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In support of a DP-Analysis of Nominal Phrases in Croatian

- the focus of recent discussions in languages without articles (such as Russian, Polish, Serbian and Croatian): Is there a DP on top of NP?

- Two competing proposals: an elaborated DP structure (cf. Progovac 1998, Dimitrova-Vulchanova and Giusti 1998, Leko 1999, Rutkowski 2002, Bašić 2004, Pereltsvaig 2007) vs. the complete omission of the DP layer in favour of a simple NP analysis (Zlatić 1998, Trenkić 2004, Bošković 2005, 2008, 2009).

This paper argues for a DP-analysis (rich functional structure above NP) of nominal expressions in Croatian. I will be critically reviewing some of the main arguments that have been brought in favour of an NP analysis:

1. the headedness issue (N is the head of the nominal projection; there is no D-head)
2. demonstrative determiners (qualifying as possible "article substitutes") are optional
3. demonstratives, possessives, quantifiers etc. categorially behave like adjectives
4. the structural position of determiners/adjectives: Spec,NP or adjunct of NP

I will show that these claims are inconclusive, concentrating on the following:

I. reapplication of the *morphosyntactic locus* and the *semantic argument* tests shows that the noun is not the ultimate morphosyntactic locus of the NP => determiners (quantifiers, numerals) also carry phi-features and display head-like properties
II. morphological and syntactic differences between determiners and adjectives show that they do not belong to the same class
III. split readings in premodified coordinated NPs (wide scope readings) suggest that adjectives (and determiners) cannot be NP-internal
IV. demonstrative determiners (as potential "article substitutes" in Croatian) are not always optional within NP (as assumed in 2) => being D-elements of non-adjectival nature they occupy their own functional projections above NP (see Appendix)

> Overview of the talk:
> Section 1: previous arguments for an NP-analysis
> Sections 2 - 4: arguments for a DP-Analysis (I-III)
> Section 5: Conclusion

1. Serbo-Croatian Nominal Expressions are claimed to be NPs

- Zlatić (1998), Trenkić (2004), Bošković (2005, 2008, 2009) provide the following arguments for the NP-analysis of nominals in Serbo-Croatian (SC):

  - Serbo-Croatian does not have overt articles, which typically ocuppy the D^0 structural position in languages that have one, therefore the projection of DP on top of NP is not

necessary. Determiner that are potentially used instead of articles (prenominal possessives, demonstratives) are optional (1) and are "morphologically adjectives in SC" for the reasons illustrated in (2)-(5) :

(1)   (**Ovaj**) student voli Mariju.
          this   student loves Mary
       "This/the student loves Mary."
                                        Zlatić (1998:3)

- like adjectives, these determiners agree in gender, number and case with the head noun and display adjectival morphology (have identical declension paradigm)

(2)   a. nek**im**   mlad**im**   djevojkama
          some FEM.PL.INSTR young FEM.PL.INSTR girls FEM.PL.INSTR
       b. nek**ih**   mlad**ih**   djevojaka
          some FEM.PL.GEN young FEM.PL.GEN girls FEM.PL.GEN
                                                            Bošković (2005:6)

- they can appear in typical adjectival syntactic environments in Serbo-Croatian such as the predicate position in copula constructions (ibid.):

(3)   Ova knjiga je moja.
       this book is my.

- they can stack up and display a relatively free word order, just like adjectives do (ibid.):

(4)   a. ta moja slika
          this my picture
       b. Jovanova skupa slika vs. skupa Jovanova slika
          *John's expensive picture vs. *expensive John's picture*

- like regular adjectives, determiners can be extracted from within the noun phrase

(5)   a. Ovu$_i$ / lepu$_j$ sam pronašla [t$_i$/t$_j$ knjigu].
          This/nice-A.F.SG AUX found book-A.F.SG
          "This/nice I found book."

       b. Koju$_i$ / kakvu$_j$ si pronašla [t$_i$/t$_j$ knjigu].
          which/what kind-A.F.SG AUX found book-A.F.SG
          "Which/what kind did you find book?"
                                        (Zlatić 1998:7)

2. Headedness Tests: Is N or D the Head of the Nominal Projection?
2.1. The Morphosyntactic Locus
The **morphosyntactic locus** = the constituent carrying the morpho-syntactic inflectional endings.

The common nouns in Serbo-Croatian such as

(6)   grad   država   selo
                     city-MASC.SG.   country-FEM.SG.   village-NEUT.SG.

carry the grammatical phi-features, such as gender, number or animacy.
=> since the grammatical phi-features originate on the noun and not on the determiner, the noun is the morphosyntactic locus and therefore head of the NP (Zlatić 1998).

Selectiveness (Number Sensitive Determiners)

- many English determiners carry number features of their own (Newson 2006):

(7)   a. these people / *these person   *plural determiners*
            b. all answers / *all answer
            c. each prescription / *each prescriptions   *singular determiners*
            d. an occasion / *an occassions
                                Newson (2006:131)

- certain determiners in English impose very strict restrictions on the selection of the nouns they modify (Galasso 2001:1):

(8)   a. Determiners like *the* modify any kind of noun [+/- count]:
          the book / the books

     b. Determiners like *enough* modify [+plural] and non-count nouns:
          enough books / enough money

     c. Determiners like *several* modify [+plural] count nouns:
          several chairs / *chair / *furniture

     d. Determiners like *much* modify a singular non-count noun:
          *much furniture / *chair / *chairs*

     e. Determiners like *a/an* modify only a singular, that is, [- plural] count
          nouns: *a book / *books*

- the number sensitive determiners that show the selectiveness towards their noun complements exist also in Croatian:

(9)   a. oni ljudi / *one-FEM.PL. osoba-FEM.SG.
        *these people / *these person*

     b. svi odgovori / *svi- MASC.PL. odgovor- MASC.SG.
         *all answers / *all answer*

     c. svaki rezept / *svaki-MASC.SG. rezepti-MASC.PL.
        *each prescription / *each prescriptions*

     d. jedna prilika / *jedna-FEM.SG.prilike-FEM.PL.
        *an occasion / *an occassions*

⟹ the corresponding Croatian examples in (9) confirm the observation made for English, especially (9c,d).

