

The Syntax of Bulgarian *edin* ‘one’*

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Abstract: The present paper aims at offering a syntactic model for the grammaticalization of the numeral *edin* ‘one’ in Bulgarian. *Edin* is argued to be at the beginning of the last stage of grammaticalization, i.e., the stage of the indefinite article (cf. Geist 2013). It may function as (i) a cardinal numeral; (ii) a specificity marker (individuating the referent); or (iii) an article-like element with non-referential interpretation in generic sentences. The proposal put forth here is that these different functions are the manifestation of three different structural positions: (i) the specifier of a functional projection (NumP) below the DP for the cardinal; (ii) SpecDP for the specific marker; and (iii) the head D for the article-like marker of genericity. This model represents a perfect linguistic cycle, which suggests that the present analysis may be on the right track.

1. Introduction

The present work arises from the necessity of providing a detailed description of the peculiar syntax of the numeral ‘one’ in Slavic languages, exploring here the case of Bulgarian *edin*. This need is dictated by two main reasons: first, the fact that ‘one’ patterns differently from the other cardinal numerals (at least, as far as Slavic languages are concerned). Second is the fact that ‘one’ is the only numeral which undergoes a cross-linguistically consistent process of

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grammaticalization, leading it to become, in the ultimate stage, an indefinite article.

As will be shown, it is not possible to map the syntax of the numeral *edin* 'one' onto one single position in the structure; thus a more detailed model is necessary to accommodate its grammaticalization process. This would lead mainly to two consequences. The most immediate one is the fact that having such a model would help to better "interrogate" the diachronic data, thus tracing the path of development of the various functions of *edin* from a historical point of view. The second consequence has broader scope: building a model for the development of *edin* (and possibly extending it to other languages) would provide us with a possible explanation of the regularities of the grammaticalization path this numeral undergoes cross-linguistically. In fact, the creation of a syntactic model would suggest that the cross-linguistic regularities in grammaticalization are to some extent driven by syntax, which constrains the set of possible operations that apply to lexical items.

The aim of this paper is to fill a gap in the literature by providing a syntactic analysis for the numeral 'one' in Bulgarian. This will be achieved by showing its multifunctional nature and by designing a model that maps its various functions onto different syntactic positions in the structure.

This section provides a brief overview of the two main facts which make this analysis necessary, namely, the panorama of Slavic numerals (§.1) and the path of grammaticalization 'one' undergoes cross-linguistically (§1.2). The rest of the paper is divided as follows: section 2 individuates the stage of grammaticalization of *edin* following Geist 2013. Section 3 introduces the reader to the theoretical framework on nominal expressions, focusing on Bulgarian. Section 4 explores the position of *edin* in its numeral function. Section 5 looks at the position of *edin* as a specificity marker, while section 6 deals with the syntax of non-specific *edin*. Section 7 is dedicated to the discussion of whether the development *edin* undergoes may be considered an instance of grammaticalization. Section 8 concludes the paper.

1.1. Panorama of Slavic Numerals

Syntactic literature has largely acknowledged the complex and entangled panorama of numerals in Slavic languages, as their behavior cannot be reduced to a single syntactic category or a single merging point in the nominal structure (cf. Franks 1994 for an overview). In languages with overt case morphology (e.g., Russian, Polish, etc.), numerals are commonly divided into different classes, according to their properties: whether they agree with the noun they quantify; whether they assign genitive case to their complement in all structural configurations; or whether they assign genitive only in structural case positions, while they agree for case in oblique configurations (for a classification of numerals in Polish, see Rutkowski 2007: 90).

Bulgarian, a language of the South Slavic group, does not display a complete paradigm of nominal case morphology¹ but has developed a fully-fledged system of definite articles. Still, Bulgarian cardinal numerals display a peculiar pattern when quantifying masculine nouns (cf. §4.1 for a more detailed discussion).

In this complex panorama, the numeral 'one' seems to have a peculiar status, as it does not pattern along with the other cardinal numbers in the languages mentioned above. In fact, 'one' in Slavic always agrees in gender, number (even displaying a plural form), and case (in languages displaying overt case morphology) with the quantified noun, never assigning it an independent case. Its full agreement paradigm is taken as evidence for its adjectival nature (cf. Giusti and Leko 2005: 145 for BCS; Ionin and Matushansky 2018: 175–6 for Russian; Rappaport 2003: 124 for Polish). Bulgarian is perfectly in line with the picture just described. Despite the impossibility of applying the case assignment diagnostics, *edin* 'one' deviates from the pattern of the other numerals (cf. §4.1).

1.2. The Path of Grammaticalization of the Numeral 'one'

As already noticed by Givón (1981), the numeral 'one' undergoes a cross-linguistically consistent process towards becoming a marker for indefinite singular nouns. This is the case for Italian and Spanish *uno*, for German *ein*, for Swedish *en*, and for Turkish *bir*. This tendency is found in Slavic languages as well: a non-exhaustive list of examples includes Upper Sorbian *jen* and Lower Sorbian *jan*, Czech *jeden* (Heine and Kuteva 2006; Caruso 2012, 2016), Molise Slavic *na* (Breu 2012), Slovene dialects of Friuli *ni* (Benacchio 2018), Macedonian *eden* (Weiss 2004), Polish *jeden* (Hwaszcz and Kędzierska 2018), and Bulgarian *edin* (Geist 2013).

This process leading to the development of an indefinite marker (and, ultimately, of an indefinite article) out of the numeral 'one' has been referred to as an instance of grammaticalization (cf. Givón 1981; Heine 1997; Heine and Kuteva 2006; van Gelderen 2011, *inter alia*). One observation is in order here: the evolution 'one' undergoes is different from other common grammaticalization processes, e.g., the well-known Jespersen cycle (cf. Jespersen 1917).² While, in the latter, the newly grammaticalized item substitutes the "old" one (which is then lost), in the case of 'one', the newly grammaticalized functions coexist with the older ones. However, in line with the previously mentioned

¹ As an anonymous reviewer points out, some residues of case are still visible on pronouns (e.g., *tja* 'she.NOM' vs. *neja* 'she.ACC') and clitics (e.g., *go* 'he.ACC' vs. *mu* 'he.DAT').

² I thank an anonymous reviewer for having pointed out this issue.

authors, I presuppose that this process is governed by the same principles that govern grammaticalization (cf. §7.3 for a justification of this view).³

The path of grammaticalization of the numeral ‘one’ follows some consistent stages and goes along with a process of semantic bleaching, in which the numeral assumes the functions of an indefiniteness marker at the expense of its quantificational nature (cf. Givón 1981).

Givón (1981: 50) provides a tripartite model of grammaticalization of the development of the functions carried out by the numeral ‘one’. His model is reported here in (1).

- (1) Quantification > referentiality/denotation > genericity/connotation

Heine (1997: 72–74) offers instead a more detailed picture of this diachronic change, subdividing it into five different stages, summarized in (2):

- (2) Stages of grammaticalization of the numeral ‘one’:
- I. The numeral: ‘one’ has only a quantitative function (corresponding to Givón’s first stage).
 - II. The presentative marker: ‘one’ introduces a new salient referent (i.e., expected to be taken up in subsequent discourse), which is supposed to be unknown to the hearer.
 - III. The specific marker: ‘one’ introduces referents which are known to the speaker, but presumed to be unknown to the hearer, independently of their saliency (II and III correspond to Givón’s second stage).
 - IV. The non-specific marker: ‘one’ introduces a referent which is unknown both to the speaker and to the hearer and whose reference is not important in the discourse.
 - V. The generalized article: the article can occur with almost all nominal classes, and its insertion is justified by mere syntactic reasons (IV and V equal Givón’s last stage).

³ Various authors (cf. Diewald 2011 and references therein for an overview) argued in favor of distinguishing the process of grammaticalization from that of *subjectification* (cf. Traugott 1989) and *pragmaticalization* (cf. Aijmer 1997). While subjectification is an instance of semantic change which does not contradict the nature of grammaticalization and goes hand in hand with it, pragmaticalization (which mainly applies to discourse markers) arises from the need to keep the domain of “grammar” and that of “pragmatics” separated (Diewald 2011: 384). However, as Diewald argues, a richer notion of “grammar” that encompasses pragmatic functions allows us to treat pragmaticalization as another instance of grammaticalization.

The grammaticalization of 'one' is generally monodirectional (from stage I to V)⁴ and cumulative: once the numeral has reached a given stage, it must have acquired all the functions proper to all the preceding ones. There is, however, a certain degree of overlap among adjacent stages.

Given these premises, let us turn to the development of the numeral *edin*⁵ 'one' in Bulgarian, which will allow us to map its different syntactic positions in the nominal expression.

2. Evaluating the Stages of Bulgarian *edin*

Geist (2013) adopts Givón's and Heine's grammaticalization models to evaluate the stage of development of *edin* in Bulgarian.

The initial stage of the process is that of the numeral, in which "'one' expresses the fact that the set to which the referent of the noun phrase belongs consists of exactly one entity" (Schroeder 2006: 556). To distinguish this function from other ones that are carried out by *edin*, Geist provides some tests that single this interpretation out, such as the modification by particles emphasizing its cardinality, shown in (3), and the possibility of being contrasted with other numerals, as in (4).

- (3) Samo *edin* telefon li imate?
 only one.M telephone Q have.2PL⁶
 'Do you have only one telephone (or two)?'

- (4) Ivan ima *edin* sin (, a ne dvama).
 Ivan has one.M son and not two

'Ivan has one son (and not two).' (Geist 2013: 127–28)

The next stage is that of the presentative marker, in which 'one' is used only with referential noun phrases (NPs) that the speaker wants to mark as salient in the discourse. The salience of the referent can be expressed by taking up the NP in subsequent discourse. In the case of Bulgarian, the NP introduced

⁴ But see Joseph 2011 and Trousdale and Norde 2013 for counterexamples to the unidirectionality.

⁵ I use the unmarked masculine form *edin* to refer to all singular forms of the numeral, i.e., *edna* 'one.F' and *edno* 'one.N'. The plural form of 'one' will be referred to as simply *edni*.

⁶ The following abbreviations are used throughout the paper: M = masculine, F = feminine, N = neuter, 1 = 1st person, 2 = 2nd person, Q = polar question particle, ACC = accusative, DAT = dative, REFL = reflexive particle, DEF = definite article, SG = singular, PL = plural, BF = *brojna forma* 'count form', COND = conditional, HUM = human, IND = indicative, SUBJ = subjunctive.

by *edin* can be referred back to in subsequent discourse—e.g., by a personal pronoun, as in (5)—but does not need to, as in (6).

(5) Imalo edno vreme *edin* starec. Toj imal trima sina.
had one.N time one.M old.man he had three sons
'Once upon a time, there was an old man. He had three sons.'

(6) Predi da predam statijata ja dadox na *edin*
before *da* submit.1SG paper.DEF it.ACC gave.1SG to one.M
kolega za korekcii. Sled tova podadox statijata
colleague for corrections after that submitted.1SG paper.DEF
na edno spisanie.
to one.N journal

'Before submitting my paper, I gave it to a colleague for proofreading.
Then I sent the paper to a journal.' (Geist 2013: 131)

The third stage is named by Heine that of the "specific marker", referring to the fact that 'one' can denote a referent or an entity which is known to the speaker and new to the hearer. Geist (2013) points out that *edin* needs to satisfy the condition of *identifiability* in the sense of Ionin 2013 (esp. p. 82), i.e., the speaker should be able to answer the question "which X is it?". This is shown in (7).

(7) a. Čete mi se *edno* spisanie.
read I.DAT REFL one.N journal
'I would like to read a journal.'

b. A imenno, poslednijat broj na Novo Vreme.
and namely last.DEF issue of Novo Vreme
'Namely the last issue of Novo Vreme.'

c. #Kakvoto i da e.
which and *da* be
'Any journal would do.'

