# Article Drop and Case Marking in Romanian

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#### **Abstract**

In Romanian, the definite article cannot be overtly realized if the maximal nominal projection contains only the lexical N and occurs in the complement position of (most) accusative-taking prepositions. Arguing that a definite D is present in the underlying syntactic representation, I describe article drop as a PF-phenomenon. I follow Dobrovie-Sorin's (2007) idea that article drop is conditioned by a complex head formation operation that assigns a X<sup>0</sup>-status to DPs of the form [D<sub>+def</sub> N<sup>0</sup>], but I show that her proposal of extending complex head formation to P is contradicted by the behavior of article drop in coordination. Therefore, I propose a different explanation for the limitation of article drop to the complement of P: based on the fact that article drop also occurs with prepositional case markers (which are K heads rather than Ps), I propose that article drop only occurs when D lacks Case. Underlying this analysis is a novel theory of case marking in Romanian: I propose that inflectional marking involves null Ks that trigger spreading of a Case feature to their complement (following Norris 2014, 2018), whereas prepositional marking involves an overt K and no feature spreading. Prepositions that trigger article drop are assimilated to K heads

in that they take a DP, rather than a KP, complement, playing K's role of closing-off the nominal extended projection.

Keywords: definiteness, article, prepositions, case, Romanian

#### 1. Introduction

A peculiar property of Romanian is the ban on definiteness marking on nouns preceded by accusative-taking prepositions, if the noun phrase consists of the noun alone:

a. A pus cărțile pe masă/\*pe mas-a.
has put books-the on table / on table-the
'(S)he put the books on the table.'
b. Au pus cărțile pe [ {mas-a / \*masă} de joc].
has put books-the on table-the / table of game
'(S)he put the books on the game table.'

This phenomenon has received two accounts in the formal linguistics literature: (i) according to Dobrovie-Sorin (2007)<sup>1</sup>, a definite D is present in the abstract syntactic representation and is deleted at PF; (ii) according to Hill & Mardale (2021), the D-level is not projected. In this paper, I will argue in favor of (i) over (ii), but I will also present some data that are problematic for the analysis proposed by Dobrovie-Sorin (2007), based on complex head formation between P, D and N. I will propose a modified account, which limits complex head formation to D and N. The fact that article drop only occurs after prepositions will be derived from a condition requiring that the definiteness morpheme that is dropped does not contain a Case feature.

#### 2. Evidence that a definite D is projected

If the absence of definiteness marker in (1) had been a matter of absence of the D-layer, we would expect (1) to receive a definite as well as an indefinite reading, like in languages without articles such as Latin or Japanese. However, the example (1) cannot be translated as '(S)he put the books on a table'. *Masă* 'table' is necessarily interpreted as definite (it has all and only the interpretations that *masa* 'the table' would have in a non-prepositional context such as *Au adus masa* 'they brought the table'). The reason for the impossibility of an indefinite reading in (1) is that count bare singulars are severely restricted in Romanian, like in similar languages with a fully-developed article system, such as Spanish, Italian or Modern Greek (see Dobrovie-Sorin 2013, Dobrovie-Sorin & Giurgea 2015). In locative PPs, count bare singulars are only allowed if the PP together with the verb refers to a conventionalized activity or state of affairs, the conditions of use being similar to those noticed for weak definites (on which see Aguilar-Guevara 2014 for a detailed description) – see (2), where a modified noun is used, to prevent the context of article drop (examples from Dobrovie-Sorin 2013: 72; on the distinction between article drop definites and genuine bare nouns, see

Adopted by the *Reference Grammar of Romanian* published at Benjamins, see Mardale et al. (2013).

the discussion in Mardale 2008: 83-85); (2)c shows that with a noun phrase of the type in (2)b, a definite interpretation requires the article, as we have seen for (1)b:

- (2) a. Dorm pe pat tare/ \*pe masă tare. sleep.1SG on bed hard on table hard 'I sleep/am sleeping on a hard bed/??table.'
  - b. Cartofii se prăjesc în tigaie de Teflon. potatoes-the REFL fry in pan of Teflon 'Potatoes need to be fried in a Teflon pan.'
  - c. [context: reference is made to a specific pan]

    Cartofii se prăjesc în tigaia de Teflon.

    potatoes-the REFL fry in pan-the of Teflon

    'The potatoes are being fried in the Teflon pan.'

As in (1) the locative plus the verb do not refer to a conventionalized activity,  $mas \check{a}$  in (1)a 'table' cannot be a bare count singular of the type in (2) – (1)b clearly shows that a modified bare noun is ungrammatical. The fact that (1)a is not only acceptable, but also compulsory in order to express a definite reading, and that it doesn't allow an indefinite reading, receives a straightforward explanation if we assume that in the abstract syntactic representation, the noun is not bare, but is embedded in a DP with a definite D, whose covertness is a matter of spell-out.

Because bare plural and mass nouns are more restricted, a definite/indefinite ambiguity arises more easily in that case, with unmodified nouns:

(3) Vorbeşte despre case / vin.
talks about houses wine
'(S)he's talking about (the) houses/(the) wine.'

In accordance to the conclusion we have reached above about the absence of ambiguity in (1), the ambiguity in (3) is structural: *case* 'houses' and *vin* 'wine' may be either definite DPs (with a covert definite D) or bare nouns (analyzable as DPs with a null D, see Longobardi 1994, or as NumPs, see Dobrovie-Sorin et al. 2006).

## 3. More on the article drop configuration

#### 3.1 On the structure of the DP where article drop applies

Before moving to the analysis, let me present further empirical details of the phenomenon.

Regarding the condition that the extended nominal projection should consist of the noun alone, two observations are in order. First, the null/empty N resulting from ellipsis is visible for the rule: if we apply N-ellipsis to the noun in *ultimul vagon* 'the last coach', we obtain a DP whose only word contains the definite inflection (*ultimul*), yet article drop does not apply, as shown in (4)b.