⟹ both the nouns and the determiners are marked for number => **it is rather difficult to say where the number feature is projected from**.

(i)   The indefinite determiner **svaki (each)** and the pre-determiner **jedan (one)** select for singular count nouns (9c, d).

NOTE: *Svaki (each)* can also select a non-count noun (e.g. *svako vino/each wine*), but in this case it rather refers to each sort of wine.

⟹ Although the indefinite determiner *one* is in general restricted to the use with singular count nouns, in certain cases it can also accompany the pluraliatantum nominals such as *jedne hlače/škarice/novine* (*one-PL.trousers/scissors/newspapers*). In such cases it is inflected for plural[1].

(ii) Determiners (quantifiers) such as **mnogo (many), puno (a lot of/much), malo (little), više (more), manje (less), dosta/dovoljno (enough), previše (too much/many)** along with nouns that express indefinite amounts, such as **dio (a part of) or manjina (minority)/većina (majority)**, occur with nouns specified for [+plural] feature or non-count nouns (*malo (little) mlijeka (milk)/vode (water)/vina (wine)*):

(10)   a. *mnogo* **knjiga**
           many   books-PL.GEN.

       b. Pročitala   sam   *mnogo* **knjiga**.
           Read-FEM.SG.PAST am-1stP.SG.PRES. [many   books-PL.GEN.]-PL.ACC.
           "I read many books."

⟹ In (10a) the quantifier *mnogo (many)* assigns genitive case to the noun *knjiga (books),* which itself is obligatorily marked for [+plural]. In (10b) the entire nominal complement of the verb *pročitati (read)* is assigned accusative case.

       c. *malo* **vina**[2]
           little **wine-**SG.GEN.

       d. Popila   sam   *malo* **vina.**
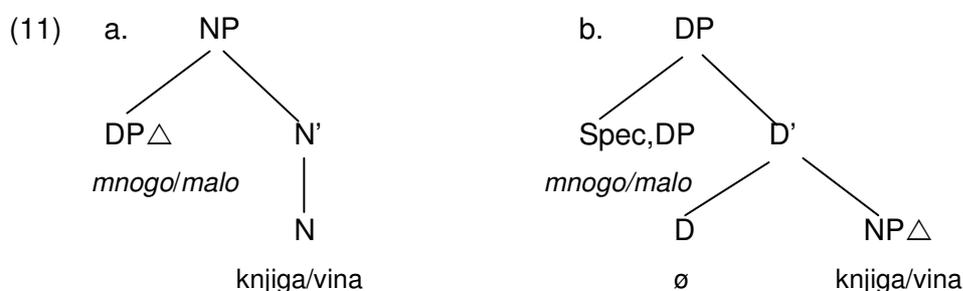   Drunk-FEM.SG.PAST am-1stP.SG.PRES. [little wine-SG.GEN.]-SG.ACC.
           "I drank little wine."

⟹ The non-count noun *vino (wine)* in (10c) is also assigned genitive - the nominal complement is inherently singular in number. Being integrated in a clause as a verbal complement (10d), the nominal expression [*malo* **vina**] is assigned accusative.

⟹ Certain determiner types do not only affect the number feature of their nominal complement, but are also responsible for their case marking (case assigners).

⟹ In order to case-mark their nominal complements, the determiners *mnogo/malo* need to govern and c-command them. By definition, governors are heads (Haegeman 1994:137).
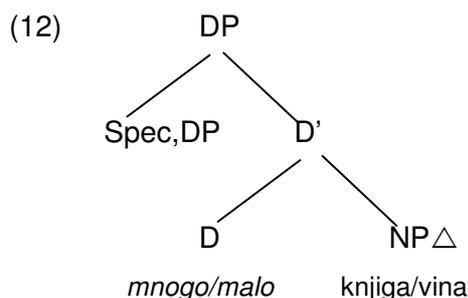
• The analyses favoured so far:

(11)   a.   NP   b.   DP

       DP△   N'   Spec,DP   D'

       mnogo/malo   *mnogo/malo*

                        N   D   NP△

              knjiga/vina   ø   knjiga/vina

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[1] With respect to this Zlatić (1997:54) says: "The fact that *jedan* inflects for plural feature in agreement with the following noun, shows that number features come from the noun rather than from *jedan*." However, she also points out that the numeral *jedan* in combination with other numerals, such as 21, 31, or 101, is to be regarded as the source for number within the nominal expression.
[2] Such nouns can also appear in plural, but in such case they have different meaning, e.g. the plural noun *vina (wines)* denotes different sorts of wine.

⟹ **NP-analysis (11a):** determiners appear either as a specifier of the noun or in a position adjoined to NP (cf. Corver 1992, Zlatić 1998, Bošković 2005) => in either one of these positions the determiners *mnogo/malo* would not satisfy the requirement imposed by the case-assignment condition.

⟹ **DP-analysis (11b):** the adjectival analysis of different determiners, according to which these elements appear in the specifier position of different functional categories projected above NP (Progovac (1998), Leko (1999)) => such an analysis does not provide a proper explanation of the nominal expressions introduced in (10) either.

(12)

```
            DP
           /  \
          /    \
     Spec,DP    D'
               /  \
              /    \
             D      NP△
         mnogo/malo   knjiga/vina
```

⟹ If the determiners *mnogo/malo* occupy the head position within the DP, they can act as governors and assign case to their nominal complements.

⟹ Determiner such as *mnogo (many), puno (a lot of), malo (little), više (more), manje (less), dosta / dovoljno (enough), previše (too much/many)* in Croatian occupy the head position within a DP.

⟹ whether they occupy the head position of D or of some other functional category above NP is a topic for further discussion. **The crucial fact**, though, is that **they display head properties** and are, accordingly, assumed to have a head-status within a nominal expression.

