers that exceptionally bear no inflectional morphology (henceforth 'exceptionally inflectionless' or 'EI' modifiers) (Halpern 1995, Spencer & Luís 2012, Adamson 2019, Georgieva To appear), such as the modifier *erbap* 'skillful' in (1), which allows the definite marker to 'skip' over it to be placed on the noun, unlike other modifiers, which do not permit skipping (2). As indicated, not all speakers accept (1), though the current work focuses on those who do (see Section 4 and Adamson 2019 for discussion of the alternative grammar for those who do not).

(1) %erbap žena-ta
    skillful woman-DEF
    'the skillful woman'

(2) interesni-jat   čovek /
    interesting.M.SG-DEF person /
    *interesen   čovek-at
     interesting.M.SG person-DEF
    'the interesting person'

This work provides a principled account of D[DEF] placement, according to which D[DEF] is moved postsyntactically in a way that i) is defined locally by closest c-command and ii) is relativized to nominal features (gender/number). If correct, this reduces D[DEF] placement to the family of phenomena captured by structural locality (defined by c-command) and feature relativization (Chomsky 1995, Béjar & Rezac 2009 among others), and is line with the idea that postsyntactic lowering can more generally be defined in terms of c-command (cf. Harizanov & Gribanova 2018, 485). Further, this work demonstrates the relevance of exceptional inflectionlessness to morphosyntactic theory.

The rest of the paper is organized as follows. Section 2 offers background on D[DEF] distribution and outlines previous accounts. Section 3 investigates EI modifiers and demonstrates that they are indeed (phrasal) modifiers. Section 4 provides an analysis both of D[DEF] placement and

inflectionlessness, and shows how the two interact in ways that are predicted. Section 5 concludes.

2 BACKGROUND ON BULGARIAN D[DEF] PLACEMENT

Accounts of D[DEF] placement typically aim to capture several core syntactic characteristics of its distribution. Many relevant observations in the theoretical literature are due to Franks (2001) (see also Franks 2021 and references in both works). Basic generalizations about D[DEF] are as follows: it goes on a noun when there are no prenominal modifiers (3); if there are prenominal modifiers, it goes on the first one (4)-(6) (data from Dost & Gribanova 2006, 132); D[DEF] goes on the head of a modifier, ignoring its intensifiers (7) and its complements (8); it is followed directly by a possessive or argument clitic if one is present (9).

(3) kniga-ta
book-DEF
'the book'

(4) interesna-ta kniga
interesting-DEF book
'the interesting book'

(5) xubava-ta interesna kniga
nice-DEF interesting book
'the nice, interesting book'

(6) *xubava interesna-ta kniga
nice interesting-DEF book
'the nice, interesting book'

(7) dosta glupava-ta zabeležka
quite stupid-DEF remark
'the quite stupid remark'
(Franks 2001)

(8) [gorda-ta săs sina si] majka
proud-DEF with son her mother
'the mother proud of her son'
(Harizanov 2018, 296)

(9) a. večno mlada-ta ni stolica
perpetually young-DEF 1.PL.POSS capital
'our perpetually young capital'   (Embick & Noyer 2001, 571)
   b. postojanno-to im brutalno razgrabvane na gradovete
constant-DEF 3.PL.POSS brutal looting of cities.DEF
'their constant brutal looting of the cities'   (Harizanov 2018, 311)

It has also been observed that, in the case of coordinated prenominal modifiers, D[DEF] is affixed to the head of the first conjunct (see e.g., Harizanov & Gribanova 2015). This is true for both collective (10) and intersective coordination (11). The first-conjunct pattern is also observed when two nouns are coordinated intersectively (12).[1]

(10) bălgarski-ja i ruski narodi
Bulgarian.M.SG-DEF and Russian.M.SG nation.PL
'the Bulgarian and Russian nations'   (Harizanov & Gribanova 2015)

(11) [nova-ta i interesna] kniga
new-DEF and interesting book
'the new and interesting book'
(Harizanov 2018, 296)

(12) prijatel-jat i kolega
friend-DEF and colleague
'the friend and colleague'

Lastly, D[DEF] appears on numerals (13). For complex multiplicative numerals,[2] D[DEF] can appear on the first number 'word' (14)-(16) (Nicolova 2017, Adamson 2019).[3]

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[1] In contrast to intersective coordination of nouns, collective coordination, as in *bašta-ta i sin* 'the father and son', is ungrammatical when only the first conjunct is marked for definiteness (Adamson 2019, 86). This pattern warrants further exploration: the contrast between intersective and collective coordination of nouns is not readily captured by the analysis offered in Section 4, nor by other accounts, as far as we can tell.