(4) a. Stă în ultimul vagon → b. Stă în ultimul / \*în ultim.

stays in last-the coach stays in last-the in last

'(S)he's sitting in the last coach (of a train)' → '(S)he's sitting in the last one'

This shows that the article drop rule does not apply on a surface string of words, but is sensitive to the structure. In (4)b the complement of D is a complex constituent, consisting of an ordinal adjective and a null N, unlike in (1)a, where the complement of D only contains the N.

Second, it is not just the complement of D that must contain only the N head: if the extended nominal projection contains items preceding D, article drop does not apply, see the pre-D universals in (5)a and the emphatic modifier in (5)b.

(5) a. în toate/amândouă cărți\*(-le) in all /both books-the b. de însuși rege\*(-le) by himself king(-the) 'by the king himself'

On the other hand, if the definite DP is modified by an appositive relative, the rule does apply:

(6) în carte(\*a), pe care tocmai o citisem, .... in book(the) DOM which just CL.ACC had.read.1SG 'in the book, which I had just read,...'

We may thus state the rule, informally, as requiring that the entire extended nominal projection consists only of D and N, on the assumption that appositive relatives are outside the extended nominal projection.

With certain kinship and role nouns, the definite form of the noun may be treated as a proper name, in which case the article is not dropped, see (7). The nouns in (7) do not refer to just any grandfather, boss or mother unique in a certain contextual setting, but to a person whose reference is fixed for the discourse participants like for a proper name – usually, the speaker's or hearer's grandfather, boss or mother.<sup>2</sup>

(7) E pentru bunicu' / şefu' / mama. is for grand-father-the boss-the mother.the 'It's for grandpa / for the(/my/our) boss / for mum.'

(ii) pentru tata / tată(\*1) for father-a father(the) 'for dad/for the father'

The noun  $tat\check{a}$  'father' distinguishes the definite common noun use and the proper name use by different forms: the proper name form is tata 'daddy' (with the -a article that normally marks the feminine, except for a handful of masculines in - $\check{a}$  -  $pop\check{a}$  'priest',  $pap\check{a}$  'pope'), the definite common noun form is  $tat\check{a}l$  (a morphological irregularity, the only form where the -l article attaches to the theme vowel - $\check{a}$ ). Expectedly, only  $tat\check{a}l$  is freely allowed with modifiers or complements (see (i)) and undergoes article drop (see (ii)):

<sup>(</sup>i) tatăl/\*tata Cristinei; tatăl/\*tata cel mai tânăr father-the Cristina-GEN father-the SUP more young 'Cristina's father' 'the youngest father'

The absence of article drop indicates that the definite inflection does not realize definite D, but is part of the noun (for the proper name syntactic behavior of such nouns, see fn. 2 as well as Miron-Fulea et al. 2013).

## 3.2 On the prepositions triggering article drop

Article drop is triggered by accusative-taking prepositions, with three exceptions: cu 'with'<sup>3</sup>, pe in the collocation a face pe... 'to play, act as, pretend to be...', and de-a in a se juca de-a, introducing a role in a game (see Mardale 2007, Mardale et al. 2013)<sup>4</sup>:

- (8) a. Mă întâlnesc cu profesorul /\*cu profesor. REFL meet.1SG with teacher-the with teacher 'I meet the teacher.'
  - b. Face pe deștept-ul. makes on smart(MSG)-the
    - 'He's playing smart.'
  - c. Se joacă de-a doctor-ul. REFL plays *de-a* doctor-the '(S)he's playing at the doctor's.'

I will come back to these exceptions after proposing my analysis, in section 7.

- Scrie cu atentie /\*atentia (i) writes with attention/ attention.the '(S)he writes/is writing carefully.'
- / cu {atenție/\*atenția} (ii) Scrie cu mare {atenție /\*atenția} writes with big attention/attention.the with attention/attention.the increased '(S)he is writing very carefully / with increased attention'

Manner cu allows definites only when a modifier introduces a particular degree of the quality denoted by the noun:

- Scrie cu atenția (iii) pe care a manifestat-o întotdeauna writes with attention-the DOM which has manifested-CL.ACC always '(S)he writes with the same attention that (s)he has always shown.'
- To these exceptions, Nedelcu (2013) adds decât 'than' and ca 'as, than'. However, these items may be treated as complementizers  $- dec\hat{a}t$  has clear complementizer uses, like Engl. than, while ca does not allow an overt verb, but does allow comparative deletion with more than one remnant:
- făcut mai multe cadouri ca [el mie]. (i) 3s.DAT-have.1 made more many presents than he me.DAT 'I gave him more presents than he gave me'

It is true that these items resemble prepositions in that they may be followed by a DP to which they assign accusative. But it appears that this DP is not a direct complement of ca/decât, but rather the subject of the remnant, because it can be followed by a second remnant, see (ii):

(ii) A răspuns mai bine decât/ca mine has answered more good than me.ACC yesterday '(S)he answered better than I did yesterday.'

In examples such as (i), pointed out by an anonymous reviewer as potential exceptions to the absence of article drop with cu, we are not dealing with article drop; the article is excluded in (i) because manner cu 'with' disallows definites, selecting bare nouns, as shown by the fact that the article is still impossible if the noun is modified, see (ii):

## 4. Article drop and complex head formation

In section 2 we concluded that a definite D is present in the underlying syntactic structure, the obligatory absence of definite inflection being a matter of D's surface realization.

Depending on how exactly we analyze the definite inflection in Romanian – a point on which I do not intend to make a choice here – article drop can be described as *a PF-rule that deletes the '+def' feature* carried by the inflectional morpheme of the noun (see *mas-a* 'table-FSG.DEF' vs. *mas-ă* 'table-FSG') or the definite morpheme, in case the definite inflection is decomposed into two morphemes (a decomposition at hand in several cells of the paradigms, see e.g. plural *mes-e-le* 'table-fpl-DEF.FPL', *porc-i-i* 'pig-MPL-DEF.MPL').