(iii)   Determiners like **nekoliko (several)** modify [+plural] count and *pluraliatantum* nouns:

(13)   nekoliko ključeva / hlača / *ključa / *mlijeka
          *several   keys-GEN.PL. / trousers-GEN.PL. / *key-GEN.SG. / *milk-GEN.SG.*

(iv)   Determiners such as the proximal demonstrative **ovaj (this),** the medial demonstrative **taj (that)** and the distal demonstrative **onaj (that)** can appear with both singular and plural count and non-count nouns:

(14)   a. *ova / ta / ona*-FEM.SG. **knjiga**-FEM.SG.
            this / that / that book

          b. *ove / te / one*-FEM.PL. **knjige**-FEM.PL.
             these / those / those books

          c. *ovo / to / ono*-NEUT.SG. **brašno** / **vino**-NEUT.SG. NON-COUNT
             this / that / that flour / wine

German: determiners are for the most part overtly marked for case and number, while the selected nouns remain uninflected (cf. Strunk 2005):

(15)   de**r** Mann / de**m** Mann /de**n** Mann
          the-M.SG.NOM man / the-M.SG.DAT man / the-M.SG.ACC man

⟹ (in)definiteness- and phi-features do not originate solely on nouns

The declension of adjectival elements within nominal expressions in German also depends on determiner:

(16)   a. **beide**st guten_wk Freunde
            bothstrong infl. *good friends*
          b. meine_st **beiden**wk guten Freunde
            my **both**weak infl. *good friends*

                                                    (Strunk 2005:19)

Numerals

Croatian

- The previous analysis of the determiners *mnogo(many) / malo(little)* can also be applied to the analysis of the nominal expression given in (17)
- when preceded by a numeral such as *dva* the singular noun *automobil (car) / ključ (key)* are inflected for genitive

⟹ unlike the determiner *mnogo*, the numeral *dva* selects for a singular noun.

Case	Singular of the noun *automobil (car)/ ključ (key)*	Plural of the noun *automobil (car)/ ključ (key)*
Nominative	automobil / ključ	automobili / ključevi
Genitive	**automobila / ključa**	automobila / ključeva
Dative	automobilu / ključu	automobilima / ključevima
Accusative	automobil / ključ	**automobile / ključeve**
Vocative	automobilu / ključe	automobili / ključevi
Locative	automobilu / ključu	automobilima / ključevima
Instrumental	s automobilom / s ključem	s automobilima / s ključevima

Table 1. The singular and plural declension paradigm of the nouns
automobil (car)/ ključ (key)

(17)   a. Vidim ***automobil (automobile) / ključ (ključeve)***.
            *see-1st P.SG.PRES. car(s)-M.SG.(PL).**ACC**./ key(s)-M.SG.(PL).**ACC**.*
           "I see the car(s)/ the key(s)."

          b. *dva* **automobila** / **ključa**
            two car-M.SG.GEN. / key-M.SG.GEN.
            "two cars / keys"

          c. Vidim [*dva* **automobila** / **ključa**].
            *see-1st P.SG.PRES.[two car-M.SG.**GEN**./ key-M.SG.**GEN**]-M.PL.ACC.*
            "I see two cars / keys."

⟹ a verb such as *viditi (to see)* subcategorizes for a nominal complement to which it regularly assigns accusative case (17a); we can observe that the accusative noun

automobil (automobile) vs. *ključ (ključeve)* changes its case form when it occurs with the numeral *dva*, as shown in (17c).

Conclusion:
- the discussed Croatian examples together with evidence provided from other languages (both those with and without articles) let us conclude that the feature complex appearing on nominal expressions does not always originate on nouns => some phi-features apparently come from determiners.
- **the noun** is not the only constituent within the nominal expression responsible for the projection of these features, and therefore, **can not be regarded as the absolute morphosyntactic locus of the noun phrase**.

2.2. The Semantic Argument

Noun is the semantic argument because "it describes the type of the object denoted by the noun phrase" (Zlatić 1998:4).

Coexistence of N- and D-Features

(18)   a. **D-Semantics:** quantification, definiteness, indefiniteness, genericity, etc.
       b. **N-Semantics:** attributive / restrictive semantics, the restriction set (dog', cat',
                fisch', etc.) of some kind of quasi-quantificational operator
<div align="right">Beavers (2003:3)</div>

Nominal Phrase Semantic Well-Formedness Condition
All well-fomed noun phrases must have both D-semantics and N-semantics.
<div align="right">(Beavers 2003:4)</div>

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(19)   a. NPs displaying **both D- and N-semantics[3]**:

     (a1) *Every fish* likes *the movies*.
     (a2) *Svako dijete* voli *svoje roditelje*.
         "Every child loves its parents."

     b. **NPs without nouns** still display N-semantics:

     <u>(i) Ellipsis</u>
     (b1)   *Although most dogs* eat dog food, *many* e prefer cat for dinner.
     (b2)   Iako je *puno građana* glasovalo, *mnogi* e nisu izašli na biranje.
         "Although *a lot of citizens* voted, *many* e did not contest the election."

     <u>(ii) Pronominal-DPs</u>
     (b3)   *These (books) / They* record who won the 1967 World Series.
     (b4)   *Ovaj (automobil) / on* mi se sviđa.
              This (car) / he myself like.
              "I like *this (car) / it*."

     c. **NPs without determiners** still display D-semantics:

     <u>(i) Generic</u>
     (c1)   *(Some) people* know who won the 1967 World Series.
     (c2)   *(Neki) ljudi* znaju tko je pobijedio na Svjetskom nogometnom prvenstvu
            ove godine.

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[3] English examples are all taken from (Beavers 2003:4ff.)

"*(Some) people* know who won the Soccer World Cup this year."

(ii) Indefinite
(c3)   I saw *(some) dogs* in the lawn.
(c4)   *(Neke) novinarke su te tražile.*
          (Some) journalists-F.PL. are you searching
          "*(Some) journalists* were looking for you."

(iii) Definite
(c5)   *He / Kim* knows the answer.
(c6)   *Ona / Katarina zna odgovor.*
          "*She / Katarina* knows the answer."