[2] There is variation with respect to additive numerals. Nicolova (2017) reports that D[DEF] appears on the final numeral, but some speakers allow placement on non-final numerals (see Adamson 2019).

[3] There are striking patterns with demonstratives and optional 'multiple determination' in the colloquial language (see (see Rudin 2018, Franks 2021), which we set to the side. Note, however, that these patterns could be compatible with a movement analysis of D[DEF], provided there can be subsequent concord; see Kramer 2010 for such an approach to definiteness marking in Amharic.

(13) sto-te   duši
      hundred-DEF people
      'the hundred people'

(14) pet-te   miliona duši
      five-DEF million people
      'the five million people'

(15) pet.deset-te duši
      five.ten-DEF people
      'the fifty people'

(16) *pet-te   deset duši
      five-DEF ten   people
      'the fifty people'

There are a number of different accounts of D[DEF] placement. One analysis that is clearly incorrect derives the placement through syntactic head movement of an element to D. Such an analysis predicts the wrong word order with respect to intensifiers (as noted by Franks 2001), and it is also challenged by first-conjunct placement, which is unexpected given ATB constraints (as noted by Harizanov 2018, 297).[4]

Other accounts can broadly be characterized as either i) targeting the *structurally highest* element (Franks 2001, Embick & Noyer 2001, Koev 2011) or ii) targeting either the *leftmost* element (Dost & Gribanova 2006) or *leftmost agreeing* element (Harizanov 2014, 2018, Adamson 2019). The issue of EI modifiers and transparency raises questions for linear adjacency, as we discuss below. We instead pursue an account in which D[DEF] moves to a target that is defined structurally. The closest account to what we will adopt here comes from Koev (2011), who adopts the view that definiteness marking is the result of *agreement* with the structurally closest agreeing head (not displacement of D[DEF]). We highlight differences between this account and the current one in Section 4.

Under the current proposal, D[DEF] moves in the postsyntax, specifically to a head that bears nominal features (gender and/or number). As described below, because of the formulation of postsyntactic movement (modified from Harizanov & Gribanova 2018), the target is the closest c-commanded head with relevant features.

In addition to capturing core distributional facts, the present proposal has additional empirical coverage, namely that it captures transparency effects observed for EI modifiers. In conjunction with the derivation of inflectionlessness below, it also correctly derives the opacity of inflectionless elements for a different set of speakers, as discussed in Section 4.

3 INFLECTIONLESS MODIFIERS

Bulgarian adjectives typically inflect for gender and number (17). In contrast, certain exceptionally inflectionless loanwords do not inflect for gender or number at all (18)-(19).

(17) a. interesen   čovek / interesna   žena   / interesno   dete
          interesting.M.SG person   interesting.F.SG woman   interesting.N.SG child
          'an interesting person/woman/child'
      b. interesni   { xora   / ženi   / deca }
          interesting.PL people women children
          'interesting people/women/children'

(18) serbez {čovek / xora} / serbez {žena   / ženi} / serbez {dete / deca}
      bold   person people bold   woman   women bold   child children

(19) erbap {čovek / xora} / erbap {žena   / ženi} / erbap {dete / deca}
      skillful person people skillful woman   women skillful child children

A list of EI elements is presented in (20). This list is drawn in part from Nicolova (2017) and in part from examples offered by our consultants. Many of them are Turkish loanwords (see Krŭsteva 2000), though some are loanwords from other languages. Note that some (e.g., *inat*) actually allow inflection for certain speakers, for whom they pattern with inflected modifiers.

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[4]Franks (2001) suggests that the morphological idiosyncrasies of D[DEF] constitute evidence for an inflectional/agreement-based treatment rather than movement. However, other phenomena that have been analyzed as head displacement also involve morphological idiosyncrasy, including synthetic comparatives, tense marking, number marking, among others; see Embick & Noyer (2001) for discussion. See also Arregi & Nevins (2013) and Gribanova & Harizanov (2017) for discussion of D[DEF] allomorphy in Bulgarian.