As we have seen in sections 1 and 3.1, the conditions in which this deletion rule applies should be stated in structural, hierarchical terms. The complex PF-architecture developed in the Distributed Morphology framework makes room for this type of rules. Embick & Noyer (2001) distinguish two types of PF-rules: (i) rules applying before vocabulary insertion, sensitive to abstract syntactic structure, and (ii) rules applying after Vocabulary Insertion, sensitive to linear adjacency and to the phonological properties of the terminals. Since article drop is sensitive to the abstract structure, making reference to the constituency of the extended nominal projection, it belongs to type (i).

But how exactly should this rule be formulated? The fact that the entire extended nominal projection should consist only of N and D indicates that the word-vs. phrase-level status is at stake. Given that the definite D is realized as an inflection, it is reasonable to assume that article drop requires that the extended nominal projection has  $X^0$ -status.

This intuition was pursued by Dobrovie-Sorin (2007), who offers an account which covers by a single rule both conditions on article drop – the word-level status of the extended nominal projection and the fact that it applies after a preposition: she proposes that the  $X^0$ -status extends to the whole [P+D+N] string, and article drop is a deletion rule applying in such complex heads. For this type of complex head formation, she assumes an operation that creates complex  $X^0$ -constituents – called *extended heads* – without involving movement (previously, complex head formation was normally assumed for head movement; see Matushansky 2006):

(9)  $[FP F^0 [L^0]] = F_{0/L0} F^{0} \oplus L^0]$ , where  $F^0$  is a functional head,  $L^0$  is a lexical head and  $F^0 + L^0$  is an extended head

She does not decide whether this operation applies at PF or in narrow syntax. This operation applies first to  $D_{def}$  and  $N^0$ , then to P and the D+N head:

(10) 
$$[PPP[DPD^{0}[NPN^{0}]]] => [PPP[D^{0}N^{0}D^{\oplus}N]] => [P^{0}D^{0}N^{0}P^{\oplus}D^{\oplus}N]]$$

Given this analysis, the article drop rule is formulated as follows:

(11) The definite article is deleted whenever it is governed by a preposition that belongs to the same Extended Head

## 5. A problem for Dobrovie-Sorin's (2007) account

If P forms a complex head with D and N, we expect the article drop rule not to apply when P takes a coordination of DPs. However, *if one of the conjuncts consists only of D and N, article drop does apply*, even if this conjunct is not adjacent to P and the first DP is complex (see the bold-faced DPs in (12);

- (12) a. relația dintre [[politica de azi] și [societate(\*-a)]] relation-the between politics-the of today and society(-the) 'the relation between today's politics and society'
  - b. priveliştea către [[livezile de vişini] şi [munte(\*-le]] view-the towards orchards-the of cherry-trees and mountain(-the) 'the view towards the cherry orchards and the mountain'
  - c. distanţa între [[locul unde ne aflăm] şi [maşină/\*maşina] distance-the between place-the where REFL find.1PL and car(-the) 'the distance between the place where we are and the car.'

The second DPs in these examples, like in (1)a, can only be interpreted as definite, because a bare count singular is not allowed here (cf., with a modifier, \*relaţia dintre politica de azi şi societate românească 'the relation between ... and Romanian society', \*priveliştea către livezile de vişini şi munte înzăpezit 'the view ... and snowy mountain', \*distanţa între ... şi maşină de teren 'the distance between... and off-road vechicle'). Moreover, at least with între 'between' and its compound dintre (= the adnominal marker  $de + \hat{i}ntre$ ), deletion of P before the second conjunct cannot be assumed, because  $\hat{i}ntre$  does not allow singular DPs – by virtue of its relational meaning, it takes either a coordination of DPs or a plurality:

(13) distanța între {case / Paris și Londra / \*casă} distance-the between houses Paris and London house

Even for (12)b, a P-deletion analysis would only explain the *possibility* to omit the article, but not the obligatoriness to do so: there is no reason to exclude a combination between P and a coordination of DPs, and for this case, the complex head analysis predicts no article drop<sup>5</sup>.

The data presented in this section are also problematic for the account given by Hill & Mardale (2021): they explain the restriction of article drop (which they analyze as absence of a D-layer, see section 2) to the complement of prepositions by a restructuring between N and P under sisterhood, which would require adjacency and would exclude complex phrases. Except the wording, there is no difference between this operation and the operation of complex head formation assumed by Dobrovie-Sorin (2007). In sum, the only substantive difference is that Dobrovie-Sorin assumes D to be present, while Hill & Mardale propose a structure without D.

Complex head formation between D and P is also proposed in Isac (2018), who uses the concept of *m-merger* (see Matushansky 2008). She assumes a general hierarchy D>P>Num>N, where prepositions are generated in the complement of D and move to SpecDP. She proposes that D undergoes m-merger with P when the P head is raised to SpecDP. This takes place only with unmodified Ns because if there is modification, a further layer (ContrP) occurs between D and P and as a result P can no longer move as a head to SpecDP, but, instead,

## 6. Proposal: complex head formation + a Case condition

Given this problem, I propose a modification of Dobrovie-Sorin's account: I maintain the idea of complex head formation, but I limit it to  $D_{def}$  and N. For the restriction of article drop to the complement of prepositions, I propose that in these environments, the definiteness morpheme that is dropped lacks Case. The proposal is summarized in (14). The  $X^0$ -labeling rule is placed at PF in view of Chomsky's (1995) arguments against using X-bar levels as primitive notions in syntax.

(14) (i) A maximal nominal projection consisting only of N and D<sub>def</sub> receives a word-level status (at PF):

$$[{}_{DP}\operatorname{D}^0{}_{+def}\operatorname{N}^0] \to [{}_{D^0}\operatorname{D}^0{}_{+def}\operatorname{N}^0]$$

(ii) The definiteness morpheme is dropped if it lacks Case

I will elaborate on (14)(i) in the following sub-section, then, in section 6.2, I will argue in favor of (14)(ii), addressing the general issue of the case system of Romanian.