⇒ N- and D-features become intertwined within nominal expressions, as shown in (19).
⇒ The absence of D-elements (articles, demonstratives etc.) is not a reliable criterion for the absence of D-sematics and D-features within a nominal phrase in Croatian.

3. Determiners are not an adjectival category

3.1. Morphological differences
Derivation

(20)   a. rouge → roug*âtre* → rouge*aud*
          b. crven → crven*kast* → *za*crven*jen*
             "red   → reddish   → red-hot"

⇒ The group of descriptive adjectives constitutes an open class (its inventory can be arbitrarily enlarged)
⇒ adjectives can change both their form and meaning, thus creating new lexical items that enrich the existing number of lexical elements.
⇒ the French adjective *rouge* changes its meaning through the attachment of the suffixes - *âtre* and -*aud* (Frleta 2005:73). The corresponding Croatian equivalent in (20b) behaves equally.

Unlike adjectives, the group of determiners constitutes a closed class of lexical items with a limited and clearly defined inventory of words.

(21)   a. ovaj /* ovaj*kast* / *za*ovaj*jen*
             "this / *thisish"
          b. taj / * taj*kast* / *za*taj*jen*
             "that / *thatish"

⇒ The derivational process applied to the adjective *crven (red)* in (20) is not productive in case of determiners (21).

Inflection (Comparison)

(22)   a. lijep → ljepši → najljepši
             "beautiful → more beautiful → the most beautiful"
          b. taj → *tajiji → *najtajiji / moj → *mojiji → *najmojiji
             "that → *thater → *thatest / my → *myer → * the myest"
⇒ Descriptive adjectives can create comparative and superlative forms; determiners in general do not have the possibility of grading[4] (ibid.).

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[4] Exception: the indefinite quantifiers *puno (a lot / much /many)* and *malo (little)* take, due to their scalar nature, the comparative and superlative forms analogous to their English counterparts (*puno, više, najviše (much, more, the most) / malo, manje, najmanje (little, less, the least)*).

3.2. Syntactic differences

<u>**Modification**</u>

(23) a. nevjerovatno lijepo / veoma kratko / totalno uvjerljivo ispričana priča
"incredibly   nicely / very   shortly / totally convincingly told   story"

b. lijepo / kratko / uvjerljivo   *ova / *moja / *jedna / *malo priča
*nicely / shortly / convincingly *this / *my   / *one   / *little story*

c. veoma velik vs.   *veoma ova / *veoma moja / *veoma jedna / veoma malo

*"large / very large" vs. *very   this / *very   my / *very   one" / very   little*

⟹ Descriptive adjectives can be modified by adverbs derived from various adjectives
(23a) as well as by degree adverbs (23c). With the exception of certain indefinite
quantifiers (e.g. *malo*), which can be modified only by degree adverbs, such a
modification of determiners is not possible.

<u>**Distribution**</u>

Predicative Constructions
If possessives can appear in copular constructions in Croatian and this should indicate their
adjectival status, then we would expect all other determiners to follow and to display the
same behaviour => this is not the case:

(24) a. Ova knjiga je *jedna / ?prva / *nekoliko / *svaka / *neka.
This book is *one / ?first / *several / *each/every / *some.

b. Knjiga je *ova / *ta / *ona.
(The) book is *this / *that-MEDIAL / *that-DISTAL

Stacking
⟹ The number of descriptive adjectives within the nominal complex is, at least
theoretically, unlimited. As Frleta (2005:74) points out, we can have multiple
appearances of descriptive adjectives in front of the noun, e.g. the noun *kuća (a
house)* can be described as *stabilna, lijepa, velika, crvena (robust, beautiful, large,
red)* etc.

⟹ The number of determiners is limited, since the speaker can choose only between a
few lexical elements that specify the desired reference.

(25) a. *ona   moja prva* crvena kožna nogometna lopta
that-DISTAL my   first red   leather   football
"that first red leather football of mine"

b. ***ova ona*** moja prva crvena kožna nogometna lopta
**this that* my first red leather football*

c. *ona ***moja tvoja*** prva crvena kožna nogometna lopta
* that *my your* first red leather football*

d. *ona moja ***prva druga*** crvena kožna nogometna lopta
* that my *first second* red leather football*

　　　　e. ***nekoliko puno previše** lopta*
　　　　　several many too many balls

⟹ Although different determiner types can cooccur (25a), we cannot use multiple determiners of the same type (25b-e) => demonstrative determiners, possessives and quantifiers are not of iterative nature themselves, but appear in complementary distribution.

Thematic Structure
Adjectives have a theta grid as part of their lexical entry and they may take arguments, determiners don't:

(26)　　Ja mislim da je prodavačica *poštena*.
　　　　I   think   that is salesperson-FEM honest-FEM.
　　　　"I think that the salesperson is honest."

Binding
⟹ Possessives show nominal properties: the reflexive pronoun *sebe*, the clitic reflexive pronoun *se*, and the possessive reflexive *svoj* are used to express reflexivity.

Reflexive pronouns favour clausal subjects as their antecedents:

(27)　　*Petar$_i$ je dao Mariji$_j$ svoju$_{i/*j}$ knjigu.*
　　　　Peter aux gave Mary self's book.
　　　　"Peter gave Mary his book."
　　　　　　　　　　　　　　　　(Bašić 2004:21)

Zlatić (1997): possessives are also able to function as antecedents and to bind anaphors

(28)　　Petar$_i$ je slušao *Marijino$_j$* opisivanje *svoje$_{*i/j}$* majke.
　　　　Peter aux. listened Mary's description self's mother
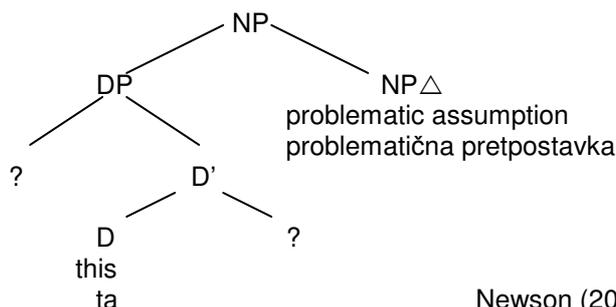　　　　"Peter listened to Mary's description of her mother."　　(adopted from Bašić 2004:21)

⟹ Given that possessives are generated as subjects within complex nominals, they are able to bind the reflexive, which explains the coindexation of the reflexive *svoje* with the possessive noun *Marijino* in (28).