(20)   češit   šik   erbap   ekstra   inat   kofti   serbez   sert   seksi   super
       'weird' 'chic' 'skillful' 'extra' 'stubborn' 'shitty' 'bold' 'assertive' 'sexy' 'super'

Prenominal, inflected adjectives take the definite marker (21)-(22) but EI modifiers cannot (23)-(24).[5] (Note that the examples in (18) and (19) do not receive a definite interpretation, either.) EI modifiers are, however, compatible with demonstratives (25) (Spencer & Luís 2012).

(21)   interesni-jat   čovek / interesna-ta   žena   / interesno-to   dete
       interesting.M.SG-DEF person   interesting.F.SG-DEF woman   interesting.N.SG-DEF child
       'the interesting person/woman/child'

(22)   interesni-te   xora / ženi   / deca
       interesting.PL-DEF people   women   children
       'the interesting people / women / children'

(23)   *serbez [-a(t)/-ta/-to/-te] {čovek / xora   / žena   / ženi   / dete / deca}
       bold   [DEF]   person people woman women child children

(24)   *erbap [-a(t)/-ta/-to/-te] {čovek / xora   / žena   / ženi   / dete / deca}
       skillful [DEF]   person people woman women child children

(25)   a.   tozi   serbez čovek / tazi   serbez žena   / tova   serbez dete
            that.M.SG bold   person that.F.SG bold   woman   that.N.SG bold   child
       b.   tozi   erbap čovek / tazi   erbap žena   / tova   erbap dete
            that.M.SG skillful person   that.F.SG skillful woman   that.N.SG skillful child

For all speakers, inflected adjectives cannot be 'skipped' for placement of D[DEF] (26). However, some speakers allow EI modifiers to be skipped, with D[DEF] appearing on the noun (27)-(30). Examples marked with % are systematically accepted by this group of speakers.

(26)   interesn-i-jat   čovek / *interesen   čovek-at
       interesting-M.SG-DEF person   interesting.M.SG person-DEF
       'the interesting person'

(27)   %erbap žena-ta   (28)   %serbez [čovek-at   / žena-ta   / dete-to]
        skillful woman-DEF   bold   person-DEF woman-DEF child-DEF
        'the skillful woman'   'the bold/stubborn person/woman/child'

(29)   %mnogo kofti čovek-at   (30)   %mnogo [inat   / erbap] student-at
        very   shitty person-DEF   very   stubborn skillful student.M.SG-DEF
        'the very shitty person'   'the very stubborn/skillful student'

Halpern (1995, 165) speculates that skipping involves "neologistic compounding". This seems sensible given that (unmodified) right-headed compounds exhibit D[DEF] placement on the head rather than on the preceding part of the compound (data from Nicolova 2017, 147).

(31)   ofis texnika(-ta)   (32)   kandidat-student(-at)
       office equipment-DEF   candidate-student-DEF
       '(the) office equipment'   '(the) applicant student'

However, a compounding analysis is not supported. Like phrasal modifiers, but unlike compounding elements, EI modifiers i) can be intensified (29)-(30), ii) can appear as comparatives (33), iii) need not be adjacent to the head noun (34), and iv) can be coordinated with inflection-ful adjectives (35). (Note that some speakers who allow skipping nevertheless reject examples like (34).) Further, a compounding analysis would fail to derive predicative uses of EI elements, which remain inflectionless and are grammatical (36).

(33)   po-{serbez/erbap} čovek   (34)   ?erbap bălgarsko   dete
       CMPR-{bold/skillful} person   skillful Bulgarian.N.SG child
       'a bolder/more skillful person'   'a skillful Bulgarian child'

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[5] For reasons of space, (23)-(24) provide all of the definite forms within each example. The forms vary morphophonologically depending in part on gender and number features; see e.g., Arregi & Nevins (2013) for one account.

(35) interesni-jat   i   serbez čovek
      interesting.M.SG-DEF and bold   person
      'the interesting and bold person'

(36) Čovek-at   e serbez / erbap.
      person-DEF is bold   skillful
      'The person is bold/skillful.'

The evidence therefore indicates that attributive EI elements pattern as phrasal modifiers syntactically, not as members of a compound, though we direct the reader to more nuanced discussion of the data as well as an alternative analysis of EI elements in Bulgarian in Georgieva (To appear).

