Dative external possessors in Ossetic

Natalia Serdobolskaya

Institute of Linguistics RAS

Oleg Belyaev

Lomonosov Moscow State University

(Interdisciplinary School "Preservation of the World Cultural and Historical Heritage")

Institute of Linguistics RAS

Pushkin State Russian Language Institute

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Abstract

Ossetic has two ways of marking possessors: by genitive or by dative. In the latter case, the dative NP has to be doubled by a possessive proclitic on the possessum. In this paper, we argue that while genitive NPs are adnominal, dative possessive NPs attach at clause level. We show that the dative is structure shared with POSS inside the noun phrase, and the proclitic acts as an agreement marker, annotated similarly to subject markers in pro-drop languages. We further demonstrate that the Ossetic construction, while superficially similar to "double possessives" in Hungarian and Germanic, should be analyzed in a different way; most importantly, Ossetic lacks a NP/DP-internal position for the dative possessor.

1 Overview

Ossetic (standard Iron variety; Iranian > Indo-European, ~500 000 speakers),[1] spoken in the Republic of North Ossetia – Alania in the North Caucasus (Russia) and in South Ossetia, has two possessive constructions. In one of them, the possessor is genitive-marked (1a) or expressed by a possessive proclitic (1b).[2]

(1) a. ***žawər-ə ʒmbal***
      Z.-GEN   friend
      '**Zaur's** friend'

    b. ***je= mbal***
      his friend
      '**his** friend'

In the other construction, the possessor is dative-marked[3] and must be doubled by a possessive proclitic:

(2) ***žawər-ɜn** *(**je=**) *mbal***
    Z.-**dat**   his   friend
    'Zaur's friend', lit. 'to Zaur his friend'

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2. None of the main possessive constructions are directly comparable to the Persian Ezafe, since they are head-final and involve dependent marking, rather than a "linker" morpheme. Therefore, the analysis of Bögel, Butt, and Sulger (2008) is not applicable here. Ossetic does have an "Ezafe-like" usage of the same genitive affix, exemplified by constructions like *fəd-ə žɜrond* (father-GEN old) 'old father', which some authors, since at least Bailey (1946, 205ff.), derive from the same source as the Persian Ezafe, i.e. the relative pronoun in **ya-*. Others contest this, however, see Cheung (2008, 89–90). This construction seems to be of limited productivity in modern Ossetic and deserves a separate study; we are not describing it in this paper.

3. Iron Ossetic has a nine-term, agglutinating case system. Apart from marking the possessor, the genitive can also mark animate direct objects. The main function of the dative is to mark recipients and addressees.

(3) **mзn-зn** *(**me=**) *mbal*
me-DAT   my   friend
'my friend', lit. 'to me my friend'

The existence of two possessive constructions, which has never been treated
separately before, raises several questions as to their behaviour: the syntactic con-
straints on the use of the two constructions; their differences in internal structure;
the site of attachment at the dative (clause level or at NP level); the nature of the
connection between the dative NP and the possessive proclitic. In this paper, we
discuss all of these questions and provide a preliminary analysis of Ossetic da-
tive possessors in LFG. In section 2, we show that neither the semantics of the
possessive relation nor the properties of the NP or the verb determine the choice
between genitive and dative: in most contexts, both can be used interchangeably.
In section 3, we show that dative possessors should be analyzed as attaching at
clause level, rather than NP level. In section 4, we discuss how the relation be-
tween the dative NP and the proclitic is established. We argue that the dative is
structure-shared with an NP-internal position. Finally, in section 5 we provide
an LFG analysis of the syntax of Ossetic possessive constructions, arguing that
the dative is a clause-level adjunct and the proclitic acts as a kind of agreement
marker.

2 Constraints on the genitive and dative

2.1 Genitive relations

While the genitive marking of NP dependents is more common and less marked,
both the genitive and the dative can encode the same set of semantic relations
within the noun phrase, regardless of animacy, such as: alienable possessor (4),
inalienable possessor (5), authorship (6), material contained in an object (7), ob-
ject that is measured (8), location (9). There seems to be no relation that can be
expressed by the genitive and cannot be expressed by the dative and vice versa.

(4) a. *lзp:u-jə   xзdon*
         boy-GEN   shirt

     b. *lзp:u-jзn jз= xзdon*
         boy-DAT   his shirt
         'the boy's shirt'

(5) a. *lзp:u-jə   k'ux*
         boy-GEN   hand

     b. *lзp:u-jзn jз= k'ux*
         boy-DAT   his hand
         'the boy's hand'

(6) a. *k'osta-jə   зmzзvgз*
         K.-GEN   poem

     b. *k'osta-jзn je= mzзvgз*
         K.-DAT   his poem
         'a poem of Kosta'

(7) a. *ššad-ə   gollag*
         flour-GEN sack

     b. *ššad-зn   jз= gollag*
         flour-DAT its sack
         'a sack of flour'

(8) a. *ziza-jə   kilɜ*
         meat-GEN kilo

     b. *ziza-jɜn   jɜ= kilɜ*
         meat-DAT its kilo
         'a kilo of meat'

(9) a. *gorɜt-ə   aštɜw*
         city-GEN middle

     b. *gorɜt-ɜn   jɜ= aštɜw*
         city-DAT its middle
         'center of the city'

However, in examples like (7)–(8), there is a significant semantic difference between the two constructions that is lacking in other contexts. Namely, (10a), with the genitive, merely signifies that the sack contained flour, whereas (10b) is interpreted such that the flour is separate from the sack and was poured into it after the sack was received. This can be interpreted as the flour being referential in (10a) and nonreferential in (10b), cf. English *sack of flour* vs. *sack with (the) flour*. This difference in interpretation is consistent with the fact that nonreferential genitives attach lower in Ossetic NP structure and are not true possessors, as argued in section 5.1 below.