Bašić (2004:22): "if possessives are treated uniformly as adjectives, their behaviour with respect to binding is left unexplained".

Determiners as Phrasal Adjuncts?
Newson (2006: 132): "the determiner looks suspiciously like a word and to analyse it as a phrase by itself begs the question of why determiners never have complements, specifiers or adjuncts of their own."

(29)

```
                    NP
              DP          NP△
                          problematic assumption
           ?       D'     problematična pretpostavka
                D      ?
                this
                ta                    Newson (2006: 132)
```

Coordination

If adjectives and determiners were of the same category, then adjectives could be replaced by determiners and vice versa.

⟹   The coordination of the discontinuous adjectival constituent is, however, only acceptable if the adjective is conjoined with another adjective, and not with a determiner:

(30)   a. U   izlogu   su crveni i crni / *onaj / *moj / *prvi pulover.
   *In the shop window are red and black / *that / *my / *first pullover.*
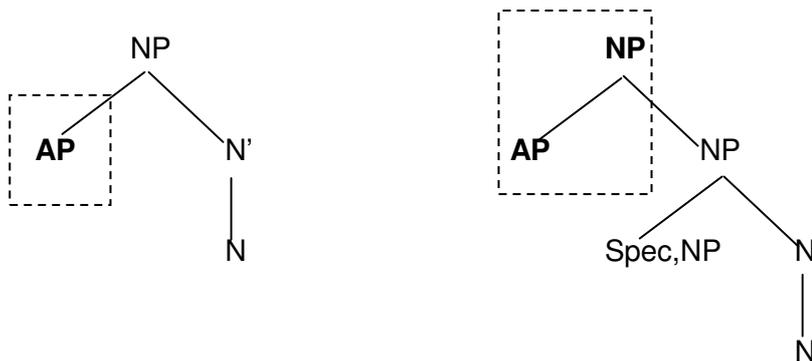   "There are a red and a black / *that / *my / *first pullover in the shop window."

4. Adjectival Premodification in Coordinated Nominal Constructions

- The position of adjectives in DP and non-DP languages is assumed to be different (Corver 1992, Zlatić 1998, Bošković 2005, 2008).

(31)   a. <u>DP languages:</u> AP-over-NP configuration
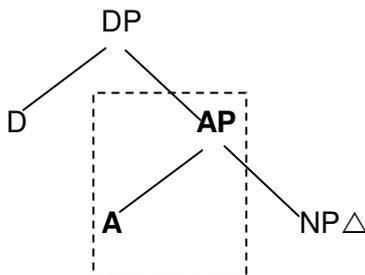
b. <u>Non-DP languages: NP-over-AP configuration</u>

(Linde-Usiekniewicz & Rutkowski 2006:107ff.)

4.1. NP-Coordination (Heycock and Zamparelli 2005)

(32)   a. [My [friend and colleague]] was late.   joint reading
   b. [That [liar and cheat]] is not to be trusted.
   c. [My [father and grandfather]] were both sailors.   split reading
   d. [That [man and woman]] were still shouting at each other.

(Heycock and Zamparelli 2005:342)

The conjunction in (32a, b) => interpreted in the same way as the conjunction of predicative nominals or adjectives below:

(33)   My uncle is [short and fat].

(34)   my-uncle' Є [short' ∩ fat']

The reading given in (32c, d) is unexpected => the conjunction denotes distinct individuals with distinct properties.

The split reading of the NP conjunction is available with many different determiners and noun heads in English (ibid.):

(35)   a. In today's preliminary hearings…[a [36-year-old farmer and 25-year-old X-ray technician]] both claim a right to asylum…
         b. [My [mouth and throat]] went dry.

4.2. The split reading of premodified coordinated NPs in Polish (Linde-Usiekniewicz & Rutkowski 2006)

<u>Linde-Usiekniewicz & Rutkowski (2006)</u>: the NP-over-AP analysis implies that **adjectives**, being NP-internal, **are expected not to be able to modify coordinated noun phrases in articleless languages.**

(36)   a. Pijam gorzką   herbatę i kawę.
            I-drink unsweetened-SG tea and coffee
            "I drink unsweetened tea and coffee."

         b. Na każdym wydziale stypendium dostanie jeden profesor, doktorant i magistrant.
            on each department fellowship will-get one professor PhD-student and MA-student
            "In each department, one fellowship will be given to a professor, one to a PhD student and one to an MA student."

                                                    (Linde-Usiekniewicz & Rutkowski 2006:110ff.)

> QUESTION: What is the implication of the split-reading analysis for the syntax of the Polish NP, or more general, for the structure of nominal expressions in articleless languages?

⟹ the availability of split readings in Polish suggests that **the syntactic position of adjectival modifiers cannot be NP-internal,** like in DP-languages.

4.3. Croatian Data

(37)   a. **Neki čovjek i žena** su nas posjetili.
            some man and women are us visited
            "**Some man and women** visited us."

         b. **Moj otac i djed** su bili arhitekti.
            my father and grandfather are been architects
            "**My father and grandfather** were architects."

         c. **Markov prijatelj i suradnik** je bio / su bili ovdje.
            Marco's friend and collaborator is been / are been here.
            "**Marco's friend and collaborator** was / were here."

    d. Dodajte **malo soli i papra.**
      Add-2nd p.pl. little salt-MASC.GEN.SG and pepper-MASC.GEN.SG
      *"Please, add **some salt and pepper**."*

⟹ In (37a) the indefinite pronoun *neki (some)* refers to both nouns, so that both *čovjek (man)* and *žena (woman)* receive indefinite interpretations.

⟹ The possessive pronoun *moj (my)* in (37b) refers to both nouns, implying that the coordinated nouns designate the speaker's father and grandfather and not the speaker's father and someone else's grandfather.