4 ANALYSIS

We follow Embick & Noyer (2001) in taking D[DEF] to correspond to a syntactic terminal D that moves to a lower head in the postsyntax. However, we propose that D[DEF] lowers to a head bearing nominal features (gender and/or number). Moreover, unlike in Embick and Noyer's (2001) account, the lowering operation cannot be defined as applying only in *head to head-of-the-complement* configurations. Rather, the operation is specified to displace an element onto a head that is closest in terms of c-command, an idea which we adapt from Harizanov and Gribanova's (2018, 285) formulation of postsyntactic Lowering. For concreteness, we adopt their mechanics, according to which Lowering is triggered by a [M:-] feature on a lexical item, in our case D[DEF]. However, to account for the relativization to nominal features for D[DEF] placement, we add a secondary feature to [M:-], stylized as [M:-]$_\phi$, which restricts possible targets to heads bearing gender and/or number features. We take it to be general for postsyntactic movement that it can specify what properties the target should have (see e.g., Adamson 2019, 55). Our modified, feature-relativized version of Harizanov and Gribanova's formulation of Lowering is as in (37):[6]

(37) *Lowering*
      $[_{XP}...X...[_{YP[F]}...Y[F] [_{ZP}...]]] \rightarrow [_{XP}...[_{YP[F]}...[_{Y[F]}Y[F] X][_{ZP}...]]]$
      (where X and Y are heads, X c-commands Y, Y and YP bear [*F*], and there is no maximal phrase ZP bearing [*F*] that c-commands Y and is c-commanded by X)
                                          (modified from Harizanov & Gribanova 2018, 485)

We adopt a Distributed Morphology architecture of the grammar (Halle & Marantz 1993, Embick & Noyer 2001, Harley 2014, among others). We assume gender features are inherent to *n* (Kramer 2015, Adamson & Šereikaitė 2019); we make the simplifying assumption that number features are also on *n* rather than a head Num. Nominal features are binary for ease of exposition (though a privative account is formulable).
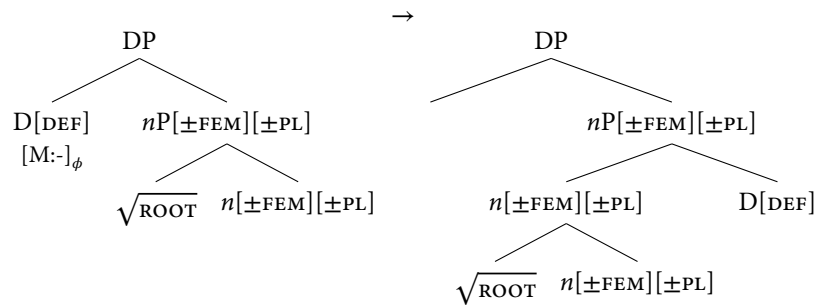
We assume prenominal modifiers are adjuncts to *n*P (see Dost & Gribanova 2006 on Bulgarian), though a Cinquean-style analysis (Cinque 2010) is also possible. We assume that modifiers come to bear gender and number features: this can be accomplished through probing from their maximal projections; see e.g., Clem (To appear) on probing from maximal projections, and Landau (2016) and others on the (implicit) assumption that nominal modifiers probe from maximal projections. (The inclusion of NumP would have consequences for the details of the agreement analysis, though we set this issue to the side.)

See (38) for a (somewhat simplified) derivation of an expression with no modifiers (e.g., (3)), and (39) for the result of movement with one prenominal modifier (e.g., (4)). At the relevant point in the derivation, the operation that endows *a*Ps with features as well as the operation that produces the inflectional node (described below) have already taken place. D[DEF] affixation identifies a head to adjoin to, being restricted to heads with nominal features. Observe that in (39), the lower *n* cannot be targeted according to the restrictions on Lowering in (37): *a* and *n* are both c-commanded by D,
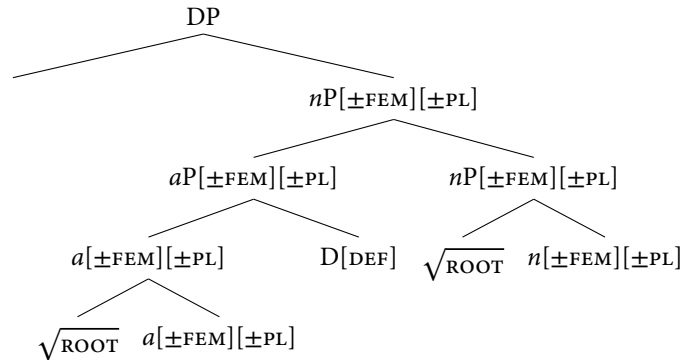
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[6]We also depart from Harizanov & Gribanova (2018, 487) on the matter of specifiers and adjuncts, which they suggest cannot be moved into and do not intervene, due to their island status. While they do not elaborate on their assumptions about islandhood, a common conception links it to the notion of the phase (Chomsky 2001). However, according to the widely used Phase Impenetrability Condition, the head of a phase is accessible to operations outside of it. For present purposes, we take this to mean that the head of a specifier or adjunct can in principle be accessible for postsyntactic movement. However, the feature-relativization of (37) means that specifiers and adjuncts can be transparent if they lack the relevant features specified by the moving element.

but the maximal nP does not c-command a (the maximal nP includes or dominates a), whereas the aP does c-command n.