(Geist 2013: 132)

The last two stages in Heine's path of grammaticalization are conflated by Geist into the stage of the "indefinite article", à la Givón. This stage entails an obligatoriness condition: since fully-fledged articles are pure syntactic markers, they are inserted in the structure for mere syntactic requirements. Bulgarian does not completely meet this requirement, as the appearance of *edin* is not generally obligatory, as shown in (8) (Ivanova and Koval' 1994: 59, cited in Geist 2013: 136). The only instance of obligatory appearance of this marker

is with bare NPs in topic position (to mark the “aboutness topic”, which needs to be specific), as in (9) (from Ivančev 1957: 515, cited in Friedman 1976: 338).

- (8) V stajata vlezē dete.
 in room.DEF came child
 ‘A child came into the room.’
- (9) a. *Edna* žena ja risuva *edin* xudožnik.
 one.F woman she.ACC painted one.M painter
 ‘A woman was painted by a painter.’
- b. *Ženata* ja risuva *edin* xudožnik.
 woman.DEF she.ACC painted one.M painter
 ‘The woman was painted by a painter.’
- c. **Žena* ja risuva *edin* xudožnik.
 woman she.ACC painted one.M painter
 Intended: ‘A woman was painted by a painter.’

Moreover, Geist individuates three further requirements that the indefinite article should meet: (i) it should be used non-referentially in generic contexts; (ii) it should be able to occur in predicative position in combination with predicative nouns; and (iii) it should have non-referential use in modal and negative scope. Of these three outlined features, only the first one is displayed by *edin*, (10) (even though, as noted by Geist, in some instances it can be omitted), while the latter two are not met, (11–13).

- (10) *(*Edin*) džentālmen vinagi otvarja vrata na damite.
 one.M gentleman always opens doors to ladies.DEF
 ‘A gentleman always opens doors for ladies.’ (Geist 2013: 142)
- (11) Peter e (**edin*) učitel.⁷
 Peter is one.M teacher
 ‘Peter is a teacher.’
 (Ivanova and Koval’ 1994: 59, cited in Geist 2013: 139)

⁷ An anonymous reviewer points out that in (11) the presence of *edin* does not make the sentence ungrammatical, but it could only answer the question “Who is Peter?”, and not “What does Peter do?”. Thus, *edin* can only be used in identificational copular sentences (but not in predicational ones) with specific indefinite reference (cf. also Geist 2013).

- (12) a. Tja iska da se omâži za edin rusnak.
 she wants *da* REFL marry to one.M Russian
 ‘She wants to marry a certain Russian man.’ (Geist 2013: 143)
- b. Continuation compatible with (12a): I know him.
- c. Continuation not compatible with (12a): #There are no candidates yet.
- (13) Toj ne spomena edna podrobnost.
 he not mentioned one.F detail
 ‘He didn’t mention some detail.’ (Geist 2013: 144)

The stage of Bulgarian *edin* resulting from the different diagnostics is summarized in the schema in (14) (adapted from Geist 2013: 147).

- (14) Stages and functions of markers of indefinite reference
- | | | | |
|--|---|---------------------------|-----------------------|
| i. The numeral | } | I. Numeral | |
| ii. The presentative marker | } | II. Indefinite determiner | |
| iii. The specificity marker | | | |
| iv. Predicative use / generic use | } | III. Indefinite article | Bulgarian <i>edin</i> |
| v. Non-referential use in modal and negative scope | | | |
| vi. The generalized article | | | |

Given the evidence above, Geist concludes that the stage of development of Bulgarian *edin* could be roughly placed at the beginning of the stage of the indefinite article, as it displays at least some of the features that are typical of this last stage (though it has not reached the status of a full-fledged indefinite article yet).

3. The Theoretical Framework

Now that the different functions *edin* may carry out have been presented, it is necessary to set some theoretical assumptions that constitute the starting point of the analysis of the complex syntax of *edin*. Section 3.1 deals with the general analysis of nominal expressions in the relevant framework assumed here. Section 3.2 focuses instead on the structure of Bulgarian nominal expressions.

3.1. The Structure of Nominal Expressions

The structure of the nominal expression assumed here follows the line of inquiry started by Giusti (1994, and subsequent works). Giusti distinguishes the elements that were previously grouped under the label “determiners” (i.e., articles, demonstratives, and quantifiers) into different classes occupying different positions inside the extended nominal projection.

Giusti (2002) formalizes an organic analysis of nominal expressions, adopting the idea that the functional layers above the NP are extended projections—in the sense of Grimshaw 1991—of the head N(oun). The main idea is that N reprojects as many times as necessary to satisfy its Selection (theta-role assignment) and Modification (combination with adjectives) requirements. Each time N reprojects, a new functional head containing silent functional φ -features of N is created, which in turn allows for the creation of an empty specifier slot which can host adjectival modifiers (APs). The APs merged in the empty specifiers (as proposed by Cinque 1994) share with the head N number, gender, and case features via Concord (Giusti 2008). Concord is instantiated as the modifier is first merged in the specifier of a functional projection (functional projections in the inflectional layer are assumed not to be labeled for any feature but are mere copies of the φ -features of N) and is enhanced by the Spec-Head configuration. This mechanism is always local and does not trigger any movement. The highest reprojection of N may be labeled D(eterminer)P(hrase).⁸ Its specifier hosts referential elements like demonstratives, possessive pronouns, and proper nouns. These are all maximal projections that raise to SpecDP to have their referential feature checked, as the interpretation of the whole nominal expression is assumed to take place in that position at LF (Giusti 2002: 106). Given that the interpretation takes place in the left edge, articles are just dummies, heads which spell out the functional features of the nominal expression in the highest functional head, i.e., D. The overt realization of D licenses an empty operator in SpecDP (in the spirit of Campbell 1996), responsible for the interpretation of the whole nominal expression. A schematic representation of a nominal expression realizing the article is given in (15a), in which the highest reprojection is labeled “NP3” and the silent operator licensed by the definite article is indicated as “ind(exical)_R”. In the case in which a referential element appears directly at the left edge, there is no need for any silent operator, and the highest head (labeled N in the examples in (15b)) can remain covert for Economy reasons, as the features are already retrievable from the specifier.

⁸ Giusti labels this projection in different ways, e.g., FP^{max} in Giusti 2002, NP_n in Giusti 2011. Independently of the label, the highest projection corresponds to what is traditionally referred to as DP, so I am using this label for ease of exposure.

3.2. Bulgarian Nominal Expressions

Capitalizing on the leading principle of this theoretical framework outlined in §3.1, Giusti and Dimitrova-Vulchanova (1996; Dimitrova-Vulchanova and Giusti 1998; henceforth, D-V&G) build a syntactic analysis of the nominal expression in Bulgarian. They argue that, in Bulgarian, N never moves to D in overt syntax: if this were the case, one would expect a sentence like (16a) to be possible, contrary to the facts. The grammatical alternative is instead given in (16b). When N does not display any modifier, the enclitic article attaches directly to it, as in (16c).

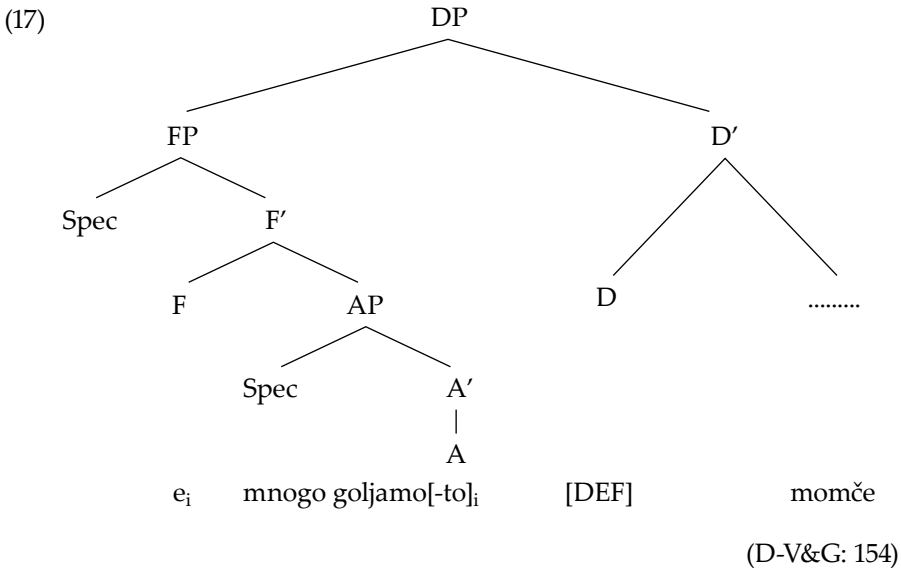
- (16) a. *momče-to goljamo
 boy-DEF big
 Intended: 'the big boy'
- b. goljamo-to momče
 big-DEF boy
 'the big boy'
- c. momče-to
 boy-DEF
 'the boy' (D-V&G: 149)

One of the key assumptions is that the so-called "definite article" in Bulgarian is not an element merged in D, but it is a form of "definiteness" inflection which originates and is checked in a functional projection FP projected by the noun or the nominal modifier itself (Giusti and Dimitrova-Vulchanova 1996: 126). The head D is instead specified for a [DEF(INITENESS)] feature with which the definite article agrees in a local configuration to be interpreted. Thus, "bare" Ns procrastinate the movement to D at LF to check the features of the definite article (D-V&G: 149). When adjectival modifiers are present instead (e.g., in (16b)), the higher AP whose head is inflected for the definite article raises to SpecDP to allow for feature-checking.¹⁰ The scenario depicted so far is nicely represented in (17) on the following page, which is the structure

"strongest" case morpheme appears on the article (when it is present), while case morphemes on the other elements in the nominal expression are a form of agreement with the relevant functional head (i.e., the one spelled out by the article) (cf. Giusti 1995).

¹⁰ The movement of APs with definite inflection to SpecDP also brings evidence in favor of the analysis of the Bulgarian definite article not being merged in D. If the definite article in Bulgarian arose in D, one would expect it to appear at the right of complex adjectival modifiers moving as a unique block in SpecDP, as in (i). Contrary to the facts, (i) is ungrammatical. The structure in (ii) is what one gets instead. The

of the expression in (16b). Note that the position of the AP is derived via movement to SpecDP.



This movement is necessary to satisfy a generic principle formulated by D-V&G (p. 158) and referred to as the “Doubly Filled XP Filter”, reported here in (18).

- (18) A functional projection must be visible at all levels of representation by either
- a. making the specifier visible, and/or
 - b. making the head visible.

The conditions in (a) and (b) may be applied conjointly or disjointly, depending on the language-specific parametric setting of this filter. In Bulgarian, the conditions are disjoint: either the specifier or the head of a functional projection can be spelled out, but both cannot be realized at the same time. AP-to-DP

example in (ii) perfectly fits the account in which the article is generated as the head of a functional projection FP projected by the AP itself, as represented by the brackets.

- (i) *_{[AP (Mnogo) [_{A'} [_{A°} veren] [_{PP} na žena si]]] -jat mǎž.}
- very true to wife his -the man
- (ii) _{[AP (Mnogo) [_{A'} [_{A°} vern-i] -jat] [_{PP} na žena si] mǎž.}
- very true -the to wife his man

‘The man very true to his wife.’

(D-V&G: 156)

movement of an “inflected” adjective makes the functional projection visible, as it spells out the relevant nominal features. In this way, the “inflected” AP in SpecDP makes the nominal φ -features contained in D retrievable; thus, the head D need not (for Economy reasons, must not) be overtly spelled out.

The filter in (18) accounts for structures such as (19) which display a kind of “double definiteness” that is ruled out in Bulgarian.¹¹

- (19) **verni-jat mǎž-ât*
 true-DEF man-DEF
 Intended: ‘the faithful man’ (D-V&G: 157)

According to what has been said so far, the adjective *verni-jat* in (19) raises to SpecDP, hence making the functional projection visible at the interface. Being the highest nominal element in the nominal expression, it has precedence in this upwards movement. Furthermore, the definite article appearing on the head N *mǎž-ât* requires it to covertly raise to D in order for the article to be interpreted. This creates a condition in which both the specifier and the head of the DP would be filled. This clashes with the filter in (18), which applies disjointly and rules out the structures.