#### 6.1 On the word-level requirement

In (14)(i) I used the label DP for 'maximal nominal projection'. But as we have seen in section 3.1, pre-D universals and emphatic modifiers must be counted inside this projection, because they bleed article drop – see (5), repeated below:

a. în toate/amândouă cărţi\*(-le) in all /both books-the
 b. de însuşi rege\*(-le) by himself king(-the)
 'by the king himself'

The rule in (14)(i) covers these cases if pre-D universals and emphatic adjectives are inside the DP, as specifiers or adjuncts:

(15)  $[_{DP} [toate] [_{D} D_{+def} cărți-le]]$  all books-the

Pre-D universals have indeed received such an analysis (see Sportiche 1988), but they also have been analyzed as higher heads (Q) that select a DP (Giusti 1990, Cardinaletti & Giusti 1992):

(16)  $[QP \text{ toate } [DP D_{+def} \text{ cărți-le}]]$ 

NumP moves to SpecContrP and the remnant PP moves as a phrase. Besides the issue of coordination under P, this analysis is problematic because there is no sufficient evidence (semantic or distributional) for the hierarchy D>P>Num>N, nor for the existence of a ContrP whenever the DP contains more than just N and D.

Under the analysis in (16), we expect  $X^0$ -labeling to occur in the DP complement of Q. In order to explain absence of article drop, we would have to add additional assumptions – for instance, we may stipulate that Q selects a Case-marked D, i.e. a K-level intervenes between Q and D, which would rule out article drop by (14)(ii), or that Q needs to have a phrasal complement, which would imply that the complex-head formation does not obtain at PF, but in syntax, and is avoided here as a last resort in order to comply to the requirement of Q.

Fortunately, these further complications are not necessary, because there is independent support for the specifier analysis of pre-D universals in (15): pre-D universals are arguably phrasal when they combine with cardinals, as in (17)a. If (17)a is parsed as Q+[Card+N-Def], we expect phrases of the type [Card+N-Def] to be grammatical, contrary to fact (see (17)b). Therefore, the correct analysis of (17)a should have Q and Card forming a constituent, as in (17)c. As pointed out by an anonymous reviewer, this parsing is further supported by the floating use in (17)d:

(17) a. toate trei cărți-le all three books-the

- b. \* trei cărți-le three books-the
- c. [toate trei][cărțile]
- d. Cărțile s-au adus toate trei books-the REFL-have brought all three 'All three books were brought.'

Since pre-D universals can be phrasal, we may assume that they are specifiers of a DP headed by a definite determiner (which may be D<sub>def</sub> or a demonstrative).<sup>6</sup>

(i) \*toţi ei / ei toţ all they.M they.M all

If personal pronouns spell-out entire DPs, the impossibility of the pre-D position follows from the specifier analysis.

A specifier analysis might also explain why pre-D universals cannot combine with a coordination of singular definite DPs, see (ii)a,c, although a coordination of singular definite DPs behaves otherwise as a plural definite DP, as manifested by agreement on the verb and on adjectival predicates; the fact that semantically such a combination is unproblematic is proven by the acceptability of floating quantifiers, see (ii)b,d.

- (ii) a. \* Toate masa, draperia și fotoliul sunt verzi.
  all table-the curtain-the and armchair-the are green.PL
  - b. Masa, draperia şi fotoliul sunt toate verzi. table-the curtain-the and armchair-the are all green.PL 'The table, the curtain and the armchair are all green.'
  - c. \* Amândouă masa şi canapeaua sunt noi. both table-the and sofa-the are new.PL
  - d. Masa şi canapeaua sunt amândouă noi. table-the and sofa-the are both new.PL 'The table and the sofa are both new.'

The specifier analysis is not meant to cover pre-D universals cross-linguistically: the Engl. *all*, when it combines with *of*+DP, is definitely a head. Note in this respect that it can also take personal pronouns (*all of them*), whereas in Romanian the universal cannot remain pre-D in this case, but must occur to the right of the pronoun:

The fact that only  $D_{def}$  participates to the complex head formation rule in (14)(i) may be related to the affixal marking of definiteness in this environment. Mardale (2008) suggests that affixal marking may be a precondition for article drop, noticing that this phenomenon is also found in Albanian, another language with an affixal article, but is not attested in the European languages where the definite article is an independent word. The precise analysis of definiteness marking in Romanian is a very complex issue which cannot be thoroughly addresssed in the space of this article. Therefore, I intend to provide an account compatible with both main analyses of the suffixal article in the literature: (i) the def-feature analysis: the Def-inflection is on N and D is null (Cornilescu & Nicolae 2011a,b, 2012, Ledgeway 2017, Nicolae 2019, 2020), checking its definiteness feature via Agree; (ii) the lowering analysis: the Def-inflection spells-out D, lowered at PF, on a Num head merged with N or an adjacent A with a  $\varphi$ -morpheme (Dobrovie-Sorin & Giurgea 2006). Both variants are compatible with an  $X^0$ -labeling, as D is either null or occupied by an affix.

## 6.2 On what exactly is deleted

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As we have already seen in section 4, the suffixal definiteness marking of Romanian involves forms where a definiteness morpheme can be recognized, as well as forms where a single fused morpheme expresses definiteness and the features of the noun:

(18) a. cas-e-l-e, cas-e-l-or, cas-e-i
house-FPL-DEF-FPL girl-FPL-DEF-PL.OBL house-FSG.OBL-DEF.FSG.OBL
b. cas-a, (colloquial Ro.) băiat-u
house-FSG.DEF boy-MSG.DEF

In (14)(ii) I spoke about a definiteness morpheme in view of the forms in (18)a. Fused forms may be obtained from decomposed forms by whatever PF-rules are responsible for 'portmanteau morphemes'. Under the def-feature analysis, the definiteness morpheme would be analyzed as a 'dissociated morpheme' in a Distributed Morphology framework (cf. Hale & Marantz 1993). But the rule can also be restated as involving the deletion of N's definiteness feature before the projection of dissociated morphemes:

#### (14) (ii) Inside the complex $[D_0 D_{+def} N_{+def}]$ , [+def] is deleted

In the lowering analysis, the definiteness morpheme is D itself. Its deletion might be considered an alternative to lowering<sup>7</sup>.