(38)   →

DP
- D[DEF] [M:-]$_\phi$
- nP[±FEM][±PL]
  - √ROOT
  - n[±FEM][±PL]

DP
- nP[±FEM][±PL]
  - n[±FEM][±PL]
    - √ROOT
    - n[±FEM][±PL]
  - D[DEF]

(39)

DP
- nP[±FEM][±PL]
  - aP[±FEM][±PL]
    - a[±FEM][±PL]
      - √ROOT
      - a[±FEM][±PL]
    - D[DEF]
  - nP[±FEM][±PL]
    - √ROOT
    - n[±FEM][±PL]

A movement analysis of D[DEF]'s position is superior to an alternative analysis in which the definite marker is the result of agreement with the D head (e.g., Franks 2001, Koev 2011). We mention three reasons here. First, a movement analysis directly reflects the fact that the definite marker is realized only once (except in limited circumstances; see Footnote 4), while an agreement analysis must essentially stipulate a null realization of the higher D[DEF] head. Second, as suggested by Embick & Noyer (2001), the distribution of possessive/argument clitics is naturally accounted for if they adjoin to D[DEF] in the syntax and are subsequently displaced with it in the postsyntax. This distribution is more difficult to account for under an agreement-based analysis. Third, for cases that may independently need to be analyzed as definiteness *agreement*, such as when a definite marker appears with floated quantifiers (see e.g., Harizanov 2014, 60), observe that a possessor clitic can only appear once and in one position (40): this reinforces a distinction between the displaced complex of D[DEF] with the clitic on the one hand, and definiteness agreement on the other.

(40)   Knigi-te   *(mu) bjaha pročeteni vsički-te (*mu).
        books-DEF   his   were read   all-DEF   his
   'All his books were read.'

Recall that intensifiers and complements are ignored (7)-(8). We respectively attribute this ignoring to i) the lack of nominal features on intensifiers and ii) the asymmetric c-command between a and any argument within its complement, which will mean that a intervenes. Regarding the possessive/argument clitic (9), we follow Embick and Noyer's (2001, 572) analysis, according to which the clitic is adjoined to D in the syntax, and subsequently moves with it in the postsyntax (see relatedly Harizanov 2014, 2018).

Regarding cardinal numerals, a derivation of (14) is provided in (41). This analysis takes numerals to bear inherent number features, even though numerals above 'two' do not exhibit formal alternations for nominal features.[7] For multiplicative numerals, we assume a 'cascading' analysis along the lines of Ionin & Matushansky (2018). (Note, however, that 'same-word' multiplicative

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[7]Numerals arguably also bear gender features, if one considers the 'masculine personal' suffix *-ma* – which appears on numerals with nouns denoting men – to reflect a general process of gender agreement.

numerals, such as the one in (15), must either be compounded or be contained within a larger phrase to derive the correct placement of D[DEF].)

(41)
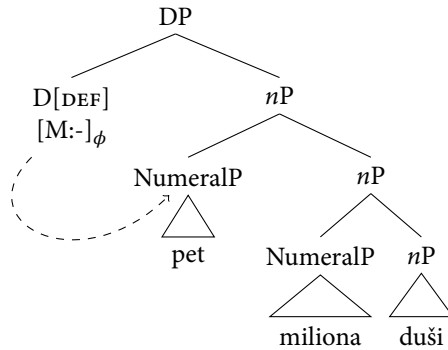
For coordinate structures, we adopt the view that they are asymmetric, such that one conjunct (in this case, the first) is higher (e.g., Munn 1993).[8] We follow Harizanov & Gribanova (2015) in taking split (but *not* intersective) coordination like (10) to be derived through nP- rather than aP-coordination. However, we assume instead that there is a (segment) nP that is shared through multidominant structure in such expressions: see Adamson (Under revision) on Italian and also Bulgarian, both for structural and for agreement considerations (see also Shen 2018 for criticism of the ATB derivations in Harizanov & Gribanova 2015). The structure is schematized in (42).

