NOTES AND DISCUSSION

A new argument for existence of the DP in languages without articles[1]

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In this squib, I provide evidence of a novel type in favor of the existence of the DP in previously undiscussed articleless languages: I show that a comitative preposition in the Ossetic languages cannot attach to nominal expressions that would be analyzed as DPs in better studied languages. On the other hand, nominal expressions that it can attach to are of the kinds that would be analyzed as bare NumPs.

Since Szabolcsi ([1984](#)), Fukui & Speas ([1986](#)), and Abney ([1987](#)), it has been a fairly standard assumption in the literature that noun phrases universally project an additional functional layer – that of the determiner phrase. In this line of thinking, at least some nominal expressions in languages that lack overt articles still project a DP[2] with a null D^0. However, it is a matter of current discussion whether languages without obligatory morphological marking of definiteness do nevertheless project a DP. An idea that languages without overt articles do not project a DP was put forward in Trenkic ([2000](#)), Baker ([2003](#)), and Trenkic ([2004](#)). The same idea was argued for in Bošković ([2005](#)) and the ensuing literature; see, for example, Bošković ([2008](#)), Bošković & Gajewski ([2011](#)), and Despić ([2011](#)). On the other hand, a number of works have appeared recently that explicitly argue for the presence of the DP (possibly alongside with the bare NP or NumP) in several articleless languages from different language families; see, for instance, Pereltsvaig ([2007](#)) for Russian, Manlove ([2015](#)) for West Greenlandic,

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[2] Abbreviations and glosses used in the squib: DP determiner phrase; NumP numeral phrase; NP noun phrase; ACC accusative; ALL allative; COM comitative; DAT dative; GEN genitive; NUM numerative; OBL oblique; PL plural; SG singular.

Lyutikova & Pereltsvaig (2015) for Tatar, Giusti & Iovino (2016) for Latin, Stanković (2017) for Serbian–Croatian–Bosnian, Syed & Simpson (2017) for Bangla, and Norris (2018) for Estonian.

In this squib, I provide evidence of a novel type in favor of the existence of the DP in previously undiscussed articleless languages: I show that a comitative preposition in the Ossetic languages cannot attach to nominal expressions that would be analyzed as DPs in better studied languages. On the other hand, nominal expressions that it can attach to are of the kinds that would be analyzed as bare NumPs. (Here, I use the term 'nominal expression' as a theory-neutral label for NPs, NumPs, and DPs.) It is natural to conclude, therefore, that this preposition obligatorily selects for NumPs.

Iron and Digor Ossetic are closely related Eastern Iranian languages (Indo-European) spoken in the Central Caucasus. Neither of these languages exhibits overt articles. It is sometimes claimed in the literature that the Digor Ossetic deictic *i* is a definite article; see, for example, Abaev (1964). However, it is not obligatory and only occurs very rarely in written texts or spoken language. The sentence in (1a), where both arguments lack *i*, allows for an interpretation where they are definite. Furthermore, contexts where *i* would be obligatory do not exist. In (1b), unique objects *χor* 'sun' and *arv* 'sky' occur without *i*, while in (1c), the discourse-given *fijɐwuttɐ* 'shepherds' does so.

(1) *Digor Ossetic*

    (a) mistɐ   tikiʃ-i   χʷɐruj
           mouse.NOM cat-ACC eats
           'The mouse is eating the cat'.

    (b) χor   arv-mɐ   bɐrzond istuldɐj
           sun.NOM sky-ALL high   rolled.up
           'The sun rolled up high to the sky'.   (Sabajti 2010: 95)

    (c) gabe   ɐtsɐgɐjdɐr χʷarz anχos kodta fijɐwu-tt-ɐn   (...)
           Gabe.NOM really   well   help did   shepherd-PL-DAT (...)
           ɐma=jin   arfitɐ kodtontsɐ fijɐwu-ttɐ
           and=3SG.DAT thanks they.did shepherd-PL.NOM
           'Gabe helped the shepherds really well. (...) And the shepherds thanked him'.   (Sabajti 2010: 5)

In this squib, all the other examples will be from Iron Ossetic, but both languages behave essentially identically in what is relevant here.