If pre-D universals are heads selecting plural definite DPs, it is not clear why they cannot select the coordinated DPs in (ii)a,c. If they are DP specifiers, the impossibility of these examples may follow from a ban on coordinating intermediate projections (see Zhang 2009 for arguments in favor of the idea that conjuncts can be either heads or maximal projections), or from a feature-checking relation between QP and the  $D^0$  head requiring a [plural] or [noncount] feature on  $D^0$ .

<sup>&</sup>lt;sup>7</sup> In other words, if the configuration [ $_{D0}D^0N^0$ ] obtains and  $D^0$  does not bear case,  $D^0$  is deleted instead of being lowered. For unmodified nouns that are not complement of Ps, article suffixation will obtain by lowering D to N inside the complex head: [ $_{D0}D^0N^0$ ]  $\rightarrow N^0+D^0$ .

## 6.3 On the lack of Case on the dropped Def-morpheme

The idea that article drop occurs when D is not used to mark Case is suggested by the fact that article drop is also found with prepositions functioning as case markers – the differential object marker (DOM) *pe* and the dative marker *la*. As shown in (19), DOM marks constituents that have the distribution of direct objects, its use depending on the properties of the DP (with definite common nouns as in (19), DOM is optional):

(19) Văd fata / O văd **pe fată**. see.1SG girl-the CL.3FS.ACC see.1SG DOM girl 'I see the girl'

The DOM *pe* can be seen as the spell-out of structural object case, possibly with some other feature(s) stemming from the DP (such as Person, see Cornilescu 2000, Giurgea 2019). Therefore, *pe* is a K (case head) rather than a P (for the proposal of a functional projection KP for case, see Abney 1987; Lamontagne & Travis 1987; Loebel 1994; Bittner & Hale 1996).

The fact that the article is not dropped when there is no prepositional K (see *fata* 'girl-the' in (19)) may be explained if D in this case is richer in features, being used to spell out Case.

Article drop can also be found with the prepositional dative marker *la*. In the standard language, this marker is normally limited to DPs that don't allow inflectional dative, which excludes the definite article. However, in the colloquial register it can occur in certain conditions (see Iorga-Mihail 2013), see (20); this use is widespread in regional varieties (see Rusu 1984).

(20) Ce leai dat {copii-lor /la copii}? what CL.3PL.DAT given children-the.DAT/to children 'What did you give to the children?'

The fact that the non-dropped article is used here to spell-out case is very clear: the oblique morpheme, which marks inflectional genitive and dative, occurs on the article (-lor '-the.DAT' can be decomposed into -l- indicating definiteness and -or indicating plural oblique).

In order to make the account precise, we need to establish what means for D to be used to express case. There are several possibilities: (i) D and K form a complex head – either in syntax or by lowering at PF; (ii) K is null but assigns a Case feature to D. Under (i), we can say that D is dropped when it does not form a complex head with K. Under (ii), we must assume that when K is overt, no case feature is assigned to D.

Deciding between these possibilities is not an easy task, because although Romanian tends to express case only once in a DP, it has kept some traces of the old case concord system of Latin. If we set aside personal pronouns, Romanian only has three inflectional cases – nominative-accusative ('direct'), genitive-dative ('oblique') and vocative. The nominative-accusative, which also appears after prepositions and prepositional case markers, can be considered a default form. Unambiguous case markers for the oblique and vocative usually appear only once in a DP, in the first position of the DP – on a determiner or another functional item, for the oblique (see

(21)); on the noun (sometimes in the definite inflection) or a prenominal adjective, for the vocative (see (22)). This fact is compatible with analysis (i):

```
(21)
       a. acest-ui
                      bun-Ø
                                prieten-Ø
        this-MSG.OBL good-MSG friend(M)-SG
       b. alt-ui
                        bun-Ø
                                  prieten-Ø
        other-MSG.OBL good-MSG friend(M)-SG
       c. acest-ui
                       alt-Ø
                                 bun-Ø
                                            prieten-Ø
        this-MSG.OBL other-MSG good-MSG friend(M)-SG
       d. prieten-u-l-ui
         friend(M)-SG-the-MSG.OBL
(22)
      a. prieten-e
                         / copil-e
                                         / copil-u-l-e
         friend-MSG.VOC child-MSG.VOC child-(M)SG-DEF-MSG.VOC
       b. tiner-e
                         prieten-Ø
         young-MSG.VOC friend(M)-SG
```

But there are instances of iteration of the unambiguous case morpheme: for the oblique, iteration (or case spreading) is obligatory with pre-D universals (where case also occurs on the definite Ds) and in a series of fully inflected functional items that precedes an empty N, see (23)a-b, and is optional with postnominal demonstratives (which occur after a noun marked with the suffixal definite article) and when the series of functional item precedes an overt N and is in the plural, see (23)c-d (AUGM, the -a augment, is an element that appears before empty N, in certain conditions, as well as on postnominal demonstratives)<sup>8</sup>; for the vocative, iteration occurs with certain adjectives (see Croitor & Hill 2013), as exemplified in (23)e:

```
(23)
                              profesor-i
       a. tutur-or acel-or
        all-PL.OBL that-PL.OBL professor-MPL
      b. mult-or
                      alt-or-a
         many-PL.OBL other-PL.OBL-AUGM
       c. mult-or
                      alt-or/alt-e
                                         problem-e
         many-PL.OBL other-PL.OBL/-FPL problem-FPL
                                 acest-ui-a
                                                    / acest-Ø-a
       d. om-u-l-ui
         man-MSG-DEF-MSG.OBL this-MSG.OBL-AUGM this-MSG-AUGM
                          prieten-e
       e. iubit-e
                                          / prieten-Ø
        beloved-MSG.VOC friend-MSG.VOC / friend(M)-SG
```