⟹ in (37c) the specification of the noun by the possessive noun *Markov (Marco's)* allows for both readings, the joint and the split one (additionally supported by either singular or plural verb inflection).

⟹ In (37d) *malo (some/little)* quantifies both *sol (salt)* and *papar (pepper)*, and assigns genitive case to both of them.

CONCLUSION: The introduced examples show that the split reading of the NP conjunction is available with many different determiners, similarly to English sentences introduced in (35).

(38)   a. Privukli su me **intenzivni okus i miris bakalara i češnjaka.**
      attracted are myself intensive taste-MASC.SG. and flavour-MASC.SG. dried cod-GEN.SG. and garlic-GEN.SG.
      *"I was attracted by **an intense taste and flavour of cod fish and garlic**."*

    b. Pozvani smo na **svečani ručak i večeru**.
      Invited are-1st p.pl. to festive lunch-MASC.SG. and dinner-FEM.SG.
      *"We are invited to **a festive lunch and dinner**."*

    c. Promatram **sjajni mjesec i zvjezdice.**
      watch-1st p.sg. <u>bright moon-MASC.SG. and stars-FEM.PL</u>.
      *"I am watching **the bright moon and stars**."*

⟹ the premodifying adjectives in (38a-c) refer to each of the given nouns, although they do not only have a different gender, but also differ in number.

⟹ The Croatian data in (37) and (38) confirm the outcome obtained from the analysis of Polish, extending its validity over to the examples of NP coordination that include nouns of different gender and number.

CONCLUSION: The availability of the split reading and wide scope interpretation of coordinated NPs in Croatian allows us to draw a conclusion that adjectival modification must be NP-external.

5. Summary / Conclusion

⇒ Although Croatian does not have articles, alternative determiners (demonstratives, possessives, quantifiers, numerals etc.) are used to establish the nominal reference within the linguistic discourse. As shown in Section 2, these determiners are number sensitive, just like their English counterparts. They select for different nominal complements → they also carry phi-features and display head-like properties. This rules out the NP/DP-analyses favoured so far (as shown in 11a, b) => being analysed as phrasal adjuncts, quantifiers and numerals should not be able to assign case, as they do.

⇒ Although nouns in Croatian appear articleless, NPs display both D- and N-sematics.

$\Rightarrow$ Morphological and syntactic differences between determiners (demonstratives, possessives, quantifiers) show that they do not belong to the same category $\rightarrow$ demonstratives are not adjectives.

$\Rightarrow$ The availability of split readings in Croatian suggests that the structural position of both determiners and adjectives cannot be NP-internal.

As summarized above, the Croatian data indicate that nominal expressions in Croatian should not be treated as simple NPs. Functional elements that contribute to the (in)definiteness, specificity and quantification of nominals are not adjectives, an as such, they need to occupy their own functional projections above NP => the split readings of both determiners and adjectives favour the DP analysis of these elements.

APPENDIX

IV Optionality of determiners

(1)   a. Someone left *a cat* on my doorstep this morning.
       b. Someone left *the cat* on my doorstep this morning.

                                        (Alexiadou et al. 2007:56 ff.)

$\Longrightarrow$ the interpretative difference between *a cat / the cat*: their contextual accessibility

Definite DPs needn't be necessarily specific, but can also have a non-specific reading:

(2)   a. J' ai pris **le train**.
        I have taken the train.
        "I took the train."   (Ihsane & Puskás 2001:40)

$\Longrightarrow$ In (2a) the definite DP *le train* can be interpreted either as specific or as non-specific
.
       b. Scommetto che non troverai mai **la segretaria di un onorevole** che sia
         disposta a testimoniare contro di lui.
         "I bet you'll never find the secretary of a deputy who is-SUBJ
         willing to witness against him."

                                          (Giusti 2002:63)

In (2b) the DP *la segretaria di un onorevole* appears with the definite article *la* => the DP does not refer to any particular person being previously introduced into the linguistic discourse.

    $\Longrightarrow$ definiteness and specificity are two distinct properties of a noun

(3)   a. **Definiteness**: selects one object in the class of possible objects
       b. **Specificity**: relates to pre-established elements in the discourse
                                 (Ihsane & Puskás 2001:40)

QUESTIONS
- How is nominal reference established in articleless languages?
- Does the lack of articles mean that nouns remain uninterpreted?
- What is the role of determiners (demonstratives, possessives, quantifiers) in such linguistic environments and how does the necessity of establishing a nominal reference influence the "optionality-status" of certain types of determiners (especially demonstratives) in Croatian?

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1. The Problem with Croatian

Two different views

(i) Definiteness is **NOT grammaticalised** in Serbian/Bosnian/Croatian. Nominals are not obligatorily marked for definiteness by any grammatical markers (cf. Trenkić 2001, 2004). However, the category of demonstrative determiners in particular has often been identified "as potential "translation equivalent" of the English definite article" (cf.Trenkić (2004) and references therein). As such, they are "restricted to the immediate situation and anaphoric uses" (Trenkić 2001:120).

(ii)   Under the assumption that the category of (in)definiteness represents a universal property of nouns[5] there exist linguistic elements in Croatian, whose primary function is, similarly to the function of articles in other languages, to express the category of (in)definiteness (cf. Hlebec (1986), Progovac (1998), Zlatić (1997,1998), Leko (1999), Silić (2000), Pranjković (2000)). These **linguistic/syntactic means range from word order, the apect of verbs and adjectives, case and number to definite and indefinite determiners**[6].

⟹   The presence of a demonstrative determiner in some contexts is not evidence for the presence of a DP in Croatian, since **demonstratives are optional** elements within the noun phrase (Zlatić 1998)

2. Towards an Analysis
Example: semantically ambiguous noun *mjesec* (*the moon* vs.*a/the month*)

(4)   a. **Mjesec** je jako svijetlio prošle noći.   *definite/specific (uniqueness)*
      the moon is very illuminating last night
      "The moon was shining bright last night."

      b. **Mjesec** je bio kišovit.   *definite /indefinite*
      (?this) month is been rainy   *(situational knowledge)*
      "It was rainy this month / a rainy month."