The line of inquiry briefly presented contains three key points that will be crucial for the following discussion: (i) the fact that demonstratives are found in SpecDP, a position in which their referential features are checked and in which the interpretation of the whole nominal expression takes place; (ii) the fact that the position D is associated with the abstract representation of the nominal φ -features of N; and (iii) the fact that in Bulgarian the filter in (18) is interpreted disjointly, i.e., if the specifier of a functional projection is visible, the head need not (therefore must not) be overtly realized (and the other way around).

¹¹ As pointed out by an anonymous reviewer, Bulgarian does display instances of double definiteness, defined as “Multiple Determination” (cf. Rudin 2019; Franks 2020). These are structures in which the demonstrative may co-occur with the definite inflection on adjectives, as in (i), but never on nouns, shown in (ii). It may be argued that in cases like (i), the AP does not move to SpecDP in that the position is already taken by the demonstrative. Thus, a construction such as the one in (ii) is ruled out in the same way (19) is. The filter in (18) is thus compatible with the phenomenon of MD.

- (i) *Ax, tezi tvoi-te krasivi oči!*
 ah these your-DEF beautiful eyes
 ‘Ah, those beautiful eyes of yours!’
- (ii) **tazi tetradka-ta*
 this notebook-DEF
 Intended: ‘this notebook’

4. *Edin* as a Cardinal Numeral

It was shown above that the primary function *edin* carries out is quantificational. The superficial form of this numeral, however, resembles an adjective, as it agrees for φ -features with the noun it occurs with. The agreement pattern it displays is a crucial indicator of its structural position, which will be explored in what follows. Section 4.1 underlines the differences between *edin* and the other cardinal numerals and argues for a specifier status of the former. Section 4.2 tries to support the specifier status of *edin*, bringing evidence from the existence of a specific idiomatic expression.

4.1. *Edin* vs. the Other Cardinal Numerals

There is a strong agreement in the literature about the fact that the numeral ‘one’ in Slavic languages indeed has an adjectival nature: in languages that have overt case morphology, the numeral ‘one’ never assigns case, but only agrees with the quantified noun (see, for example, Franks 1994: 650, 664). Moreover, the *Mittelfeld* position of numerals is well acknowledged: as Cinque (2005) showed, in all the possible orderings of nominal modifiers, numerals are always internal to the nominal expression (i.e., they are structurally lower than demonstratives). This pattern led to the idea that ‘one’ is merged in the specifier position of a functional projection which is lower than the DP (cf. Rutkowski 2007). As a result, the specifier enters in a Spec-Head agreement relation with the head noun and agrees with it.

Bulgarian does not have overt case but patterns in line with the other Slavic languages in that the numeral *edin* agrees for φ -features with the NP it quantifies. This is in line with the assumption that cardinal *edin* is merged in the specifier position of a DP-internal functional projection in the nominal spine. For simplicity, I will adopt here Giusti and Dimitrova-Vulchanova’s (1996) label “NumP” for this projection hosting numerals.

Bulgarian is in line with the general pattern in that *edin* can be preceded by other nominal modifiers traditionally associated with the DP-layer, such as demonstratives. While it is much more common to find examples with demonstratives preceding numerals greater than ‘one’, combination with *edin* is not an exception, as shown in (20) by Dimitrova-Vulchanova and Tomić (2009: 9) and in (21), taken from the Bulgarian National Corpus (<http://search.dcl.bas.bg/>; the specific file name is provided in parentheses).¹²

¹² A simple corpus search on Sketch Engine (Kilgarriff et al. 2004, 2014; <http://www.sketchengine.eu>) on the “Bulgarian National Corpus with web” (corpus size: 419,512,059 tokens) reveals this difference: the combination *tezi dva* ‘these two’ registers 10,683 occurrences (about 0.002% of the whole corpus), while *tazi edna* ‘this.F one.F’ has 117

(20) a. ?tozi edin mâž
 this one.M man
 'this (particular) man'

b. *edin tozi mâž
 one.M this man

(21) Imaše čuvstvoto, če za тази edna godina e ostarjala
 had feeling.DEF that in this one.F year is aged
 s cjalo desetiletie.
 with whole decade

'It felt like in this particular year she had aged a decade.'

(L00004128tDEE)

Bulgarian *edin* displays properties that make it unique among all the other numerals. In fact, it is different from numerals such as *sto* 'one hundred' or *xiljada* 'one thousand' in that these do not display any agreement with the head noun but behave as nouns themselves (cf. Corbett 1978). Moreover, *edin* patterns in a deviant way with respect to the other cardinal numerals, which behave in an idiosyncratic way when quantifying masculine (human) nouns.

The numerals from *dva* 'two' on trigger a special form in masculine nouns, known as *brojna forma* 'count form' (cf. Pancheva 2018), which is different from the regular plural form. The same does not hold when a feminine or neuter noun appears after the numeral. The pattern is presented in (22–23), showing the contrast between the feminine noun *kniga* 'book' and the masculine *stol* 'chair'. The (a) examples are taken from Giusti and Dimitrova-Vulchanova 1996, while the (b) variants are added here for the sake of comparing the two forms.

(22) a. dve(te) / tri(te) knigi
 two(DEF) three(DEF) book.PL
 '(the) two/three books'

b. mnogo knigi
 many book.PL

'many books' (Giusti and Dimitrova-Vulchanova 1996: 142)

occurrences (0.00002%). This difference is intuitively justified by the fact that the plurality expressed by *tezi* 'these' is always vague and thus can be specified by adding the exact number of items. The singularity of *tozi* 'this' is instead always specified and may only be spelled out by the numeral 'one'. Thus, the latter is generally omitted, unless some discourse-specific pragmatic reasons require its spell-out.

- (23) a. dva(ta) stola
 two(DEF) chair.BF
 '(the) two chairs'
- b. mnogo stolove
 many chair.PL
 'many chairs'

Another idiosyncrasy involving low cardinals, mainly (but not restricted to) 'two' to 'six' (cf. Pancheva 2018: 205), is their property of taking the suffix *-(i)ma* when co-occurring with a masculine personal noun, which appears in its regular plural form, as shown in (24).

- (24) dvama(ta) / trima(ta) mâže
 two.M.HUM(DEF) three.M.HUM(DEF) man.PL
 '(the) two/three men' (Giusti and Dimitrova-Vulchanova 1996: 142)

Edin differs from other cardinals in that it does not trigger the *brojna forma* on the NP it quantifies, (25a), as it can only be combined with singular nouns. Moreover, *edin* never takes the *-(i)ma* suffix in front of human masculine nouns, (25b). Interestingly enough, the same holds for the plural form *edni*, (26), which, despite its being plural, cannot combine with the *brojna forma* but requires the canonical plural form.

- (25) a. *edin* stol / *stola
 one.M chair.SG chair.BF
 'a chair'
- b. **edinima* mâž
 one man
 Intended: 'a man'
- (26) a. *edni* stolove / *stola¹³
 one.PL chair.PL chair.BF
 'some chairs'

¹³ The example in (26a) shows that plural *edin* patterns along with quantifiers such as *mnogo* 'much/many' (cf. example (22b)), while cardinal numbers display the same behavior as the quantifier *njakolko* 'some', which requires masculine nouns to feature the *brojna forma* (cf. Franks 2018).

- (26) b. **ednima* mâže
 one.PL men

Intended: 'some men'

Another difference lies in that the cardinal 'one' cannot appear after other adjectival modifiers. This is shown in sentence (27), which the consulted informants strongly rejected. It is interesting to note that the same effect is not obtained with the other cardinal numerals, (28). This may be due to the specifier position of 'one', which prevents APs from crossing it while moving upwards.

- (27) **Nova edna kniga veče e po knižarnicite*.¹⁴
 new one.F book already is at libraries.DEF

Intended: 'One new book is already available in libraries.'

- (28) a. *dve (novi) knigi*
 two new books

'two new books'

- b. *dвете (novi) knigi*
 two.DEF new books

'the two new books'

- c. *novite dve knigi*¹⁵
 new.DEF two books

'the two new books'

(Giusti and Dimitrova-Vulchanova 1996: 133)

Giusti and Dimitrova-Vulchanova (1996) assume the headedness of cardinal numerals on the basis of their property of selecting the *brojna forma* and their possibility of being crossed by an AP. Since the position of the other numerals is not relevant for the present discussion, I will remain agnostic here as to the status of cardinal numbers different from *edin*. However, the agreeing nature of *edin*, its impossibility to trigger any special form on masculine nouns, and its impossibility of being crossed by an AP targeting a higher position seem

¹⁴ As was pointed out to me by Assia Assenova, if the article appeared on *nova*, i.e., *novata edna kniga*, the result would still be impossible, as the "definiteness" of the adjective sharply contrasts with the "indefiniteness" of the cardinal.

¹⁵ As an anonymous reviewer pointed out, both the order in (28b) and (28c) may be base-generated, in which case, the argumentation proposed here does not stand up. Such possibility cannot be excluded. In that case, however, the fact that the order of (28c) is not possible with *edin* would be left without an explanation.

to suggest that this cardinal is merged in a specifier position below the DP, labeled here as SpecNumP. In that structural configuration, *edin* would not be able to select any special form on the NP, and it would block AP movement, as the specifier it occupies is not available as an intermediate landing site.

4.2. *Edin* as a Specifier

A further piece of evidence for the maximal projection status of *edin* comes from the idiomatic expression *edin i sâšt*, corresponding to the English ‘one and the same’ (literally, ‘one and same’). Like its English equivalent, the expression *edin i sâšt* is used to refer to a single referent which, in the case of (29), is shared by the two subjects.

- (29) Petâr i brat mu ispolzvat *edin* i sâšt kompjutâr.
 Petâr and brother he.DAT use one.M and same computer
 ‘Petâr and his brother use the same computer.’

In this idiomatic expression, *edin* is a real cardinal numeral, as it refers to the quantity ‘one’. In fact, the NP modified by *edin i sâšt* needs to be unique; this is evident from the impossibility of using this expression with referents that cannot be shared by more than one subject, as is the case in (30).

- (30) *Dvete sestri imat *edin* i sâšt nos.¹⁶
 two.DEF sisters have one.M and same nose
 Intended: ‘The two sisters have the same nose.’

The example in (30) is ungrammatical, as it would imply that the two sisters share the same nose, which is not possible in our world. Thus, the cardinality of ‘one’ is a meaningful part of the semantics of the idiomatic expression. The sentence would be felicitous substituting *edin i sâšt* with *sâštija* ‘the same’ (lit. ‘same-the’), which in this case implies ‘of the same shape’.

If we consider idiomatic expressions to be “frozen bits of complex syntax” (Nattinger 1980: 337), we can observe that this structure is a coordination between the numeral *edin* and the adjective *sâšt*.¹⁷ On the assumption that APs are maximal projections merged as specifiers of the nominal spine, we can conclude that this structure is a coordination of two maximal projections. A tentative sketch of the structure is given in (31).

¹⁶ I thank Iliyana Krapova for this insight and for the judgment.

¹⁷ Note that the same structure is not possible with other cardinal numerals.

- (31) Petâr i brat mu ispolzvat [_{NumP} [&P [_{QP} *edin*]
 Petâr and brother he.DAT use one.M
 i [_{AP} sâšt]] kompjutâr.
 and same computer

The existence of such idiomatic expression strengthens the hypothesis of having the cardinal numeral *edin* merged as a specifier, as it can be coordinated with another maximal projection. The functional projection hosting the numeral *edin* is labeled here as “NumP”. Let us now turn to the syntactic position of *edin* as a specificity marker, which constituted the intermediate stage (in Givón’s model) of grammaticalization.

5. *Edin* as an Indefinite Marker

In this section, I will deal with the status of *edin* as a specificity marker, as it has already completed the third stage of development in Heine’s scale. In this analysis, I take the stage of the “presentative marker” with that of the “specific marker” to spell out the same syntactic position, as they function in an analogous way: both are subject to Ionin’s (2006) *noteworthiness* condition (cf. §5.2.3). I will thus refer to both functions as just “specific *edin*”. Section 5.1 argues that specific *edin* occupies a higher position than that of the numeral. Section 5.2 characterizes this position as SpecDP, operating in parallel with pronouns and demonstratives.