The rest of this squib is organized as follows: in Section 1, I lay out the key data and propose their interpretation, and in Section 2, I address the overall structure of DP in Ossetic. In Section 3, I provide additional evidence in favor of the proposal based on the case assigning properties of *ɐd*.

1. KEY DATA

One of the ways to express the comitative meaning in Ossetic is to attach a preposition *ɐd* 'with' to nominal expression, (2).

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(2) (a) ɐd   [ʃtər bel]
         with big spade
         'with a big spade'

     (b) ɐd   bɐχ-tɐ   ɐmɐ (ɐd) χɐrʤɐ-tɐ   ɐrbasədtɐn
         with horse-PL and   with donkey-PL I.arrived
         'I arrived with horses and donkeys'.

     (c) ɐd   ɐrtɐ ʧ'iri-jə
         with three pie-NUM
         'with three pies'

However, it is impossible to use *ɐd* with nominal expressions that typically consti-
tute DPs in better studied languages. This is illustrated for personal pronouns (no
matter which case they are put in) in (3a), for proper nouns in (3b), for wh-words
in (3c), and for nominal expressions with a demonstrative in (3d).

(3) (a) *ɐd   ɐʒ   / mɐn …
          with I.NOM / I.OBL …
          'with me'   (intended)

     (b) *ɐd   ʃoʃlan
           with Soslan
           'with Soslan'   (intended)

     (c) *ɐd   sə   / sɐj
           with what.NOM / what.OBL
           'with what'   (intended)

     (d) *ɐd   asə bel
           with this spade
           'with this spade'   (intended)

A natural interpretation of these facts is that *ɐd* lexically subcategorizes for (bare)
NumPs[3] and fails to attach to DPs. Accordingly, pronouns, proper names, and
nominal expressions with a deictic constitute DPs in Ossetic.

   Another way to express the comitative, by means of the comitative case marker
-imɐ in Iron and the postposition *χɐtstsɐ* in Digor, is not subject to any of
the restrictions discussed in this squib, as illustrated in (4) by the grammatical
counterparts of the phrases from (3).

(4) (a) mɐn-imɐ
          I.OBL-COM
          'with me'

     (b) ʃoʃlan-imɐ
          Soslan-COM
          'with Soslan'

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[3] Or perhaps some other nominal projection smaller than a DP. For the sake of concreteness, I will
talk about a NumP in this squib.

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    (c) sɐj-imɐ
          what.OBL-COM
          'with what'

    (d) asə bel-imɐ
          this spade-COM
          'with this spade'

An anonymous reviewer inquires about the behavior of coordinated nominal expressions where one of the coordinands can combine with ɐd and the other cannot. As the sentences in (5) illustrate, it is impossible to use such coordinations as the complement of the preposition, no matter what the order of coordinands. The natural way to express the respective meaning is to use the case/postpositional comitative (5c). It is also possible, but less felicitous, to mark the DP with the case/postpositional comitative and the smaller nominal with the preposition (5d).

(5) (a) *ɐd [bɐχ-tɐ   ɐmɐ ʃoʃlan / ɐʒ] ɐrbasədi
         with horse-PL and Soslan / I   (s)he.arrived
         'She/he arrived with horses and Soslan/me'.   (intended)

    (b) *ɐd   [ʃoʃlan / ɐʒ ɐmɐ bɐχ-tɐ] ɐrbasədi
         with Soslan / I and horse-PL (s)he.arrived
         'She/he arrived with Soslan/me and horses'.   (intended)

    (c) ʃoʃlan(-imɐ) ɐmɐ bɐχ-t-imɐ   ɐrbasədi
         Soslan-COM and horse-COM (s)he.arrived
         'She/he arrived with Soslan and horses'.

    (d) ?ʃoʃlan-imɐ   ɐmɐ ɐd   bɐχ-tɐ   ɐrbasədi
         Soslan-COM and with horse-PL (s)he.arrived
         'She/he arrived with Soslan and horses'.

It is worth stressing that it is indeed the morphosyntax rather than only the referential status of a nominal that determines its compatibility with ɐd. Namely, indefinite nominal expressions with a possessor are incompatible with this preposition (6). The context for (6) is the following. Consider a situation when a friend of mine, Soslan, is a potter and makes (easily identifiable) jugs for a living. I arrive with a jug produced by him. Only the comitative case marking is possible in this situation (6). Accordingly, it is the morphosyntactic properties of a nominal expression rather than just its referential properties that influence the marking.