⟹   nouns in Croatian receive their (in)definite and/or (un)specific interpretation in their relative context
⟹   despite the absence of article, in (4a) the hearer will definitely identify *the moon* as the unique celestial body revolving around the earth
⟹   in (4b) the hearer can interpret the noun as either definite or indefinite, depending on his/hers situational knowledge.

(5)   a. Molim te, daj mi **ø nož**!   *definite/unspecific*
       Please-you, give me-DAT-SG. knife-ACC-SG.
      "Please, give me a/the knife!"

      b. Molim te, daj mi **taj nož**!   *definite/specific*
       Please-you, give me-DAT-SG. that knife-ACC-SG.
      "Please, give me the/that knife!"

The situation pictured out in (5*): there are two people preparing a meal in the kitchen. The one person tells to the other to give her the knife.*

   ⟹   In (5a) *the knife* speaker refers to mustn't necessarily be within either the speaker's or hearer's sight, it can be any of the knives available in the kitchen at that moment. The speaker basically conveys that he wants to have a knife and not a fork or a spoon.
   ⟹   In (5a) the NP *knife* is definite, but not specific (according to the definition of definiteness and specificity proposed by Ihsane & Puskás 2001).

The example in (5b) has two different readings. This time the knife is necessarily within the speaker's and hearer's sight (e.g. on the worktop in front of them).

   o   1st reading: one knife = **emphatic** deictic use (the determiner <u>can</u> be left out)

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[5] Silić (2000:401) says: "Čitajući literaturu o lingvističkim univerzalijama, nisam naišao na to da se među njima spominje kategorija neoodređenosti/određenosti. A ja mislim da ona to jest." [While reading a literature on linguistic universals, I didn't encounter that the category of (in)definiteness is being mentioned as one of them. But I think that it should be, because it is a linguistic universal].
[6] The markers of (in)definiteness won't be discussed in this paper.

o 2nd reading: two knives = **selective** deictic use (the determiner <u>cannot</u> be left out)

⟹ The 1st reading describes the situation where there is only one knife there and the person wanting to have it points in its direction: the demonstrative is used here for emphatic reasons (**emphatic deictic use**) => it can as well be left out without affecting the proper interpretation of the reference.

⟹ The 2nd reading: there are two knives lying on the kitchen worktop. In order to make its reference clearer, the speaker points to the entity he has in mind and backs up his nonverbal pointing towards a chosen entity by the use of the demonstrative determiner => the deictically used demonstrative is employed **with the purpose of selecting between two identical objects:** it can not be left out (**selective** deictic use). In addition to being [+definite], the NP *nož* ("knife") in (8b) is also [+specific] due to the presence of the demonstrative pronoun *taj*.

QUESTION: In which contexts/functions do demonstratives appear in general?

Universal Uses/Functions of Demonstratives

⇒ the definite demonstrative determiners and definite articles exhibit a functional overlap (Himmelmann 1996, 1998, Cyr 1993).
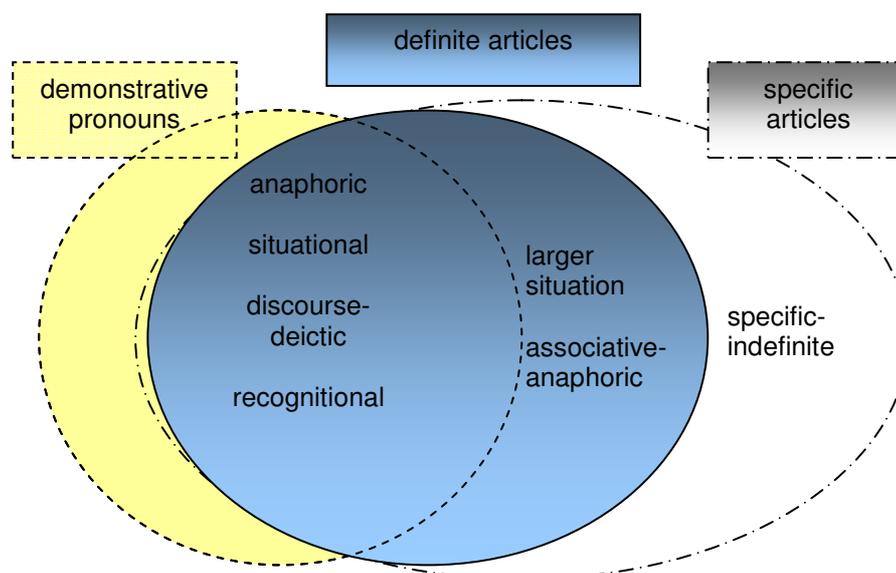
Graphics 1: Semantic/pragmatic functions of D-elements (based on Himmelmann 1998:323)

QUESTIONS: Which uses are typical for Croatian demonstratives? Do they cover the reference domain covered by the English definite articles? Articles in English are obligatory; are demonstratives (as potential "article substitites" in Croatian) optional or obligatory?

⇒ Trenkić (2001, 2004): "demonstratives as potential translation equivalents of the English definite article are restricted to the immediate situation and anaphoric uses" only in Serbo-Croatian
⇒ Zlatić (1998): **demonstratives are optional** elements within the SC noun phrase

3. Uses of Demonstrative Pronouns in Croatian

Situational Use / Anaphoric Use
In addition to the situational (exophoric) use of demonstrative elements, as illustrated in (5b), demonstrative determiners in Croatian are used to refer back to the entity previously introduced into the linguistic discourse (anaphoric use).
Whereas in languages like English we can alternatively use articles to establish the desirable reference (cf. Graphics 1), in Croatian we can only employ a determiner to fullfil this function[7]:

(6)   a. Blistajući na tamnoputom licu, njene su zelene oči bile prikovane uz Ilijine; on
        shining   on   dark   face, her are green eyes been fixed   to Elijah's; he
        nije uspijevao prozreti   što su mu **te** oči govorile[8].
        *not is managing to decipher what are him **these** eyes telling.*

        b. Blistajući na tamnoputom licu, njene su zelene oči bile prikovane uz Ilijine; on nije
        uspijevao prozreti što su mu * **ø** oči govorile.