5.1. Higher Structural Position

Before turning to the claim that the indefinite marker *edin* occurs in the DP-layer, we can verify whether this function implies that *edin* occupies a higher structural position than the other numerals. A piece of evidence in this direction comes from the behavior of the plural form *edni*, which displays an interesting pattern.

By nature, plural *edni* can be considered a real numeral only when quantifying pluralia tantum nouns, as in example (32), reported by Nicolova (2017: 194) from Maslov (1982: 367).

- (32) Tja vze samo *edni* čorapi.
 she took only one.PL socks
 ‘She took only one pair of socks.’

This plural form is, however, not restricted to pluralia tantum nouns, as it also co-occurs with plural count nouns. In the latter case, however, it would be impossible for *edni* to function as a numeral, thus it is considered an indefinite

pronoun (Nicolova 2017: 194). NPs introduced by *edni* refer to “unilaterally defined, unilaterally identifiable multitudes of phenomena named by the lexical root of the noun. The combination of the features *unilateral identifiability* + *multitude* explicates the feature *part of the whole that the speaker can identify*” (Marovska 2017: 20, my translation),¹⁸ as shown in (33).

- (33) a. *Edni* studenti zaminaxa.
 one.PL students left
 ‘Some students left.’
- b. *Edni* studenti ot vašata grupa zaminaxa.
 one.PL students from your.DEF group left
 ‘Some students of your group left.’ (Marovska 2017: 20)

Interestingly enough, *edni* can precede numerals quantifying over plural count nouns. This indicates that *edni* occurs in a structural position that is higher than the position in which numerals are merged. Compare the examples in (34), taken from Sketch Engine (Kilgarriff et al. 2004, 2014; <http://www.sketchengine.eu>), with the name of the corpus specified in parentheses:

- (34) a. ... a tuk idejata e *edni* dvama duši sami da
 but here idea.DEF is one.PL two souls by.themselves da
 precejat kakvi tajni da razkrijat...
 judge which secrets da reveal
 ‘...but here the idea is for two (specific) people to decide by themselves which secrets to reveal...’ (bgTenTen12, 200312948)
- b. No imaše *edni* dva slučaja, kogato ne uspjax.
 but had one.PL two cases when not succeed
 ‘But there were two (specific) cases in which I failed.’
 (bgTenTen12, 62821614)

Note that in the cases above, *edni* triggers a specific reading (as the speaker can identify the set containing the instances described by the lexical noun) and thus qualifies as a specific indefinite marker. The singular form is, however,

¹⁸ In Marovska’s (2017) terms, the “unilateral identifiability” corresponds to specific indefiniteness, in which the referent is identifiable by the speaker but not by the hearer (in this sense, the identifiability is unilateral).

banned in these contexts, as it would lead to a mismatch in terms of number features.¹⁹

5.2. *Edin* in SpecDP

Now that it has been shown that *edin* may occur in a structural position above the numerals, it is necessary to better understand the exact position it occupies. I will argue that *edin* occurring as a specificity marker is merged in the specifier of the highest nominal projection, namely SpecDP.

This section (and the following ones) provides examples taken from an online pilot questionnaire (using the platform Google Forms)²⁰ created for the purpose of collecting grammaticality judgments for a set of 38 sentences to test different functions of *edin*. The questionnaire was completed by 46 anonymous native speakers, who were given a Likert scale task with a range from 1 (totally ungrammatical) to 7 (perfectly grammatical).²¹

5.2.1. *Edin* and Pronouns

As a first piece of evidence, *edin* may covary with an indefinite pronoun, such as *njakakâv* (cf. (35) from Stoevski 2019: 193).²²

¹⁹ Note that it is possible to find the singular neuter form *edno* preceding another numeral, as in (i). In this case, however, we are dealing with a different function, in that *edno* indicates an approximative quantity (Stoevski 2019).

(i) Sigurno ima *edno* dvadeset godini otkak ne sâm hodil na more.
surely has one.N twenty years since not am went to seaside
'It must have been some twenty years since I last went to the seaside.'
(Stoevski 2019: 201)

²⁰ The reader can find the questionnaire at the following DOI: 10.17605/OSF.IO/AKUXF.

²¹ Reporting the mean score x of the sentences, the following notational criterion is adopted: (i) if $5 \leq x \leq 7$, the sentence is considered grammatical; (ii) if $4 \leq x < 5$, the sentence is weird, thus marked with "?"; (iii) if $1 \leq x < 4$, the sentence is ungrammatical, thus marked with an asterisk (*).

²² As noted by Stoevski (2019: 193), there are contexts in which the substitution of *edin* with an indefinite pronoun is not possible; these are contexts in which the speaker has no direct experience of the relevant referent, as is the case in a sentence like *Njakoj/*Edin čovek maj se e opitval da razbie ključalkata* 'It seems someone has been tampering with the lock.' This is in line with the specificity of *edin* as an indefinite marker and is another piece of evidence that the distribution of *edin* obeys a noteworthiness condition (cf. §5.2.3).

- (35) a. *Edna* / *njakakva* *kotka* *se* *peče* *na* *slânce* *vârhu*
 one.F some cat REFL sunbathes on sun on.top
pokriva *na* *kolata* *ti*.
 roof of car.DEF YOU.DAT
 ‘A/Some cat is sunbathing on the roof of your car.’
- b. *Na* *pokriva* *na* *kolata* *imalo* *edna* / *njakakva* *kotka*.
 on roof of car.DEF had one.F some cat
 ‘On the roof of the car, there was a/some cat.’

Following Giusti’s (2002: 109) assumption that, among the elements that used to fall under the category of *determiners* (e.g., articles, demonstratives, quantifiers, pronouns), only articles are functional heads, the fact that specific indefinite *edin* may occupy SpecDP is automatically borne out. This does not seem to be such an unnatural assumption, as SpecDP is the place where referential elements (e.g., demonstratives and pronouns) are argued to sit.

From a structural point of view, specific *edin* patterns along with pronouns (sitting in the SpecDP) and differently from articles (which may be identified as residing in D). Pronouns are, in fact, able to license a null nominal and may be found isolated from the head N, as in (36a), while articles are ungrammatical if they do not co-occur with the N they modify (cf. (37), which is an example from Italian that has proclitic definite articles). *Edin*, not surprisingly, behaves like indefinite pronouns, (36b).

- (36) a. *Vidjah* *njakoj* (*njakakâv* *čovek*) *da* *vliza* *v* *kâštata*
 saw.1SG someone some man *da* enters in house.DEF
i *se* *obadih* *na* *policijata*.
 and REFL phoned.1SG to police.DEF
 ‘I saw someone/some man enter the house and I called the police.’
 (Stoevski 2019: 194)
- b. *Dojdoha* *edni* (*hora*) *za* *malko* *i* *mi* *zagubiha*
 came one.PL people for little and I.DAT wasted
tri *časa*.
 three hours
 ‘Some folks popped in “for a moment” and wasted three hours of my time.’
 (Stoevski 2019: 187)

- (37) Ho visto il / un *(ragazzo).
 have.1SG seen the a boy (Giusti 1997: 103)

Not only is *edin* substitutable with an indefinite pronoun, but the two are generally in complementary distribution;²³ this points at the fact that the two forms compete for the same position.

5.2.2. *Edin* and Demonstratives

Taking the indefinite marker *edin* to occur in SpecDP leads to the assumption that it is found in the same position in which demonstratives are generally found (or interpreted). Let us consider Brugé's (2002) account of demonstratives in Romance. Bringing evidence mainly from Spanish, Brugé convincingly argues that demonstratives are generated low in the structure, as in this language they can appear post-nominally, following all classes of adjectives, even the lowest ones. This leads the author to conclude that demonstratives are generated in a projection which is immediately above that of the NP (before N movement takes place) but lower than the "inflectional layer" where adjectives are merged. Moreover, she claims that these items are specified for [+referential] and [+deictic] features. The fact that demonstratives are found as the highest element in the extended nominal projection in many languages leads to the assumption that they undergo movement targeting the highest nominal layer. More specifically, their [+referential] feature is checked in SpecDP: if the feature is "strong", the movement of the demonstrative is overt (as is the case for Italian), while if it is "weak", the movement can be procrastinated to LF (as happens in Spanish).

Thus, the present proposal argues for analyzing the specific marker *edin* in the same place in which demonstratives are found (or, at least, in which they are interpreted cross-linguistically). According to Brugé's proposal, this would follow naturally. Demonstratives check their [+referential] feature in SpecDP. Hence, one is led to assume that *edin*, being referential, checks its [+referential] feature in the same position. The difference between Spanish and Bulgarian lies in the strength of the referential feature to be checked. While in Spanish the feature is weak and allows the procrastination of the demonstrative movement at LF, in Bulgarian the [+referential] feature is strong and obligatorily forces the movement of the demonstrative at the left edge.

²³ A search on the Bulgarian National Corpus for the combination *edin njakakâv/njakakâv edin* leads to six total results, four of which have the two items separated by a comma or an ellipsis, signaling that *edin* and *njakakâv* belong to two different phrases. It is possible to think that they marginally co-occur in emphasized contexts with a numeral reading of *edin*, as happens with demonstratives (cf. §5.2.2).

Furthermore, the fact that these two items are found in the same position consequently leads to the impossibility of their co-occurrence. This is intuitively true, as the demonstrative introduces a definite NP, while *edin*, despite being referential, marks indefiniteness. The fact that they bear complementary pragmatic features (the referent is supposed to be known to both the speaker and the hearer in the case of the demonstrative, as opposed to *edin* which entails only the speaker's knowledge) is, however, not a reason to postulate different positions for these two items which are both anchored to the speaker. Evidence corroborating this claim comes from an apparent counterexample in which *edin* does cooccur with a demonstrative, as in (20a) (see p. 15) and in (38) below.

- (38) a. No тази *edna* minuta bez spomeni e strašna.
 but this one.F minute without memories is scary
 'But this (single) minute without memories is scary.'
 (bgTenTen12, 211437990)
- b. Za тази *edna* godina v Nju Jork sa izdadani pone
 in this one.F year.F in New York are given at.least
 8200 svatebni licenza za brakove između xora ot
 8,200 wedding license for weddings between people from
 ednakâv pol.
 same sex
 'In this single year, at least 8,200 same-sex marriage licenses were
 issued in New York.'
 (bgTenTen12, 93014140)

The examples in (38) show that *edin* occurring with a demonstrative is not interpreted as an indefinite marker, but rather as a numeral providing the cardinality of 'one'. In this case, the demonstrative bears the [+referential] trait and checks it in SpecDP (letting it percolate down the structure). Since the left edge of the nominal expression is already occupied, specific *edin* cannot surface; instead, *edin* can appear lower in the structure in the projection hosting numerals.

Moreover, *edin* and demonstratives show a certain similarity from a morphosyntactic point of view. In Bulgarian, demonstratives do not generally co-occur with the definite article²⁴ and cannot be preceded by other nominal modifiers, as they are arguably the occupants of the higher edge of the nominal expression. The same holds for the specificity marker *edin*. The sentence

²⁴ As mentioned in fn. 11, Bulgarian displays phenomena of MD (Rudin 2019; Franks 2020). From the point of view of the theoretical framework adopted here, MD is accounted for without any further stipulation.

in (39) is taken from the questionnaire; it is safely taken to be grammatical (mean score: 5.87), even though it looks like a counterexample to what has just been stated.

- (39) Poznavam dvamata sinove na Elisaveta:
 know.1SG two.DEF sons of Elisaveta
edini-jat uči medicina, a drugi-jat—pravo.
 one-DEF studies medicine while other-DEF law
 'I know Elisaveta's two sons: the one studies medicine, and the other studies law.'