(42)
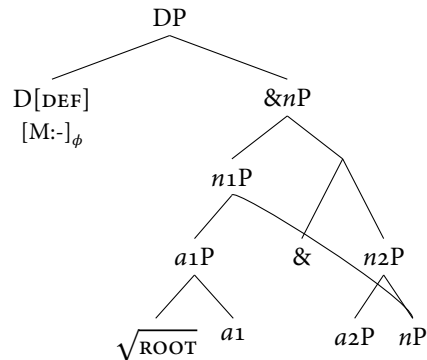
In (42), D[DEF] has three conceivable targets: the head of a_1P, the head of a_2P, or the shared head of nP. However, the head n is c-commanded by both a_1P and a_2P, which bear features, and a_2 is c-commanded by n_1P, which also bears features. Thus the head a_1 is targeted by D[DEF].

For intersective coordination (11), we assume aPs are coordinated and that &aP is adjoined to nP; we stipulate that each aP inherits the features of the &aP. A simplified structure is presented in (43). Of the heads a_1, a_2, and n, only a_1 can be targeted by D[DEF], as a_2 is c-commanded by a_1P and n is c-commanded by &aP.[9]

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[8]A reviewer asks if there is independent motivation for the asymmetric analysis of coordination in Bulgarian. The language does allow the first conjunct to bind into the second (i), supporting the asymmetric view.

i.   vsjaka majka$_i$ i   nejnoto$_i$ dete
        every mother and her   child
        'every mother$_i$ and her$_i$ child'

[9]Postnominal material never appears to intervene for D[DEF] placement. One possibility is that heads within (non-complement) postnominal phrases (e.g., PPs or CPs) either lack nominal features or are too deeply embedded within the phrase to be accessible. The non-intervention would then be related to their lack of accessible features. Another possibility is that postnominal status reflects c-command, such that right-side modifiers are always lower in the structure than (moved) nominal constituents that precede them (Cinque 2010).

(43) $[_{DP} \text{D} [_{nP} [_{\&aP} [_{a1P} \text{ } a1 \text{ }] [\& [_{a2P} \text{ } a2 \text{ }]]] [_{nP} \text{ } n \text{ }]]]$

Turning to the issue of agreement marking, we take agreement-related inflection to be derived via a node-sprouting operation: a postsyntactic rule that sprouts agreement nodes from a defined set of heads — more specifically in this case, from Morphological Words (in the sense of Embick & Noyer 2001); (see Kramer 2009, Norris 2014, Choi & Harley 2019, Adamson 2019, among others). For the rule in (44), an adjectivizing head *a* with nominal features is adjoined to by an inflectional head, to which nominal features are copied.

(44) $a[\alpha\text{FEM},\alpha\text{PL}] \rightarrow$ $a[\alpha\text{FEM},\alpha\text{PL}]$

$$a[\alpha\text{FEM},\alpha\text{PL}] \quad a\text{Infl}[\alpha\text{FEM},\alpha\text{PL}]$$

Recall that EI modifiers syntactically pattern with other modifiers. To capture both this and their transparency for D[DEF] placement, we propose that they are indeed adjectives, and that their inflectionlessness is due to a feature [LOAN] that is specified to appear on the head *a* that combines with certain roots (but not necessarily with all loans). The feature [LOAN] then has one of two impacts: i) it suppresses agreement by causing *a* to lack unvalued features, thereby causing *a* to lack nominal features and preventing the application of (44),[10] or ii) it triggers a postsyntactic diacritic rule that deletes nominal features in the context of a feature [LOAN] (45), which would have the same effect of both preventing (44) from applying and rendering *a* featureless.

(45)   **Diacritic Rule**: $[\alpha\text{FEM},\alpha\text{PL}] \rightarrow \varnothing$ / [LOAN], where *a*[LOAN] is the adjectivizing head selected to combine with $\sqrt{\text{INAT}}$, $\sqrt{\text{SERBEZ}}$, $\sqrt{\text{ERBAP}}$, etc.

If we were to embrace (ii), the critical issue is then how the rule in (45) interacts with D[DEF] movement; in particular (45) would have to *precede* D[DEF] movement.