        *"Her green eyes, which shone in her dark face, remained fixed on Elijah's; he was
        unable to decipher what they meant."*

  ⟹ In (6) the demonstrative determiner is used in order to establish a reference to the previously introduced NP *njene zelene oči (her green eyes)* => the omission of the demonstrative determiner *te (these)* would result in the uninterpretability of the nominal expression *oči (eyes)*.

  ⟹ the demonstrative *te* can be replaced by some other determiner (e.g. *Jezebel's, her*). The crucial fact, though, is that **a noun can not occur on its own** in this context.

(7)   a. Znam koji je razlog   – reče svećenik   – **Jedna** žena te natjerala u bijeg[9]
        *Know-1stP.PRES.SG. which is reason – said priest – **one** woman you forced to flee?*
        Ta je žena   najljepše stvorenje koje sam   ikada vidio   u svom životu.
        ***That** is woman most beautiful being   that am1st P.P.SG. ever seen in my   life.*

        b. Znam koji je razlog – reče svećenik – ***ø** žena te natjerala u bijeg?
        ***ø** žena je najljepše stvorenje koje sam ikada vidio u svom životu.

        *"I know the reason," said the high priest. "Was it a woman who made you flee?" "In all
        my life, that woman was the most beautiful creature I have ever met."*

  ⟹ In (7) the noun *žena (woman)* is accompanied by the indefinite predeterminer *jedan "one"* (the speaker introduces her into the discourse for the first time). In order to refer to the same entity in the following sentence, the interlocutor uses the definite demonstrative determiner *ta (this)* => the omission of both is ruled out, since the nouns would fail to be properly interpreted in both cases.

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[7] All examples given to illustrate different uses of demonstratives in Croatian in this section are taken from P. Coelho's novel "Peta gora" ("The fifth mountain" - Croatian edition).
[8] P. Coelho: Peta gora ("The fifth mountain" - Croatian edition), p. 25.
[9] (ibid.), p. 47.

Discourse Deictic Use

(8)   a.**Onaj** razgovor sa svećenikom, dok je još bio dijete, pretvorio se u blijedo sjećanje.[10]
     *"**That** conversation with priest,   while is still been child, turned itself into remote memory."*

     b.*****ø** razgovor sa svećenikom, dok je još bio dijete, pretvorio se u blijedo sjećanje.

      *"The conversation with the priest, when he was still a child, came to be merely
       a remote memory.*

⟹ In (8a) the NP *razgovor (conversation)* is accompanied by the distal demonstrative ***onaj***, which establishes the reference to a conversation that took place at some point in the past, here the childhood of the person having been talked about. The adverbial clause in (8a) creates a particular referential context which makes the demonstrative determiner obligatory.

⟹ The determinerless appearance of the noun yields an unacceptable sentence in (8b), which is refused by the native speakers on the grounds of its unaccessibility.

Recognitional Use

=> the intended referent is identified through the speaker's and addressee's shared specific knowledge

(9)   a.Da, sjećam se **te** žene[11].
     Yes, remember –1st.P.SG. myself **that** women-GEN.SG.
     "Yes, I remember the/that woman."

     b. Da, sjećam se *****ø** žene.

⟹ Through the omission of the demonstrative in (9b), the intended referent of the nominal expression fails to be identified.

In the following instances of non-deictic use of demonstrative determiners, which are very likely used in the same way in the equivalent English contexts, the omission of the determiner is refused by the native speakers:

(10)   a. **Tog** popodneva, dok je završavao   jedan stol u svojoj radionici…
      That afternoon,   while is finishing-3rd P.SG.MASC. one   table in his   shop…
      "One afternoon, as he was finishing a table in his shop…"

      b. ***ø** Popodneva, dok je završavao jedan stol u svojoj radionici…

(11)   a. Ilija nije spavao **te** noći.
      Elijah not is slept-3rd P.SG.MASC **that** night.
      "Elijah did not sleep that night."

      b. Ilija nije spavao *****ø** noći.

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[10] (ibid), p. 25.
[11] (ibid.), p. 38.

4. Conclusion

⇒ The stipulated universal uses of demonstratives postulated by Himmelmann (1998) can also be confirmed for Croatian.

⇒ Whether Croatian demonstratives cover a part of the reference domain covered by the English definite articles remains a subject for further research. We clearly cannot maintain that "demonstratives as potential translation equivalents of the English definite article are restricted to the immediate situation and anaphoric uses" only (cf.Trenkić 2001, 2004), as the discourse-deictic and recognitional uses of demonstrative determiners in (8) - (11) show.

⇒ The introduced examples also show that demonstrative determiners contribute to the definiteness/specificity status of referents in a given context (as expected).

⇒ The assumed optionality of demonstrative determiners in Croatian is **context-sensitive and the necessity of their use is closely related to the existing contextual accessibility of nouns.** Due to the necessity of establishing a definiteness/specificity status of nominal reference in given contexts, the demonstrative determiners in Croatian are not optional, but, in many cases, rather obligatory elements within a nominal complex.

What is the relevance of this observation for the structure of nominal expressions in Croatian?

⇒ One of the main arguments in favour of the NP-analysis of nominal constructions in Serbo-Croatian was the claim that noun phrases appear without determiners => in this section I showed that this claim does not hold.

⇒ if we have structures that necessarily include functional categories of this type, we must account for these structures.

⇒ Even if these elements were not obligatory, the fact that we can have complex nominal expressions of the type *one tvoje prve plave tenisice* (*that your first blue sneakers*), which include several functional elements, urges us to provide a structure that can accommodate all these elements. NP approaches to Slavic accommodate both adjectives and determiners within the NP (Zlatić 1998, Bošković 2005, 2008, 2009). In this paper I provided a range of arguments for the view that determiners and adjectives are distinct categories with different morphological and syntactic properties that do not occupy structural positions within NP, but are assumed to be hosted by their own functional projections above NP.

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