In (39) *edin* appears in the articulated long form (*edinijat*). In this case, however, it can be argued not to function as a specificity marker: the referent is not presented as indefinite, as the numeral picks an entity out of a set which has been previously specified and is therefore familiar to the hearer (*dvamata sinove* 'the two sons'). Moreover, the articulated form of 'one' always entails that the single entity is part of a larger (specified) group (Iliyana Krapova, p.c.). In the context of (39), 'one' is used to create a contrast with the second construal, as the opposition *edinijat – drugijat* (analogous to English "the one – the other") clearly shows. On the other hand, the co-occurrence with a higher modifier, such as a possessive, shown in (40), is ungrammatical. Sentence (40) scored 1.83 on average in the questionnaire.

- (40) *Imam mnogo prijатели ot različni točki na sveta.
 have.1SG many friends from different points of world.DEF
 Moja *edna* braziliska prijatelka ne moža da mi dojde
 my one.F Brazilian friend.F not could *da* I.DAT came
 na gosti minaloto ljato.²⁵
 on guest last.DEF summer

Intended: 'I have many friends from all over the world. A Brazilian (female) friend of mine couldn't come to visit me last summer.'

²⁵ An anonymous reviewer points out that the presence of the definite article on the possessive would make the sentence grammatical (i.e., *mojata edna braziliska prijatelka...*). However, as Iliyana Krapova (p.c.) pointed out, this is marginally possible and only with the meaning 'my only Brazilian (female) friend'. Hence, in such a case, *edin* would play the role of the numeral and would be interpreted lower in the structure.

The fact that *edin* in this instance cannot be preceded by the possessive is easily explained by the fact that the former arguably occupies the highest nominal projection.²⁶

5.2.3. The Semantics of *edin*

The comparison that was drawn between indefinite referential *edin* and the demonstratives finds further support in a cross-linguistic perspective by looking at their semantics and the conditions that license their occurrence.

Bernstein (1997: 95) observes that demonstratives are ambiguous between a deictic and an “indefinite specific” reading, as in (41):

- (41) a. This woman (right here) (deictic)
 = this woman
- b. This woman (from Paris) (indefinite specific)
 = a woman

Ionin (2006) analyzes the conditions which license the occurrence of the “indefinite specific” *this*, building on Fodor and Sag’s (1982) notion of referentiality. Crucially, Ionin analyzes the specificity associated with the use of “indefinite” *this* as including a noteworthiness condition, which plays a crucial role in its licensing. This property hinges upon the speaker’s manifestation of a certain degree of knowledge about the referent, or upon the fact that the referent itself displays some noteworthy property. Ionin (2006: 185) provides the examples reported in (42–43).

- (42) a. #I want to see *this new movie*.
- b. I want to see *this new movie* that my friends have been recommending to me for ages.

²⁶ In the framework adopted here, possessive adjectives are also occupants of the SpecDP position, so one might wonder how may *edin* and a possessive adjective co-occur. Possessive adjectives, as already acknowledged by Giusti (2002: 144), are merged lower in the structure and are moved for interpretative reasons to SpecDP only if that position is not already occupied by another element. Giusti argues that the original position of the possessive is SpecNP, as nouns such as some kinship terms assign a θ -role in that position. Let us imagine a structure containing both *edin* and a possessive in their base positions. Let us also assume that some feature on the head D acts as probe and looks for a goal that may check the feature required for the interpretation of the whole expression in SpecDP. Given their base positions, the numeral is the first available goal that the probe meets, and it is attracted to SpecDP. The possessive will be able to move but lands in the specifier of a lower re-projection of N, as happens in Italian when the possessive is preceded by the article (cf. Giusti 2015: 151 for a representation of this movement).

- (43) a. I found *this blue apple* on my plate!
 b. #I found *this apple* on my plate!

In (42b) the speaker's knowledge about some facts related to the movie (expressed by the relative clause modifying *this new movie*) suffices to license the use of non-referential *this*, contrary to what happens in (42a). What licenses the use of indefinite *this* in (43a), but not in (43b), is the adjective *blue*, which defines the noteworthy property of the apple.

The same use of "indefinite" 'this' is possible in Bulgarian as well. In a context in which there is no film to be deictically pointed at (e.g., a situation in which two friends are talking while walking in a park), (44) is infelicitous if uttered out of the blue and without any further information about the film in question. Sentence (45) is instead perfectly grammatical, as the key information licensing the use of the "indefinite" demonstrative is present.²⁷

- (44) #Iskam da gledam *tozi* film.
 want.1SG *da* see.1SG this film
 'I want to see *this* film.'

- (45) Namerix *tazi* kniga, za kojato mi govoreše.
 found.1SG this book for which I.DAT talked.2SG
 'I found *this* book you told me about.'

At first glance, it seems that in Bulgarian the conditions licensing the occurrence of specific *edin* correspond to those posited for English *this*-indefinites. Let us take a look at sentences (46–49), which exemplify the licensing conditions for *edin*.

- (46) Sâprugata na Ivan ima kovid. Toj e pritesnen i iska
 wife.DEF of Ivan has Covid he is worried and wants
 da govori s *edin* lekar, d-r Borisov, može bi
da talks with one.M doctor Dr. Borisov can COND
 go poznaváš?
 him know.2SG

'Ivan's wife has Covid. He is worried and wants to talk to a doctor, Dr. Borisov, maybe you know him?'

²⁷ I thank Assia Assenova for having provided me with the examples in (44) and (45).

- (47) Čux, če *edin* lekar otriča sâštествuvaneto na kovid.
 heard.1SG that one.M doctor denied existence.DEF of Covid
 Iskam da znam koj e toj.
 want.1SG *da* know.1SG who is he

'I heard that a doctor denied the existence of Covid. I want to know who he is.'

- (48) Elena pročete vsički knigi, koito ì preporâča
 Elena read all books which she.DAT recommended
edin prepodavatel. Ne znam koj e toj.
 one.M professor not know.1SG who is he

'Elena read all the books that a professor recommended to her. I don't know who he is.'

- (49) *Sâprugata na Ivan ima kovid. Toj e pritesnen i iska
 wife.DEF of Ivan has Covid he is worried and wants
 da govori s *edin* lekar, kojto i da e toj.
da talks with one.M doctor who and *da* is he

Intended: 'Ivan's wife has Covid. He is worried and wants to talk to a doctor, whoever he is.'

In (46) *edin* is referential in the most traditional sense of the term: the speaker is able to identify the referent, whose name is mentioned in the discourse. This sentence was accepted with a mean score of 5.41. As for the remaining examples, the noteworthiness requirement is satisfied in (47) and (48), but not in (49). In the latter, the speaker does not exhibit any knowledge about the doctor she is talking about, whose identity is not possible to establish, as shown by the expression *kojto i da e toj* 'whoever he is'. This sentence scored on average 2.76. In (47), too, the referent is not directly identified by the speaker, as revealed by the second statement (*Iskam da znam koj e toj* 'I want to know who he is'). In this case, however, there is a noteworthy property about the person who is being talked about, namely, the fact that he denied the existence of Covid (which is quite surprising given the fact that this person is a doctor). This noteworthy property licenses the occurrence of *edin*, as shown by the mean judgment score of 5.70. Similarly, (48) is accepted with a mean score of 5.65. Even if the action of recommending a book is not noteworthy in the traditional sense, it shows that the speaker has the knowledge of some property associated with the referent, in contrast with the ungrammatical (49). This is the property which specific *edin* shares with the "presentative marker" *edin*, which typically occurs at the beginning of fairy tales (see (5) on p. 6). In

these contexts, in fact, the narrator displays a certain amount of knowledge about the referent introduced by *edin*.

The current subsection has drawn a parallel between “indefinite” *this* (and *tozi*) and specific *edin*, showing that they pattern alike with respect to their licensing conditions. Their semantic similarity is another element which encourages a unified treatment of these items at the level of syntax as well. This is further empirically justified by a comment by Assia Assenova (p.c.), who observes that *edin* in the sentences (46–48), but crucially not (49), can be substituted by “indefinite” *tozi* ‘this’. Not only can these the two items be substituted for each other, but they are also in complementary distribution, as shown in (50).²⁸ This fact strongly suggests that they occupy the same position inside the nominal expression.

- (50) a. Pročetox *tazi* kniga, za kojato ti govoreše.
 read.1SG this book about which you.NOM talked.2SG
 ‘I read this book you were talking about.’
- b. Pročetox *edna* kniga, za kojato ti govoreše.
 read.1SG one.F book about which you.NOM talked.2SG
 ‘I read a book you were talking about.’
- c. Pročetox *tazi* (#*edna*) kniga, za kojato ti govoreše.
 read.1SG this one.F book about which you.NOM talked.2SG
 ‘I read this (particular) book you were talking about.’

This section discussed the instance of *edin* as a specificity marker, arguing that its position is likely to be the same as that of demonstratives, i.e., SpecDP, the left edge of the nominal expression. The next section will take into account the last stage of the development of *edin*, in which it behaves as an article-like item that is interpreted non-referentially.²⁹

6. *Edin* as an Article-Like Element

As argued above, the numeral *edin* partially shows properties of the stage of the indefinite article. Clearly, as was stressed by Geist (2013), *edin* cannot

²⁸ As an anonymous reviewer points out, it is possible to have the demonstrative and *edin* co-occurring. In such a case, however, *edin* receives the numeral interpretation that was mentioned in example (20).

²⁹ Here I refrain from labeling this occurrence of *edin* an “indefinite article”, as the grammaticalization path predicts. Thus, even though this development is expected, I will not commit myself in attributing to it the status of an indefinite article. What is relevant for the present discussion is its sharing of some features with articles.

be said to be a fully-fledged indefinite article at this stage. However, in this section, I will argue that *edin*, in its article-like function, already occupies the position traditionally assigned to articles, i.e., the head of the DP. Section 6.1 traces a parallel between non-specific *edin* and definite articles. Section 6.2 underlines the article-like properties of this instance of *edin*, and §6.3 outlines the advantages of this theoretical approach.

6.1. Parallel with the Definite Article

Out of the three features displayed by a full-fledged indefinite article identified by Geist (2013), Bulgarian *edin* only displays one, i.e., the ability to appear in a generic context with non-referential interpretation. Let us take a couple of examples from the questionnaire: (51) was accepted with a rate of 5.61, while (52) had an average score around 5.35.

(51) *Edna* žena vinagi e prava.
 one.F woman always is right
 ‘A woman is always right.’

(52) Statističeski *edin* bâlgarin živee sredno 75 godini.
 statistically one.M Bulgarian lives on.average 75 years
 ‘Statistically, a Bulgarian lives on average 75 years.’

In these examples, *edin* is interpreted in a completely different way with respect to the interpretation it receives when it is a specificity marker. The sentence in (51) is commonly interpreted as equal to ‘women are generally always right’. Similarly, (52) conveys the meaning that ‘Bulgarians generally live on average 75 years’. In this latter case, the referential reading which could have arisen in the former sentence³⁰ is prevented by using the adverb *statističeski* ‘statistically’. This amounts to saying that, in these instances, *edin* refers to a prototypical representative of the class of referents denoted by the NP (women and Bulgarians, respectively) rather than picking a specific entity out of the denotation of the NP. This use of *edin* is not limited to sentence-initial position, as suggested by (53) (taken from (11) above), which was judged perfectly grammatical by the native speakers consulted.

³⁰ Assia Assenova (p.c.), however, assures me that the most natural reading of sentence (50) is one in which *edin* is non-referential. A referential reading could of course arise, but only if the context contains a clear indication that *edin* is referring to a woman in particular.

- (53) *Edin* džentâlmen vinagi otvarja vrata na *edna* dama.
 one.M gentleman always opens doors to one.F lady
 'A gentleman always opens doors for ladies.'

The occurrence of non-specific *edin* in generic sentences is constrained to those sentences with a predicate selecting a non-kind-referring NP: thus, *edin*-NPs cannot appear as subjects of predicates such as *be extinct*, as is the case with English NPs introduced by the indefinite article (Krifka et al. 1995).

The fact that *edin* in these instances does not refer to a particular referent already indicates that it cannot occur in the same position as referential *edin*, as it would be unlikely that the same element could receive two different interpretations in the same position. More so, sentences like (51) are potentially ambiguous between a referential and non-referential interpretation; thus, finding the source of this difference in the syntax would be a welcome result.