For both options (i) and (ii), the adjective is transparent, as the movement is specified to adjoin to a head bearing nominal features, and cannot see the absent or deleted features on *a*. Adjunction of D[DEF] then applies to *n* instead for examples like (1) (as the nominal features on the maximal *a*P[LOAN] would also be absent or deleted).

Incorporating the novel evidence from EI modifiers, the current account fares better than other approaches to D[DEF] affixation. Embick & Noyer (2001) propose a Lowering analysis in which D lowers onto the head of its complement, as they assume an *a*P-over-*n*P analysis along the lines of Abney 1987. This analysis is not viable for EI modifiers, which, because they behave like other modifiers syntactically, would be expected to appear in the complement position of D, as well. It is then unclear how to derive D[DEF] transparency: an iterative Lowering account – one in which D[DEF] lowers until the right type of target is identified – would require head excorporation. It is also not clear how a Lowering account could capture coordination facts, especially with respect to the transparency of EI modifiers.

The analysis in Dost & Gribanova (2006) is couched instead in terms of leftmostness within the nominal domain, but does not make reference to nominal features. The view in Harizanov 2014, 2018 is similar, except that it requires D[DEF] to affix to the leftmost agreeing head. The latter could technically be made to work with EI modifiers, though it requires linear left-to-right scanning, a powerful addition to the theory that should raise suspicion. In contrast, the locality of the current account is framed in terms of (feature-relativized) closest c-command, which is independently motivated for many syntactic phenomena. A c-command analysis of D[DEF] placement was in fact proposed by Franks (2001), though without reference to nominal features.[11]

There are several further predictions of the current account. The first concerns intersective coordination: inflected first conjuncts cannot be skipped, but EI first conjuncts can be (46). Speakers

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[10]See Adamson 2019 on confining morphological idiosyncrasy like exceptional inflectionlessness to the PF component, which would make (i) theoretically unviable.

[11]As mentioned above, Franks (2001) rejects a movement account. This is motivated in part by Franks's view that the morphological idiosyncrasy of D[DEF] reflects its inflectional status, which is challenged by Embick & Noyer (2001). See above on the superiority of the movement account over a definiteness agreement alternative.

who accept (1) find (46) somewhat awkward.[12] The second prediction involves the same logic, but applies to stacking (47).

A third, related prediction concerns coordination of two EI modifiers, which should allow skipping past the conjunction altogether, with the noun targeted by D[DEF]. This is also borne out for at least one speaker who permits 'skipping' (48).

(46)   {*interesen   / %?inat}   i   glupav-i-jat   čovek
          interesting.M.SG   stubborn and stupid-M.SG-DEF person
        'the interesting/stubborn and stupid person'

(47) %?inat   bălgarsk-o-to   dete   (48)   inat   i   serbez žena-ta
        stubborn Bulgarian-N.SG-DEF child   stubborn and bold   woman-DEF
        'the stubborn, Bulgarian child'   'the stubborn and bold woman'
                                                                          (Roumyana Pancheva, p.c.)

The fourth prediction concerns non- or de-adjectival uses of EI roots. The exceptionality only applies to *a*[LOAN]. EI roots should therefore (potentially) be able to host definiteness marking in environments in which they are nominalized. There are indeed underived loan nouns that can take the definite marker, including *inat-at* 'the stubbornness' and *ekstra-ta* 'the extra' (Nicolova 2017, 178).

Some speakers also report that 'standalone' human uses with no overt noun are acceptable with D[DEF] affixation to the loanword (49). Additionally, there is a productive nicknaming construction (Nicolova 2017, 185) that allows D[DEF] affixation to these loanwords, as well (also observed by Krŭsteva 2009, 80) (50)-(51). (Not all loanwords allow this. For example, none of our consultants accept *seksi-jat* 'the sexy'.)

(49)   Inat-at   / Serbez-at (vleze v   stajata.)
        stubborn-DEF   bold-DEF   came into room.DEF
        'The stubborn bold person (came into the room.)'

(50)   Nadka Primern-a-ta   (51)   Ivan ({mnogo / po-})   Inat-at
        Nadka exemplary-F.SG-DEF   Ivan very   CMPR- stubborn-DEF
        'Nadka the Exemplary'   'Ivan the (very/more) stubborn'
   (Nicolova 2017, 185)

This can be analyzed as a type of (human) nominalization, in which *a*[LOAN] is buried in *n*P structure (see e.g., Sleeman 2017). The analysis thus correctly captures that the exceptionality is restricted to adjectival settings.[13]

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[12]Two speakers do not accept (46). It is possible that the second conjunct is sufficiently buried within the coordinate structure as to be treated as inaccessible for some speakers. Future research should address this issue.