Moreover, a sort of case concord on N and all the inflected adjectives occurs in the feminine singular: it obtains only in DPs introduced by an element bearing the unambiguous oblique morpheme and involves a form which is almost always ambiguous, being identical to the feminine plural, see (24) (the exceptions are a very small number or feminine nouns that have a special plural morpheme, see (25)):

(24) acest-ei alt-e important-e problem-e this-FSG.OBL other-FSGOBL/FPL important-FSGOBL/FPL problem--FSGOBL/FPL

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<sup>&</sup>lt;sup>8</sup> See Barbu (2009), Dobrovie-Sorin & Giurgea (2013).

(25) un-ei treb-i / nişte treb-uri a-FSG.OBL work-FSG.OBL some work-FPL

This very limited and ambiguous case marking does not suffice to mark case by itself: if there is no functional element that can carry the unambiguous oblique suffix, the nominal must be introduced by a prepositional case marker – this is clear for the genitive, where bare singulars can occur in adnominal structural case positions<sup>9</sup>. As shown by Cornilescu (2001, 2003), such a position can be assumed for the object argument of complex event nominalizations (in the sense of Grimshaw 1990); in this position, the object argument is either marked by the inflectional genitive (see (26)a) or by the prepositional markers a (if the argument is introduced by a functional item which lacks oblique inflection, see (26)b) or de (if the argument is a bare noun, see (26)c). The feminine singular case concord marker cannot be used in this situation on bare nouns, to mark genitive case by itself, see (26)c.

```
(26)
       a. a adăuga apa
                          / această apă => adăugarea ap-ei /
                                            adding-the water-the.FSG.OBL
         to add
                  water-the this
                                   water
         acest-ei
                      ар-е
         this-FSG.OBL water-the.FSG.OBL
       b. a adăuga niște apă
                              => adăugarea a nişte apă
                                 adding-the a some water
         to add
                  some water
       c. a adăuga apă => aducerea de ap-ă
                                               / * adăugarea ap-e
                         adding-the of water-SG adding-the water(F)-SG.OBL/PL
         to add water
```

The instances of iteration of unambiguous case morphemes illustrated in (23) are problematic for the hypothesis of a complex head [D+K] for inflectional case. The occurrence of an unambiguous oblique morpheme on a pre-D universal, in (23)a, cannot be analyzed as reflecting a Q+K head formed in syntax, if pre-D universals are specifiers, as argued in §6.1. This morpheme can also occur on the definite morpheme suffixed to the lexical head of a phrasal adjectival projection in DP-initial position, see (27), which is at odds with a D+K head formed in syntax:

(27) [atât de frumoas-ei] biserici such of beautiful-the.FSG.OBL church-FSG.OBL/FPL

A lowering analysis (K to D or Q) might cover these cases (coupled with further lowering of K+D for (27)), but does not explain the iteration of the unambiguous case morpheme found in (23). The existence of case concord (see (24)), even in a very limited form, shows that the existence of a case feature that may take part to agreement or feature spreading is inescapable. But then, this feature can also be used for the unambiguous case morphemes.

On the other hand, the strong limitations on case concord show that case cannot be treated on a par with the other concord features: gender and number concord between N, adjectives, determiners and other inflected functional items applies systematically, as opposed to case concord.

<sup>&</sup>lt;sup>9</sup> Datives cannot be bare count singulars.

Fortunately, there are theoretical models of concord which treat case concord differently from φ-feature concord. Even for languages where case and φ-concord work on a par (as in the old Indo-European type represented by Latin, Greek, Icelandic, or Balto-Slavic languages), a different mechanism has been proposed due to the fact that case reflects the external structural environment in which a nominal projection is embedded, so that it is primarily a property of the maximal nominal projection: according to Babby (1987), Delsing (1993), Matushansky (2008), Pesetsky (2013), Norris (2014, 2018), case is first assigned to the NP/DP and then the case feature percolates downward on determiners, nouns and adjectives.

The notion of case assignment, used in GB (see Chomsky 1981, 1986), has been refined in the minimalist framework in order to comply with the Inclusiveness Condition: structural case is present in the numeration as a feature in need of checking (being unvalued or uninterpretable). In the model that uses KP, case can be considered to be base-generated on K (i.e., present in the numeration on the K head). By downward percolation, this feature is copied on designated elements in the complement of K. This process has been considered post-syntactic by some researchers (see McFadden 2004<sup>10</sup>, Norris 2012, den Dikken & Dékány 2018), but Richards (2012) provided some arguments for placing it in syntax, a view endorsed by Norris (2014, 2018)<sup>11</sup>.

Adopting this theory of morphological case, we can describe the difference between inflectional and prepositional case marking in Romanian as follows:

(28) a. Inflectional cases trigger case spreading inside their complement: nominative, DOM-less accusative, agreeing genitive<sup>12</sup>, dative, vocative

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McFadden (2004) does not resort to K, proposing, instead, that case is first assigned to D and then its value is copied on the morphemes generated at PF on N and As inside the complement of D.

As for K, the standard assumption is that for structural cases, the feature is uCase, but Romanian challenges this assumption: both for the accusative and for the genitive (which behaves as an adnominal structural case, see (25)), there are several varieties of K heads depending on various properties of their complements – for the accusative we have DOM and DOM-less objects, for the genitive we have oblique-marked genitives accompanied by the head al that shows concord agreement controlled from outside, and the prepositions a and de. The rules according to which one or other of these case marking strategies are selected are specific to each case (i.e. the rules regulating the distribution of DOM have nothing in common with the rules that control the choice between genitive markers, and so on). Such a system is easier to describe if K heads come with the relevant feature from the lexicon, and structural case is not a matter of valuation, but of checking. A possible implementation of this idea can be found in Giurgea (2014): structural cases are uninterpretable/unvalued counterparts of the categorial features of the case lincesors - uv\* for accusative, un\* for genitive, uT for nominative. The idea that case may reflect the licensor's categorial feature can also be found in Pesetsky (2013), who treats morphological case in terms of the copying of part-of-speech information from heads to their dependents.