I argue that this difference in the interpretation of *edin* is due to its diachronic reanalysis from SpecDP to D. As seen in §3.2, the D position in Bulgarian is specified with the [DEF] trait, with which the definite article agrees in a local configuration to be interpreted. It is interesting, but not surprising, to notice that the same sentences in (51–52) may be rephrased with a singular or plural NP inflected for the definite article (shown in (54a–55a) and (54b–55b), respectively). The resulting sentences obtain the same interpretation as those featuring *edin* (if a semantic difference is there, it is very subtle),³¹ as confirmed by the informants. Sentences featuring specific *edin* (e.g., (47)) cannot be rephrased using the definite article, since the referent would instead be presented as known to the hearer, as reported by the consulted informants for (56).

- (54) a. Žena-ta vinagi e prava.
 woman-DEF always is right
 b. Ženi-te vinagi sa pravi.
 women-DEF always are right
 'Women are always right.'

³¹ It is known that different kinds of NP display a different distribution with respect to the predicate they can combine with (Krifka et al. 1995). However, an extensive discussion on this issue would lead us too far away from the current topic. For the purpose of the present work, it is sufficient to know that *edin*-NPs can be interpreted non-specifically in a subset of generic sentences and that native speakers tend to interpret these in the same way as they would interpret NPs inflected for the definite article. A complete discussion of the subtle differences among different kinds of NP appearing in generic sentences in Bulgarian is left for future research.

- (55) a. Statističeski bǎlgarin-ât živee sredno 75 godini.
 statistically Bulgarians-DEF lives on.average 75 years
- b. Statističeski bǎlgari-te živejat sredno 75 godini.
 statistically Bulgarian-DEF live on.average 75 years
 ‘Statistically, Bulgarians live on average 75 years.’
- (56) *Čux, če lekar-jat otriča sâštestvuvaneto na kovid.
 heard.1SG that doctor-DEF denied existence.DEF of Covid
 Iskam da znam koj e toj.
 want.1SG *da* know.1SG who is he
 Intended: ‘I heard that the doctor denied the existence of Covid. I
 want to know who this is.’

This observation that the semantic contribution of generic *edin* is in this case (almost) equivalent to that of the definite article further strengthens the assumption that generic *edin* occurs in the head D, which is associated with (and also diachronically related to) the position of the definite article (cf. Giusti 1995).

This account could *prima facie* run into a problem: if generic *edin* is realized as the head D, the specifier remains empty and could then host a demonstrative. Still, the demonstrative cannot co-occur with generic *edin*, as it would force a specific reading of the indefinite, thus picking a single entity out of the set denoted by the NP, ultimately losing the non-referential interpretation. The impossibility of co-occurrence of the two elements is, however, naturally ruled out by the Doubly Filled XP Filter: the functional projection DP needs to be visible by realizing one of the two positions associated with it. Once *edin* is realized, the head D is overtly spelled out, and the specifier position need not (for Economy reasons, cannot) be overtly realized.

Another parallel with definite articles that supports the idea that non-specific *edin* is the product of the reanalysis of the specifier of the DP into the head D is the similarity of this process with that which led to the development of the definite article in Romance.³² In particular, Giusti (2001) argues that the Italian definite article developed from the morphological weakening of the Latin demonstrative *ille* in SpecDP. Its reduced form was reanalyzed as the head D, as shown in (57), which is the bracket notation of Giusti’s (2001: 167) representation.

³² The shift from the demonstrative to the article holds in this case as well: the Bulgarian definite article is diachronically derived from the old Slavic demonstrative pronouns in unstressed position, which cliticized onto the noun (cf. Manguileu 1987). I thank the anonymous reviewer for pointing this out.

(57) [_{DP} IL(LE) [_D Ø]] > [_{DP} Ø [_D IL(LE)]]

This gives strength to the proposed analysis, showing that the reanalysis of SpecDP into the head D is not an isolated phenomenon and that this same mechanism is responsible for the development of a grammatically related item in a quite unrelated language. Another interesting detail, which further supports the view of generic *edin* in D, is to be mentioned. As Giusti (2001: 197) admits, given the absence of lexical material in either the specifier or the head of the DP, the two structures may have coexisted for several generations. This is the case for specific and nonspecific *edin*, whose positions are hardly distinguishable if we look at the superficial level.

6.2. Article-Like Properties of Non-Specific *edin*

Superficially, non-referential *edin* occurring in generic sentences also displays two important features that are linked to articles: its phonetic weakness and its syntactic dependency on the head N (Giusti 1997).

As far as the former property is concerned, Alexander (2000: 55) (quoted in Leafgren 2011: 61) states that “[w]hen *един, една, едно* [*edin, edna, edno*] means ‘a’, Bulgarians tend to pronounce it with a much weaker accent than when it means ‘one’”. This indicates that *edin* is undergoing a process of phonological weakening, which is expected to ultimately lead to morphological erosion, as happened in the Slovene dialects of Friuli (Benacchio 2018).³³ Moreover, another piece of evidence in favor of the weakened phonetic form of non-specific *edin* is the impossibility of focusing it without producing a change in its interpretation. If *edin* is focused in a sentence like (58), it gets a specific reading (Iliyana Krapova, p.c.).

(58) #*EDNA* žena vinagi e prava.
 one.F woman always is right
 ‘A certain woman is always right.’

As for the syntactic dependence from the head N, it was shown that specific *edin* could license a null nominal (cf. (37b)). In the instance under investigation, however, it is not possible to separate non-specific *edin* from the N it introduces. Sentences like those in (59) are not interpretable in a non-specific

³³ In the Slovene dialects spoken in Friuli, “together with the accented forms of the numeral (*dyn, dnö, dnä; dny, dne*), we also have the corresponding clitic forms, in proclitic position, before the noun phrase. These forms mostly lack the initial phonetic element -d (*din/ni, nö/nu, na; ni/ne*). These forms no longer have a quantitative function, but confer an indeterminate value to the noun phrase, evidence that the referent is unknown to the listener” (Benacchio 2018: 205).

way, as the informants pointed out. Similarly, articles cannot be separated from the N they co-occur with (cf. (38)).

- (59) a. [Talking about women]
 **Edna* vinagi e prava.
 one.F always is right
 Intended: ‘A woman is always right.’
- b. [Talking about Bulgarians]
 **Statističeski edin* živee sredno 75 godini.
 statistically one.M lives on.average 75 years
 Intended: ‘Statistically, a Bulgarian lives on average 75 years.’

These are further pieces of evidence pointing in the direction of analyzing non-specific *edin* as a functional head realizing D, parallel to other articles. Let us now turn to some advantages of this analysis.

6.3. Advantages of Non-Specific *edin* in D

As far as the syntax-semantics interface is concerned, a strong reason to suppose that non-specific *edin* is in the head D is that it does not contribute to the interpretation of the noun it occurs with (as it does not pick any referent out of the denotation of the NP, whose extension remains unaffected). In this sense, its interpretation in the generic sentences it appears in is almost analogous to the interpretation of the definite article. Moreover, taking non-specific *edin* to be the spell-out of the head D has the advantage of providing an account for its co-variance with the structures displaying the definite article. Recall sentences (51) and (54a), repeated here in (60).

- (60) a. *Edna* žena vinagi e prava.
 one.F woman always is right
 ‘A woman is always right.’
- b. *Žena-ta* vinagi e prava.
 woman-DEF always is right
 ‘Women are always right.’

As shown by D-V&G, Bulgarian Ns never undergo N-to-D movement in overt syntax, but they do in LF if they are “bare”, i.e., if there are no other nominal modifiers and thus the definite article is found on the N itself, as is the case in (60b). The movement is necessary to make the DP visible at the interface, at

the same time checking the features of the definite article. In the case in which *edin* is inserted in D, no movement of N is possible in LF, as the position is already occupied. The movement is, however, not necessary, as the functional category DP is already visible at the interface. The two LF structures are given in (61).

- (61) a. [_{DP} [_D žena-ta] [_{NP} ~~žena-ta~~]]
 b. [_{DP} [_D edna] [_{NP} žena]]

Assuming (61), the two structures are likely to coexist in that they require the same derivational cost (cf. Biberauer and Richards 2006), and the system is not able to decide which one is more economical. In (61a), N features the definite article and needs to move in LF to the DP in order for the article to be interpreted by making the projection visible at the interface with semantics. This movement is not necessary in (61b), in which *edin* is directly merged in D, making the movement of N unnecessary. Note that the two constructions do not imply any violation of the Merge-over-Move Principle (cf. Chomsky 1995): in fact, the movement involved in (61a) is more economical in that it happens at LF, according to Procrastinate.

Assuming non-specific *edin* in D also lends support to the hypothesis that specific *edin* is in SpecDP. As was already pointed out, specific *edin* is assumed to behave like a demonstrative, being endowed with a [+referential] feature which is checked in SpecDP. This feature manifests itself in the possibility of the speaker (or of the bearer of attitude) to individuate the referent (or some noteworthy property of it) introduced by *edin*. Giusti's (2002) claim that the interpretation of the nominal expression takes place in SpecDP at LF translates in the assumption that the [+referential] feature can be checked only at the very left edge of the nominal expression. If an element does not appear in that position, it will not be able to have the [+referential] feature checked. Assuming this, the position of non-specific *edin* in D is naturally accounted for: as it does not appear in SpecDP, it does not get a specific interpretation.

Another theoretical advantage of differentiating the two positions inside the DP (specific *edin* in SpecDP and non-specific *edin* in D) is that it is possible to trace a straightforward parallel between the nominal left periphery and the clausal one (a parallelism already drawn by Abney 1987 and Longobardi 1994, inter alia). Interestingly enough, the assumption that the elements anchored to the speaker sit in SpecDP finds an interesting parallel with Giorgi's (2009, 2012) theory on the representation of the speaker's coordinates in the left periphery of the clause. Giorgi (2009) argues that the speaker's space-temporal coordinates are represented in syntax in the form of a deictic element pointing at the speaker. In a split-CP model (cf. Rizzi 1997), this deictic element is

realized in the highest layer, above ForceP.³⁴ Thus, the highest projection of the left periphery of the clause is the locus where the tense of the utterance is “anchored” to the speaker. Following the proposal assumed here, the left edge of the nominal expression would carry out the same function as the left edge of the clausal left periphery. As nominal expressions, unlike clauses, lack Tense (cf. Giusti 2006), the features that can be checked in SpecDP are arguably those which have to do with the speaker in the nominal domain, i.e., referentiality (and spatial deixis).

One possible issue raised by the present proposal is the morphophonological equivalence between *edin* sitting in SpecDP and *edin* sitting in D, implicating, instead, a difference between their properties, as the former is a specifier, while the latter is a head. Mainly, what remains to be accounted for is, on the one hand, the fact that *edin* in the head D still agrees with the nouns it modifies (while this is usually a trait of phrases sitting in specifier position which undergo Concord), and on the other hand, the fact that there is no morphologic erosion of this latter element. As for the latter, §6.2 showed that *edin* is undergoing a process of phonetic weakening. Moreover, as was pointed out, *edin* has not reached the status of a full-fledged indefinite article. Hence, one is led to conclude that the reduction of *edin* will occur in a more advanced stage of development of the article.

As far as the agreement issue is concerned, the situation is less dramatic if looked at from the perspective of the structure of nominal expressions. The assumption, presented in §3.1, is that the nominal spine is created by re-emerging the functional features of the lexical noun; this creates functional heads containing a copy of the features of the nominal expression. Since *edin* overtly

³⁴ Giorgi (2012: fn. 3) tentatively labels this projection “C-Speaker”, which is realized by the complementizer *che* ‘that’ introducing an indicative subordinate in Italian. In such case, shown in (i), it is not possible to delete the complementizer, while it is optionally realized when it introduces a subjunctive subordinate, as in (ii).

- (i) Gianni ha detto *(che) è incinta.
Gianni has said that is.IND pregnant
‘Gianni said that she is pregnant.’