(6) (a) *ɐd ʃoʃlan-ə   / mɐ=ləmɐn-ə   durən ɐrbasədtɐn
         with Soslan-GEN / my=friend-GEN jug   I.arrived
         'I arrived with a jug of Soslan's / my friend's'.   (intended)

    (b) ʃoʃlan-ə   / mɐ=ləmɐn-ə   durən-imɐ ɐrbasədtɐn
         Soslan-GEN / my=friend-GEN jug-COM   I.arrived
         'I arrived with a jug of Soslan's / my friend's'.

Finally, if a nominal expression denotes a naturally unique object, for most speakers consulted using ɐd with it is ungrammatical or infelicitous, which is

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consistent with the expectation that in such cases, a covert D^0 is merged. However, some speakers accept *ɐd* in such sentences. To illustrate this phenomenon, consider the following context. Any Ossetic shrine, *zwar*, has a unique priest, *zwarəlɐg*. He and we went to the shrine he is the priest of. Some speakers allow (7a) in this situation, although most of those I consulted find more felicitous the variant (7b), where the comitative case is used.

(7) (a) zwar-ə   bən-mɐ   ɐd   zwarəlɐg ɐrbasədəʃtɐm
        shrine-OBL under-ALL with priest   we.arrived
        'We came to the shrine with the priest'.
    (b) zwar-ə   bən-mɐ   zwarəlɐg-imɐ ɐrbasədəʃtɐm
        shrine-OBL under-ALL priest-COM   we.arrived
        'We came to the shrine with the priest'.

I propose that in sentences such as those in (7a), the nominal expression remains a NumP and denotes a property rather than an individual; cf. Partee (1986), Dayal (2011), and Pereltsvaig & Kagan (2018). Speakers that accept sentences of this type are able to coerce the definite reading based on the world knowledge (any shrine normally has a unique priest, any country normally has a unique president, etc.).

Table 1 summarizes the distributional properties of the prepositional and case/postpositional comitatives.

Type of nominal expression	With *ɐd*	With the comitative case/postposition
Bare common nouns	✓	✓
Bare common nouns with adjectives	✓	✓
Bare common nouns with adjectives and a numeral	✓	✓
Plural marking on the head noun	✓	✓
Coordinated NEs	✓	✓
Proper nouns	*	✓
Pronouns	*	✓
Wh-phrases	*	✓
NEs with demonstratives	*	✓
Universally quantified NEs	*	✓
NEs with possessors	*	✓

Table 1
Distribution of the two comitatives.

The proposal that *ɐd* only allows NumP complements, whereas the postpositional comitatives take DPs, predicts the differences between the two comitative constructions. Lyutikova & Pereltsvaig (2015) describe a similar contrast between two suffixes in Mishar Tatar, *-gV*, and *-lV*. However, the suffix that takes smaller

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nominals, *-lV*, is reported to disallow plural marking on the head noun of its complement, and, therefore, it subcategorizes for nominals smaller than the NumP.

2. THE STRUCTURE OF THE DP IN OSSETIC

Having seen the evidence for positing DP in Ossetic, it is natural to inquire about the overall structure of the DP in these languages. Descriptively, the order of elements of the DP in Ossetic is possessor – demonstrative – (adjectives) – numeral – (adjectives) – noun (8). Case and number are marked on the right edge of the DP.

(8) ʃoʃlan-ə   asə dəwɐ ʃaw quʥ-ə
     Soslan-GEN this two black cow-NUM
     'these two black cows of Soslan's'

I propose that the structure of the DP in Ossetic is as shown in (9). A possessor, should one be present, occupies Spec DP. A demonstrative, again, should one be present, occupies D^0, while all the other material is part of the NumP. I am leaving open the possibility for a more articulate left periphery structure of the DP, as discussed, for instance, in Szabolcsi (1994), Giusti (2002), Hsu & Syed (2018), and Pereltsvaig & Kagan (2018).