Agreeing genitive refers to the genitive marked by the oblique inflection accompanied by a preposed marker *al* that shows gender and number agreement with the head noun (the 'possessum'):

<sup>(</sup>i) o carte(F) **a** băiatul**ui** a book *al.*FSG boy-the.MSG.OBL

b. Prepositional cases do not trigger case spreading inside their complement: DOM, genitive *a* and *de*, dative *la* 

In the absence of case spreading, there is no case feature on determiners, nouns and adjectives. This is why ap 'water' appears in its unmarked singular form with the prepositional genitive Ks a and de in (26)b-c, but when embedded in a KP with inflectional genitive, it shows the oblique form ape, see (26)a.

Turning back to the contrast in (19), repeated below, our proposal is that the article is not dropped when there is no DOM because K in this case, being null, triggers case spreading to D (and only a case-less Def morpheme can be dropped, see (14)(ii)). When DOM occurs, there is no case spreading, therefore the Def morpheme is dropped if it occurs in a word-level maximal projection.

(19) Văd fata / O văd **pe fată**. see.1sG girl-the CL.3FS.ACC see.1sG DOM girl 'I see the girl'

The extension from case markers to other prepositions is straightforward: we need to assume that those prepositions that trigger article drop select DPs rather than KPs. This raises no particular problem, given that only prepositions that take the direct case trigger article drop, and direct case is an unmarked form. An inflectional distinction between nominative and accusative (which are otherwise conflated in the direct case) only appears for singular +Participant pronouns (eu '1SG.NOM' vs. mine '1SG.ACC', tu '2SG.NOM' vs. tine '2SG.ACC'; in the weak forms, we have the distinction between the nominative null subject pro and accusative clitics – mă, te). In this case, prepositions select the accusative forms (mine, tine) – this is why I referred to 'accusative-taking prepositions' in the preliminary description of article drop. The consequence of my proposal is that mine and tine, when occurring after article drop triggering prepositions, are case-less forms. Note that as direct objects, they require DOM (pe mine, pe tine).

The proposal that prepositions may take a DP directly, without the mediation of KP, formalizes the intuition that prepositions and case markers have a similar function (note that case concord is by no means limited to structural cases: semantic cases such as ablative, instrumental, locative participate to case concord in languages from various families – Indo-European, Finno-Ugric, Kartvelian, Chukotko–Kamchatkan, Cushitic, various Australian languages, etc.<sup>13</sup>).

## 7. On the prepositions that do not trigger article drop

The consequences of my account on the syntax of prepositions are summarized in (29):

- (29) a. Prepositions that trigger article drop select for DP
  - b. Prepositions that do not trigger article drop select for KP

See Plank (1995) on *Suffixaufnahme*, which is a form of case concord.

(29)b is obvious for prepositions that take oblique cases (e.g. *datorită mie* 'due me.DAT'). In Romanian only three words are traditionally analyzed as dative-selecting prepositions (see e.g. Ciobanu & Nedelcu 2008, Nedelcu 2013). All of them represent grammaticalized uses of other parts of speech (*grație* 'thanks to' < *grație* 'grace'; *datorită* 'due to' is the feminine singular participle of *datori* (obsolete, nowadays *datora*) 'to owe, be indebted'; *mulţumită* 'thanks to' is the feminine singular participle of *mulţumi* 'to thank'). Genitive-taking prepositions, which follow the pattern of spatial nouns with a preposition-like meaning (e.g. *în faţa* 'in face-the', cf. *in front of*), contain an element formally identical to the definite article, which introduces φ-features, visible on agreeing possessors (e.g. *înainte-a mea* 'before-DEF.FSG my.FSG')<sup>14</sup>. Depending on the analysis of the *in-front-of* construction, items such as *înainte-a* may be analyzed as grammatical or semi-lexical nouns that occur only in this construction (historically, they may be adverbs – *înainte* 'before' < *în* 'in' + Old Ro. *ainte* < Lat. *ab ante* 'before' – or borrowings – *contra* 'against' is a modern borrowing from Lat. *contra*).

Among the prepositions that take the unmarked case form (or accusative, see the discussion on personal pronouns in the previous sub-section), we have seen in section 3.2 that only three fail to trigger article drop: cu 'with', pe in the collocation a face pe... 'to play, act as, pretend to be...', and de-a in a se juca de-a, introducing a role in a game (see examples (8)). Under my account, the absence of article drop implies that these prepositions select an accusative KP, rather than a  $DP^{15}$ .

For pe in the collocation a face pe..., another explanation is available. Note that the DP that follows expresses a property or a role assigned to the subject of face. We may assume that pe takes a small clause with a null subject co-indexed with the main subject, see  $(30)^{16}$ :

(30) Maria<sub>i</sub> face [pe [ $\emptyset$ <sub>i</sub> nevinovata / directoarea]]. Maria does *pe* innocent-the.FSG manager-the 'Maria acts as if she's innocent / the manager.'

As *face* is transitive, *pe* may be analyzed as a DOM here and the absence of clitic doubling (which otherwise is strongly preferred with definite DPs) may be attributed to the fact that the complement is not a DP, but a small clause, which is not a nominal constituent and therefore lacks the features required for clitic doubling.

For *de-a*, the reason for lack of article drop may be the fact that the constituent it introduces behaves as a proper name of a game. We may indeed find not only DPs, but various other expressions in this position:

-

On the issue of agreement in genitives in Romanian and the inclusion of the so-called 'posssessive adjectives' in the category of agreeing genitives, see Dobrovie-Sorin & Giurgea (2011), Giurgea (2011).