- (ii) Gianni credeva (che) fosse incinta
Gianni believed that was.SUBJ pregnant
‘Giannia believed she was pregnant.’

(Giorgi 2012: 45)

Interestingly, (i) triggers Double Access Reading (DAR), i.e., the subordinate tense is checked both against the main subject’s temporal coordinate (*Gianni*) and that of the utterer (i.e., *now*). This means that (i) is true if the state of pregnancy of the third person holds both at the time Gianni uttered the sentence and *now*. Example (ii) does not trigger DAR; consequently, the state of pregnancy is understood to hold only at the time Gianni uttered the sentence. Thus, *che* in (i) encodes the speaker’s temporal coordinate: it triggers DAR and cannot be deleted.

displays the φ -features of the head N, it is a perfect candidate for being reanalyzed as a mere spell-out of the nominal features. Since each functional projection needs to be made visible, I argue that non-specific *edin* is reanalyzed as a reprojection of the functional features of the noun, thus sitting in head position.

The present subsection has extensively argued in favor of considering non-specific *edin* to be the spell-out of nominal features in head D. Once all the pieces of the puzzle have been set down, we can take a step back to look at the general picture obtained from the present analysis.

7. Summing Up the Chunks

The analysis developed so far has been independently motivated. However, looking at the more general picture, it also presents a great advantage from a theoretical point of view. In fact, the proposed grammaticalization path of *edin*, as described here, represents a perfect linguistic cycle. Section 7.1 outlines the features of grammaticalization processes. Section 7.2 describes the general process of grammaticalization of *edin*, showing its similarity with other cycles. Section 7.3 shows that the grammaticalization of *edin* can be considered a full-fledged grammaticalization process.

7.1. What is Grammaticalization?

Grammaticalization is a diachronic process whereby an item α is reanalyzed from being (semi-)lexical to being (semi-)functional. One of the most well-known examples of grammaticalization is represented by the so called “Jespersen cycle” (Jespersen 1917), which describes the way in which negation develops in English and other Indo-European languages (e.g., French). The cyclical nature of this development is given by the fact that, when a lexical item has fully grammaticalized (thus losing its original function), a new lexical item is added to compensate for the loss of the original meaning. This new item may in turn undergo the same process, creating a cycle. For example, the French preverbal negator *non* is at some point reduced to *ne* and thus needs to be reinforced. The postverbal marker *pas* is optionally added to reinforce *ne*, but at some stage, *pas* is interpreted as the “real” negator and is obligatorily inserted. *Ne* becomes optional (as it does not bare negative features anymore) until it is dropped, and *pas* becomes the only negative marker. This process is often accompanied by a loss of phonological weight and semantic specificity (van Gelderen 2008). The cycle of negation in English (cf. van Gelderen 2013 and references therein) follows a similar path.

It is of great interest to investigate the syntax that underlies these changes and the principles that guide the cycle, as they can perfectly account for the

change of Bulgarian *edin* from numeral to specificity marker, and ultimately to article-like marker of genericity (see §7.2).

Collecting together what was proposed in her earlier works, van Gelderen (2011) proposes that linguistic cycles are driven by the reanalysis of formal features (introduced by Chomsky 1995), which are accessible during the derivation. They may be either interpretable or uninterpretable. The former ones are readable by the semantic interface, while the latter are not and thus need to be checked and eliminated. In linguistic cycles, interpretable features are reanalyzed as uninterpretable ones, which are more economical in that they cause the derivation to proceed in order for them to be eliminated. The driving principle is stated by van Gelderen (2013: 246) as in (62), in which she provides the example of the negation cycle in English.

(62) Feature Economy

Minimize the semantic and interpretable features in the derivation:

DP in the VP	Specifier of Neg	Head Neg	Negative affix
Semantic	> [iF]	> [uF]	> [uF] ³⁵

The negation cycle in English can be captured by the stages described in (62): the typical Old English negator *ne* ‘not’ bears negative interpretable feature [iF], which is subsequently analyzed as [uF], and thus acts as a probe searching for a goal to attract in the specifier of the Neg(ation)P(hrase) to eliminate the [uF]. In Middle English, the negative argument *nowuth/nan wuht* ‘no thing’ is promoted to SpecNegP, as it bears a negative semantic feature. Afterwards, the negative [iF] of the specifier is reanalyzed as [uF], and it reduces and shifts to the head Neg position. In this way, the cycle is fed and goes on in the same way.

In cycles, mainly two principles come into play, reported in (63) and (64) (from van Gelderen 2011: 13–14).

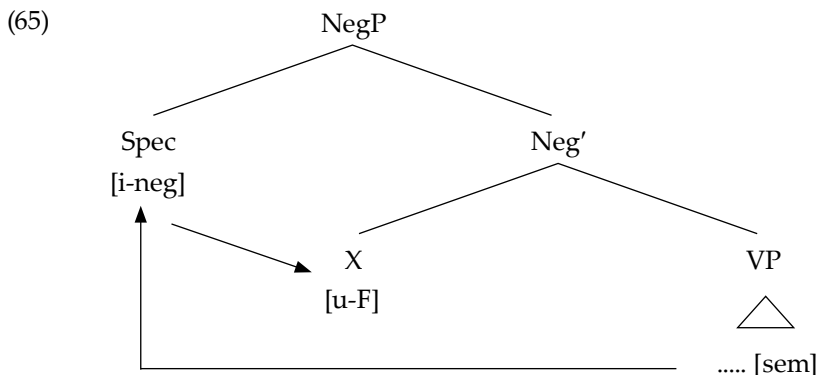
(63) Head Preference Principle (HPP): Be a head, rather than a phrase.

(64) Late Merge Principle (LMP): Merge as late as possible.³⁶

³⁵ “Semantic” refers to “semantic features” of the predicate, e.g., the verb *remain* has the semantic feature [duration] (van Gelderen 2013: 242). “iF” stands for “interpretable feature”, while “uF” indicates “uninterpretable feature”.

³⁶ For the sake of consistency, I will refer to the two Economy principles reported here. As pointed out by an anonymous reviewer, however, these principles are not entirely new in the literature on syntax: HDD is equivalent to Cardinaletti and Starke’s (1999) “Minimize Structure”, while LMP is grounded on the same principle underlying Chomsky’s (1995) “Procrastinate”. It should be pointed out, however, that LMP is not equivalent to Procrastinate, which favors LF movement over movement in overt

As far as the cycle of negation is concerned, LMP is responsible for the merging of the negative adverb from its base position to a higher one, i.e., SpecNegP. This complies with general Economy, as directly merging a phrase in a high position is less costly than merging it in a lower position and remerging the element higher in the structure. Once the negative adverb is merged in SpecNegP, the HPP intervenes in reanalyzing the specifier as a head. The whole negative cycle is graphically represented in (65) (reported here from van Gelderen 2013: 246).



The model provided in (65) is consistent with a formal approach to grammaticalization (cf. Roberts and Roussou 2003), in that it involves a structural shift “upwards” in the functional hierarchy, which then involves a loss of movement (as the element is directly merged higher in the structure). Moreover, this process goes hand in hand with phonological reduction (from *nowuth/nan wuht* to *not*) and semantic bleaching of the original element (which, in van Gelderen’s terms, loses its “semantic features”).

One last thing to be mentioned to conclude this section is that there are three core features which distinguish grammaticalization (Diewald 2011: 367): (i) paradigmatic integration, (ii) obligatoriness, and (iii) relational meaning. The property in (i) refers to the Jakobsonian idea that a grammaticalized item is, by definition, the marked member of an opposition with a notionally unmarked zero element and, as such, becomes a member of a paradigm (cf. Diewald 2011). In virtue of that, (ii) expresses the necessity of operating a choice between the opposite values of the paradigm, i.e., the information conveyed by this opposition needs to be expressed by choosing one of the two items (either the grammaticalized one or the notional zero). Importantly,

syntax. LMP is instead intended by van Gelderen as a principle favoring the direct merge of a phrase in a higher structural position rather than its low merge followed by its upward movement.

the obligatoriness requirement is a matter of degree: the grammaticalized element may be obligatory in some contexts but not in others (Diewald 2011; Lehmann 1995/1982). The property in (iii) assumes that grammatical signs create a link between the element they modify and another entity, which typically results in an indexical relation (e.g., with the speaker). A typical example of (iii) is subjectification (cf. Traugott 1989, 1995), in which a grammaticalized item comes to encode the speaker's perspective (e.g., the hortative *let's* developed from the imperative construction *let us*).

7.2. What About *edin*?

As pointed out in §1.2, the development of different functions of *edin* is qualitatively different from the process of grammaticalization depicted by the Jespersen cycle.³⁷ In the case of negation, the newly grammaticalized negative element supersedes the old one, thus maintaining a sort of “equilibrium” inside the lexicon: one item is gained, but another one is lost. Things are different when looking at *edin*: the newly grammaticalized item(s) do(es) not cause the loss of the original one, i.e., the numeral. However, there are many reasons to consider this as a process of grammaticalization with full rights.

Assembling the pieces of the proposal outlined in the previous sections, one notices that the syntactic analysis proposed for the numeral *edin* in Bulgarian is perfectly in line with this model of grammaticalization of the negator in (62). The path à la van Gelderen is summarized in (66).

(66) The cycle of Bulgarian *edin*

SpecNumP		SpecDP		Head D
[iF]	>	[iF]	>	[uF]

In this view, *edin* starts out as a numeral, and in its grammaticalization process, some of its features are reanalyzed and some others are lost. It is important to point out that the model I am proposing here is to be taken as a diachronic one, since grammaticalization is a process which unfolds over time.³⁸

³⁷ I am referring here to *edin*, but the same reasoning straightforwardly applies to the process of grammaticalization of the numeral ‘one’ cross-linguistically.

³⁸ I am not claiming a sort of “online grammaticalization”, i.e., that *edin* always enters the numeration as a numeral and then undergoes movement based on its function. What I am trying to do here is look at synchrony to understand which syntactic changes may have occurred in the linguistic development of Bulgarian. This provides a model which can be used to guide a corpus study in search of diachronic data supporting or refuting the hypothesized development of *edin*.

A question, however, arises: why is *edin* eligible to undergo this process? The answer is already provided by Givón (1981: 51):³⁹

Quantifying expressions [...] *imply referentiality but do not imply prior-acquaintance/familiarity*. They are thus the only major class of noun-modifiers in the NP that fulfils the requirement for the development of a referential-indefinite marker. (*italics mine*)

Following Givón's suggestion, the numeral *edin*, in its cardinal function, is endowed with an interpretable quantificational feature [+quant] roughly indicating that the set of the referent contains only one element. This feature also implies referentiality (indicated as [+ref] in the representation in (67)), as the entity needs to have a reference to be quantified.

Let us suppose that in specific contexts nominal expressions with a singular head N have a referential [uF] in D which acts as a probe,⁴⁰ searching down the tree for the first suitable goal bearing a referential feature [+ref], finding it in the numeral *edin*. As a consequence, *edin* is attracted to SpecDP, checking and eliminating the [uF] on the head. This probe-goal relation (and consequent movement of *edin* to SpecDP) is repeated over time. Once this movement is well established, LMP applies, merging the item directly in SpecDP, which is more economical than remerging the item from a lower to a higher position. This is an instance of what has thus far been called "specific *edin*". After this stage, some specific syntactic configurations (i.e., subject position of generic sentences with individual-level predicates) create favorable conditions for the application of HPP, which causes the interpretable referential feature of *edin* in the specifier to be reanalyzed as an [uF] in the head D. This follows naturally from Giusti's assumption that articles are bundled with (abstract) Case features (cf. §3.1), and Case is per se uninterpretable (cf. Giusti 2011). This [uCase] feature is checked by the head selecting the DP, e.g., a lexical verb. As said before, this stage of the process (the reanalysis from specifier to head) is not generalized to all occurrences of *edin*, which is a sign that this item has only quite recently entered this stage. This is probably the reason why morphological erosion has not applied yet, although at the present stage, it is

³⁹ An interesting proposal by Crisma (2015) regarding the grammaticalization of *a(n)* in English is that the numeral 'one' is the only cardinal having both the lower bound ('at least one') and the upper bound ('at most one') as part of the lexical meaning (while in the other numerals, the upper bound is only implicated; cf. Crisma 2015 and Horn 1972). As such, 'one' has a special status, and both the upper and lower bound may be bleached during the process of grammaticalization. I will not dwell on this inspiring proposal here, and I direct this question to future research.