(9)

DP

Spec DP
ʃoʃlan-ə
Soslan's

D′

D^0
asə
this

NumP

dəwɐ ʃaw quʥ-ə
two black cows
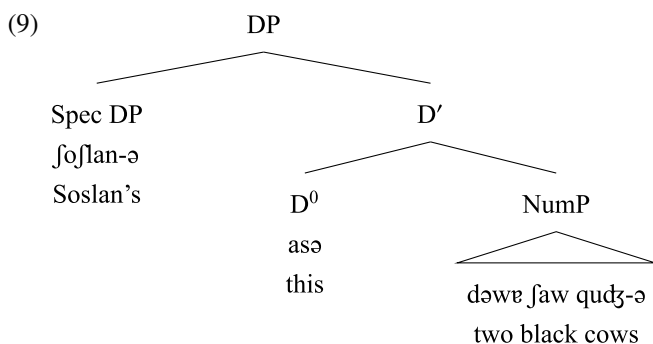
Evidence for such a structure comes from the linear position of possessors and their interpretation. The possessor must be strictly initial in the DP (10a). It is obligatorily marked with the genitive. If a demonstrative is initial in a nominal expression with a possessor, the demonstrative can only be construed as modifying the possessor (10b). Accordingly, the possessor must be assigned the highest position in the DP, that is, Spec DP. In the absence of a possessor, a demonstrative, if present, must precede all the other content of a nominal expression (10c). This allows us to conclude that the demonstrative occupies the second highest position in the DP, that is, D^0.

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(10) (a) ʃoʃlan-ə   asə bel
           Soslan-GEN this spade
           'this spade of Soslan's'
      (b) asə ʃoʃlan-ə   bel
           this Soslan-GEN spade
           'the spade of this Soslan's'
           *'this spade of Soslan's'
      (c) asə ʃtər ⟨*asə⟩ bel
           this big   this spade
           'this big spade'

Placing the possessor in Spec DP makes an immediate prediction about the compatibility with ɐd of nominal expressions with a possessor. Namely, the prediction is that a nominal expression with a possessor will not be able to serve as a complement of ɐd. This prediction is indeed borne out (11).

(11) *ɐd fəd-ə   bel
        with father-GEN spade
      'with a/the father's spade'   (intended)

I leave the investigation of the finer structure of the Ossetic DP for further research.

3. ADDITIONAL EVIDENCE: CASE MARKING PROPERTIES

It has been argued by Danon (2006) that only DPs, rather than smaller nominal projections, may be assigned case. Case marking properties of ɐd match this proposal assuming that complements of ɐd are indeed NumPs. As (2) shows (repeated as (12) here), complements of ɐd obligatorily lack overt case marking.

(12) [PP ɐd   [NumP [NP ʃtər bel-Ø]]]
            with   big spade
      'with a big spade'

This contrasts with the behavior of the only other preposition in Ossetic, ɐnɐ 'without', which lacks any distributional restrictions and is able to assign case to its complement (13). The rather intricate case assigning properties of ɐnɐ are beyond the scope of this squib.

(13) (a) ɐnɐ   mɐn(-ɐj)
           without I.OBL-ABL
           'without me'
      (b) ɐnɐ   ʃoʃlan(-ɐj)
           without Soslan-ABL
           'without Soslan'

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(c) ænæ ʃtər bel(-æj)
with big spade-ABL
'without a/the big spade'

This provides additional evidence in favor of the proposal advanced in this squib.

4. CONCLUSION

Positing abstract functional structure, such as that of the DP in a language without articles, requires explicit supporting evidence. In this squib, I have presented a novel evidence for the existence of DP in hitherto unstudied articleless languages. Namely, I have shown that a certain preposition in Ossetic is only compatible with nominal expressions that cross-linguistically are NumPs. I leave for further research the question of whether bare NumPs or NPs occur in Ossetic as verb arguments. The argument laid out here is undeniably language specific; however, it gives more weight to the hypothesis that a DP can be projected in any language no matter whether or not it exhibits overt articles. Additionally, this squib provides explicit morphological evidence that, alongside with DPs, a language may use nominal expressions that are only NumPs, as was proposed for independent reasons by Danon (2006) and Pereltsvaig (2006). Moreover, from a broader perspective, this observation contributes to the debate about the universality of syntactic categories in general.

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