The singular +Participant pronouns have the forms *mine* and *tine* after *cu*, which implies that these forms are not always case-less, but can also be used for the accusative.

Note that in traditional grammars, *face pe* is treated as a copular verb, see Manea et al. (2008:353), Dragomirescu et al. (2016:484).

(31) Se joacă de-a [cine clipeşte primul]. REFL play.3PL *de-a* who blinks first-the 'They're playing who blinks first.'

If the complement of *de-a* is not categorially specified, it is expected that a nominal needs the K-level, because *de-a* cannot play the role of K, of 'closing-off' a nominal projection.

The most important exception, and also the one for which I see no synchronic explanation, is the preposition cu 'with'. Like other irregularities, the absence of article drop with cu might have a historical explanation. All the other accusative-taking prepositions have or had at some point in the past a locative use<sup>17</sup>. In Modern Romanian, prepositions such as despre 'about' and de către 'by (specialized for by-phrases)' lack any spatial meaning, but they originate in prepositions that had a spatial meaning (despre < Old. Rom. de 'from' + spre 'on', de către < de 'from' + c t catre 'towards, in the direction of'). It is possible that article drop initially characterized spatial prepositions, originating in constructions of the type in bed, at church (whose initial semantic conditioning has been reanalyzed as the formal requirement of  $X^0$ -status). Since cu never had a spatial use in the history of Romanian (its Latin ancestor cum already lacked any spatial use), it did not occur in the constructions that were later re-analyzed as  $X^0$ -status-conditioned article drop.

#### 8. A note on Albanian

We may wonder to which extent this analysis carries over to Albanian, a language which has an article drop phenomenon very similar to the Romanian one (see Mardale 2008). In Albanian, article drop affects accusative-taking prepositions in DPs consisting of D<sub>+def</sub> and N alone, like in Romanian. But the accusative case is distinguished, in the singular, from the nominative (e.g. *vajz-a* 'girl-the.FS.NOM' vs. *vajzë-n* 'girl-the.FS.ACC'). Moreover, Albanian has prepositions that take the nominative, for which article drop does not apply, and it does not have prepositional case markers. Thus, unlike in Romanian, there is no independent evidence for the claim that the accusative is a default form. This correlates with more variability regarding article drop, as compared to Romanian: thus, *për* 'about; for', *me* 'with', *pa* 'without' have optional article drop, and only accusative-taking *locative* prepositions (*në* 'in', *mbi* 'on', *nën* 'under', *ndër* 'among', *nëpër* 'through', *përmbi* 'above') require article drop (Bujar Rushiti, p.c.). Like in Romanian, the article drop rule applies to coordinated DPs as well<sup>18</sup>:

(32) Kishte shumë njerëz në shtëpi(\*në) e kopsht(\*in) were many people in house(-the) and garden.the 'There were many people in the house and the garden.'

<sup>17</sup> I am grateful to Ora Matushansky for the suggestion of considering the connection between article drop and spatial prepositions.

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In order to describe Albanian by the same rule as Romanian, we should assume that certain prepositions select DPs instead of accusative KPs, and the accusative morphology that we see in complex DPs headed by Ps (e.g.  $n\ddot{e}$   $sht\ddot{e}pi$ -n e re 'in house-the.FS.ACC AGR new' vs.  $n\ddot{e}$   $sht\ddot{e}pi$  'in house' = "in the house") is a default form, like for the Romanian pronouns mine 'me', tine 'you.S', tine '3.REFL'. Another possibility is to assume a prepositional case, identical to the accusative except for the fact that it has a zero realization inside the complex  $[D_{+def} N]^0$ -head.

#### 9. Conclusions

I have argued that article drop is a PF-phenomenon, which applies to structures in which a  $D_{+def}$  is present. The fact that article drop only occurs after accusative-taking prepositions was formalized as a requirement that the dropped definiteness morpheme lacks Case. For the fact that article drop occurs iff the maximal projection of N consists only of  $D_{def}$  and N, I followed Dobrovie-Sorin's (2007) proposal that  $D_{def}$  and N form a complex  $X^0$ . The main difference with respect to her account is that complex head formation does not extend to P, a difference justified by the fact that article drop may occur in coordinations in the complement of P (even on DPs that are separated from P by a complex DP).

The idea that the complement of P in article-drop configurations lacks Case was framed in a theory of case marking in Romanian: the fact that this language has both inflectional and prepositional case marking was formalized by using the KP hypothesis: inflectional marking involves null Ks that trigger spreading of a Case feature to their complement (see Norris 2014, 2018), prepositional marking involves an overt K and no feature spreading (prepositional case markers are like Ps in triggering article drop). Prepositions that trigger article drop are assimilated to K heads in that they take a DP, rather than a KP, complement, playing K's role of closing-off the nominal extended projection.

The exact technical formulation of the article drop rule depends on an analysis of definiteness marking in Romanian, which could not be done in the space of this article. Therefore, I proposed rules compatible with the two main analyses of the Romanian suffixal definite article (as a feature on N or A, or as a head lowered at PF). Under the def-feature analysis, assuming that article drop applies after insertion of dissociated morphemes, the rule can be written as in (33)a; alternatively, it can be written as an impoverishment rule which deletes the +def feature of N before the insertion of inflectional morphemes, see (33)b.

```
(33) a. [_{D^0}[_{D^+}def]][_{N^0}[N][\beta Number][+def \alpha Gender \beta Number]]]
=>[_{D^0}[_{D^+}def]][_{N^0}[N][\beta Number]]
iff the def morpheme has no Case
b. [_{D^0}D^0[N^0N_{+def}]]=>[_{D^0}D^0[N^0]], iff D does not have Case
```

Under the lowering analysis, article drop can be analyzed as applying as an alternative to lowering:

```
(34) [_{D^0} D^0_{+def} [N^0]] => [_{D^0} [N^0]], iff D does not have Case
```

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