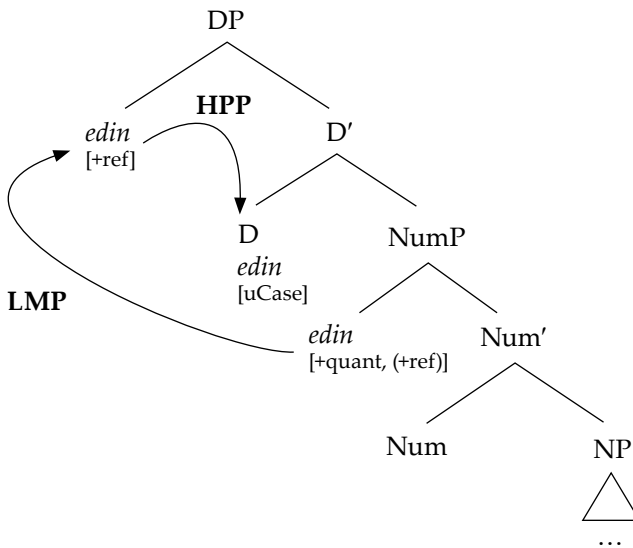
⁴⁰ This is in line with Longobardi's (1994) proposal that the DP layer is independently needed for referential requirements.

possible to trace a phonetic reduction, with *edin* in generic sentences losing the independent accent and being unable to be focused.

If there is still no (superficial) reduction of *edin*, the process of semantic bleaching is instead attested. Givón's (1981) insight is particularly interesting in this respect: the feature distinguishing numerals is that they not only express cardinality but also imply referentiality. The process of semantic bleaching of the numeral 'one' seems to involve the gradual loss of the quantitative semantics to leave space for the referential one. This could be described by the Langackerian metaphor of glasses (although not in the sense of Langacker 1990). If we wear glasses and we focus on some external object, the construal of the glasses fades away from our consciousness and we no longer notice it. Something similar is likely to happen with 'one': the referential implication becomes the "object of attention", causing the rest (in this case, the quantitative semantics) to fade away.

Coming back to *edin*, it is possible to notice that there is a striking analogy in the syntactic positions between linguistic cycles and the "path" of grammaticalization which *edin* undergoes. The latter is exemplified in (67), which is analogous to the representation given by van Gelderen (2013) of the negation cycle reported in (65).

(67)



This analogy with the syntactic model of grammaticalization of negation in (63) seems a good reason to believe that the analysis sketched up to this point may at least be on the right track. Moreover, this model is perfectly in line with Crisma's (2015) proposal of grammaticalization of the cardinal *an* in Old

English into the indefinite article *a(n)* in present-day English. Crisma (2015: 142) distinguishes three stages in the historical development of *an*:

- i. In Old English, it is a cardinal “merged in a quantity projection lower than D, say NumberP or #P”.
- ii. At a later stage, *an* becomes an existential operator marking specificity “found in (or in some position in the D-field)”.
- iii. In present-day English, *a(n)* as an indefinite article is an expletive merged directly in D.

The model presented here perfectly integrates with Crisma’s analysis of the grammaticalization of the indefinite article in English. This suggests that the model in (67) could in principle be extended to other Slavic and non-Slavic languages (e.g., those mentioned in §1.2, but also Romance languages) in which the numeral ‘one’ is grammaticalizing (or has grammaticalized) into an indefinite article.

7.3. An Instance of Grammaticalization

Before concluding, let us have a look at the general properties of the process to see which implications it has as far as the concept of grammaticalization is concerned. As shown in the previous sections, this process qualifies with full rights as an instance of grammaticalization. However, it must be acknowledged that it is qualitatively different from other processes which fall under the same umbrella term (e.g., the negation cycle). The difference lies in the fact that the new grammaticalized functions stemming from the numeral *edin* pile up and are added in the lexicon, without causing the loss of the source numeral.⁴¹

Leaving this difference aside for the moment, the development of *edin* displays the features that characterize grammaticalization. In Roberts and Rousou’s (2003) formal approach, the change *edin* undergoes involves an upward

⁴¹ I will not take any stand here about the mental representation of the newly grammaticalized functions of *edin*, i.e., whether they are represented as separate lexical items or whether it is a matter of underspecification of the only representation of *edin*. The case of English (and many other languages) would suggest the creation of a separate lexical item for the most grammaticalized functions (numeral *one* vs. indefinite article *a(n)*). This view poses a theoretical issue, i.e., adding new items to the lexicon without dispensing with the “old” ones is anti-economical. However, this process seems to be quite productive (an example is the creation of neologisms for new referents, e.g., *computer* or *to google*).

movement in the functional hierarchy, accompanied by semantic bleaching and a prelude of phonological weakening.

The process *edin* undergoes also fits perfectly within Diewald's (2011) characterization of grammaticalization (see §7.1). The new grammaticalized functions respect the three main features outlined above:

- i. Paradigmatic integration: *edin* as a marker of specific indefiniteness enters a paradigm in opposition to the zero marking (bare NPs). The two values of this paradigm—*edin*-NPs vs. bare NPs—is likely to encode the “token” vs. “type” opposition (cf. Gorishneva 2013).
- ii. Obligatoriness: once *edin* is grammaticalized as an indefinite marker or as an article-like element, its insertion is obligatory at least in some contexts, e.g., when introducing indefinite topics (cf. (10)) or in some cases in generic contexts (cf. (11), although in co-variance with the definite article).
- iii. Relational meaning: *edin*, from a marker of cardinality, grammaticalizes an indexical relation with the speaker, i.e., (non-)specific indefiniteness. In this sense, we could trace a process of *subjectification* alongside the grammaticalization of *edin*: from cardinal numeral, it becomes a marker of the attitude of the speaker towards the hearer. In fact, by definition, (non-)specific indefinites introduce referents (un)familiar to the speaker (familiar if specific, unfamiliar if non-specific) but which are presented as unknown/unfamiliar to the hearer. In this sense, the use of an indefinite reveals the speaker's inference that the hearer does not possess the knowledge to identify the referent that is being introduced in the discourse.

Acknowledging that the grammaticalization of *edin* also involves a certain degree of subjectification allows us to trace yet another interesting parallel: also in the case of *edin*, the new “subjectified” functions coexist with the original element, as is the case with items undergoing subjectification described by Traugott (1995).⁴² After all, cases of layering (i.e., the coexistence of both the grammaticalized item and the original source) are common in the numeral domain as well; as von Mengden (2008) argues, expressions for body parts are the main source for cardinal numerals. In some languages, the original body-

⁴² For example, the andative construction *to be going to* coexists with *to be going to* as a marker of future tense. *I think* as a main clause verb selecting a first-person singular subject coexists with *I think* as a parenthetical construction with great distributional freedom and with *I think* as a fixed phrase expressing speaker's epistemic attitude (Traugott 1995).

part expression is still in use in its original meaning, together with the more grammaticalized meaning of cardinal numeral (von Mengden 2008: 299).

Since this is an instance of grammaticalization, the regularities found cross-linguistically lead to an important observation—namely, that such consistency is unlikely to arise from some sort of featural underspecification of the original lexical item, otherwise we would expect much more heterogeneity in this process. It is instead likely that syntax itself leads the process constraining the set of possible operations that can be applied to the lexical items. This is visible in both of the hypothesized changes. Since downwards movement is not allowed, the lexical item can only move upwards; more so, being originally merged in a specifier position, its landing site is a higher specifier position (from SpecNumP to SpecDP). Serving a nominal function, the item cannot move any higher from the leftmost edge of the nominal expression, as it would exit the nominal domain. The only operation allowed at that point is the reanalysis from specifier to head position to reduce the structure to be computed. In this way, the track the whole process moves along is already traced and constrained by syntax. Assuming the universality of syntactic structures, the consistency found cross-linguistically can be accounted for.

8. Conclusion and Future Perspectives

The present work has tried to characterize the syntax underlying the process of grammaticalization of the Bulgarian numeral *edin* 'one', which already is in an advanced stage of development. Its base function is that of a cardinal numeral, quantifying the referent it is combined with. Furthermore, it also functions as a well-established specificity marker, which identifies (instead of quantifying) the NP referent it co-occurs with. *Edin* has also entered the last stage of grammaticalization, corresponding to that of the indefinite article, as it may be used non-referentially in generic contexts (cf. Geist 2013). Here I analyzed these three different functions, assigning to each of them a different structural position.

I argue that cardinal *edin* is merged in the specifier of NumP, a functional projection below the DP. Its specifier status is mainly suggested by (i) the adjectival Concord with the head N; (ii) the lack of selectional properties (e.g. the impossibility to select for the *brojna forma* shows that *edin* can only Concord with N just like APs); (iii) the existence of idiomatic expressions such as *edin i sâšt* 'one and the same' in which *edin* is coordinated with an AP; and (iv) the impossibility of being crossed by an AP.

In its function as a specificity marker, *edin* is instead hosted in SpecDP, which is the site of referential elements and the locus in which the interpretation of the whole nominal expression takes place at LF (cf. Giusti 2002). That position is supported by a strong parallelism between specific *edin* and demonstratives, which are elements argued to occupy SpecDP (cf. Brugé 2002).

Interestingly, the licensing conditions for the use of specific *edin* are the same as those which license the occurrence of “indefinite” *this* (cf. Ionin 2006), which also hold for Bulgarian “indefinite” *tozi* ‘this’.

I propose that, when *edin* is used non-referentially in generic contexts, it occurs in the head D and spells out abstract Case features of the nominal expression. This parallelism is also suggested by the possibility of paraphrasing the sentences containing non-referential *edin* by substituting it with the definite article. It also follows the reanalysis from SpecDP to D that happened in the development of the definite article from demonstratives in Romance (cf. Giusti 2001).

The overall model has the advantage of describing a complete linguistic cycle which is driven by an Economy Principle imposing the minimization of interpretable features in the derivation (cf. van Gelderen 2013). The cardinal *edin* starts out in SpecNumP. Specific *edin*, however, is merged in SpecDP, applying the Late Merge Principle (van Gelderen 2011: 14), according to which the direct merging of a phrase in a higher structural position is preferred over its remerge from a lower to a higher position.⁴³ Subsequently, the Head Preference Principle (van Gelderen 2011: 13) is applied, and the specifier of the DP is reanalyzed as the head D.

Another important advantage of the model is that it allows us to account for the cross-linguistic consistency of the grammaticalization of ‘one’, assuming that syntax guides the whole process by constraining the possible operation to be applied to the lexical item undergoing this change. Assuming that the syntactic backbone is universal, the homogeneity in the stages of grammaticalization of ‘one’ stems from the same constraints imposed by syntax on the possible set of operations to be applied.

As always, there are some open issues which will need to be tackled in the future. One particular open question pertains to when the changes in the status of *edin* took place. This issue urges the investigation of corpora from Old to Modern Bulgarian to characterize this process of grammaticalization from a diachronic point of view. Moreover, another aim of future research is the possible extension and verification of this model with regard to other languages. Since the process of grammaticalization of the numeral ‘one’ is very common and consistent (the order of stages seems to be homogeneous, cf. Heine 1997) among all the natural languages, this model is likely to have cross-linguistic validity. More research is needed to confirm this claim, which I, however, deem promising. A final issue not faced here is a thorough exploration of the syntax of the plural ‘one’ *edni*. Future research will need to investigate to what

⁴³ An anonymous reviewer objects that this runs counter to the minimalist “Merge-over-Move requirement” (cf. Chomsky 1995). However, LMP does not contradict Merge-over-Move; it just favors the shorter derivation, preferring the Merge option to the combination of Merge + Move.

extent its syntax may overlap with that of the singular *edin*, and where their differences may be located in a semantic-syntactic perspective.

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