[13]Roumyana Pancheva (p.c.) suggests that loanword nouns more generally must reflect nominal features by being affixed, both for plurals—as in (i)—and for count forms that occur with numerals—as in (ii). As she points out, this could speak to a difference between the nominal features on modifiers versus nouns in terms of interpretability, which may govern what features can be deleted.

i.   vsički serbez*(-i)   ii.   dva serbez*(-a)
        all   bold-PL   two bold-COUNT
        'all bold ones (people)'   'two bold ones (people)'

(52)
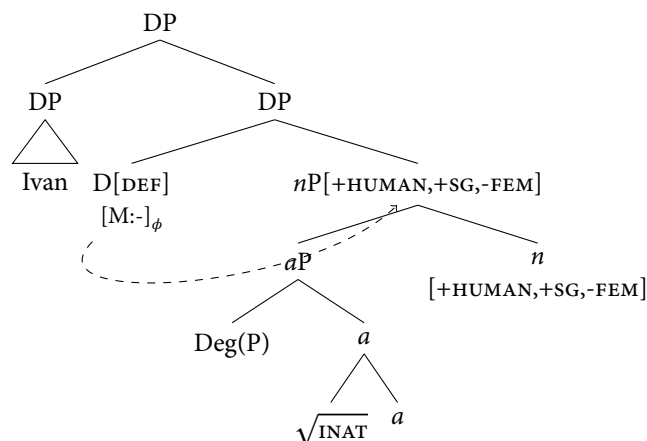
Lastly, not all speakers allow EI modifiers to be skipped. For some speakers, definite marking is altogether ineffable, as reflected in (53) (Halpern 1995, Spencer & Luís 2012, Adamson 2019).

(53)   erbap(*-at) čovek(*-at)
        skillful-DEF person-DEF
        'a/*the skillful person'

This point of variation can be captured if, for these speakers, a[LOAN] does bear nominal features, but a diacritic deletion rule applies *after* node-sprouting, which deletes the node aInfl (a type of 'obliteration', in the terminology of Arregi & Nevins 2007), such that the movement of D[DEF] still targets the EI modifier.[14] In this case, a morphological issue arises when D[DEF] expects to be realized with the inflectionless modifier, but cannot (see Adamson 2019) more generally on 'derivational trapping' and discussion of this Bulgarian case).

5 CONCLUSION AND EXTENSIONS

The Bulgarian definiteness morpheme lowers from D onto the most local head with nominal features. In addition to capturing previous observations about the distribution of D[DEF], this proposal is confirmed by novel evidence from EI modifiers, which (for some speakers) are not targeted and do not intervene. An outstanding issue concerns variation among Bulgarian speakers, which warrants further exploration.

The current account is in line with the view from Harizanov & Gribanova (2018, 485) that postsyntactic lowering should be encoded in terms of c-command, rather than through the original formulation from Embick & Noyer (2001) in terms of complementation. If a movement analysis turns out to be on the wrong track, the current empirical findings would have implications for inflectional transparency, possibly for the operation of Agree.

More broadly, the current work speaks to the idea that morphosyntactic issues can be illuminated by deeper investigations of exceptionally inflectionless elements across languages (on which, see Adamson 2019). As Jonathan Bobaljik (p.c.) points out, in German, while strong adjectives are generally followed by strong adjectives, an exceptional pattern of weak endings can follow an element with a strong ending (54-a). Interestingly, uninflected elements do not 'count' as strong elements (54-b) (as originally observed by Schlenker (1999)) and therefore do not allow the next adjective to be weak in the same environment.

(54)   a.   mit gut-em   rot-en   Wein
              with good-STR.DAT.M.SG red-WK.DAT.M.SG wine
              'with good red wine'

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[14]It is possible that PLD under-determines the 'correct' grammatical analysis: perhaps some speakers do in fact compound EI elements with the noun. These speakers should have a distinct profile with respect to the diagnostics, though we have not yet encountered any such speakers.

  b. mit prima {rot-em   / *rot-en}   Wein
    with great red-STR.DAT.M.SG red-WK.DAT.M.SG wine
    'with great red wine'

By the same logic as D[DEF] suffixation in Bulgarian, examples like (54) support the idea that the assignment of strong features in German is best characterized as being defined under closest c-command. Other phenomena are expected to show the same signature.

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