(10) a. ***ššad-ə***   *gollag irɜ rat:-a*
          flour-GEN sack   I. give.PFV-PST.3SG
          'It was Ira who gave the sack of flour.'

      b. ***ššad-ɜn*** *jɜ= gollag irɜ rat:-a*
          flour-DAT its sack   I. give.PFV-PST.3SG
          'It was Ira who gave the sack (that is now) with the flour.'

The genitive and dative constructions are also interchangeable when marking objects of most postpositions (11), which can be treated as relational nouns in Ossetic. Only a few postpositions, such as *təxxɜj* 'for' and *(j)aš* 'the size/age of', are incompatible with dative possessors – but these are also the postpositions which cannot take possessive proclitics at all (12)–(13).

(11) a. *xɜzar-ə   midɜg*
          house-GEN inside

      b. *(xɜzar-ɜn) jɜ= midɜg*
          house-GEN its inside
          'inside the house'

(12) a. *žawər-ə təxxɜj*
          Z.-GEN for
          'for Zaur'

      b. *wəj /   *jɜ=   təxxɜj*
          that[GEN] his/her for
          'for him/her'

(13) a. *dwar-ə   jaš   adɜjmag*
          door-GEN sized person
          'door sized person'

      b. *wəj /   *jɜ= jaš   adɜjmag*
          that[GEN] its sized person
          'a person the size of it'

Two special cases where the genitive cannot be used, but the dative can, are reflexives and fused postpositions. Reflexives in Ossetic are formed using the stem *xi* 'self' combined with the possessive proclitic reflecting the person and number of the antecedent. This possessive proclitic can be doubled by a dative "possessor", but can never be replaced by a full genitive NP (14).

(14) *wəm fet:-on*   {*k'osta-jɜn jɜ=*} / **k'osta-jə xi*   *k'ux-ɜj*
      there see.PFV-PST.1SG K.-DAT   his   K.-GEN   self[GEN] hand-ABL

      fəšt   jɜ= fəd   lewan-ə nəv
      written his   father L.-GEN   image

      'There I saw the portrait of his father Lewan painted by **Kosta's own** hand.'
      (ONC)

Ossetic has three suffixes whose status is in between a case marker and an adposition: the comitative in *-imɜ* (on its postposition-like properties see Erschler 2020), the directive in *-(ə)rdɜm* ('towards') and the recessive in *-(ə)rdəgɜj* ('from the direction of') (Belyaev 2010). Only the former is recognized in grammars as a case markers, but all three have similar properties. In particular, with pronouns these case forms have two variants: one based on the full oblique stem (*mɜn-imɜ* 'with me', *mɜn-ərdɜm* 'towards me', *mɜn-ərdəgɜj* 'from my side', etc.) and another based on the possessive proclitic (*me=mɜ, me=rdɜm, me=rdəgɜj*), which reflects their postpositional origin. The latter variants are not available for the rest of the cases in the paradigm. Now these proclitic-based forms can have external possessors (15), much like postpositions as in (11).

(15) *wəm lɜp:u-jɜn je=mɜ   či   lɜwwəd,   wədon-mɜ xɜlɜg*
      there boy-DAT   his=COM who.NOM stand[PST.3SG] those-ALL jealousy

      kot:-a
      do-PST.3SG

      'She was jealous of those who stood **with the boy**.' (lit. 'to the boy his with')
      (ONC)

Thus, the dative doubling construction in Ossetic is for the most part inter-changeable with the genitive construction, the only two exceptions being reflexives and fused postpositions. In the latter case, the use of the dative is explicable from their diachronic origin (and their continuing syntactic status as postpositions, in spite of morphonological fusion with the noun), while in the former case, the genitive is disallowed because the reflexive stem *xi* is a bound stem that has to be accompanied by a possessive.

2.2 Constraints on the verb

The dative possessor resembles so-called external possessors, which are very often connected to the semantics and valency structure of particular verbs, cf. e.g. the papers in Payne and Barshi (1999). But no such constraints seem to apply to Ossetic. Any argument or adjunct of any predicate can have a dative possessor, e.g. (16), where the dative marks the possessor of a patient-like argument of an

intransitive verb, and (17) where it encodes the possessor of a stimulus object of a transitive verb. While in the former case, the dative argument could be interpreted as affect by the bear's action and "prominent" in a certain sense, this interpretation does not seem plausible in the latter case: the love is supposed to be directed at the children, not at their parent.

(16) *ɜmɜ* *=jən* *jɜ=* *xʷəm-ə* *əš-xʷəššəd-i*
and he.DAT his field-IN PV-sleep-PST.3SG
'and (the bear) slept in **his** field' (spoken corpus)

(17) *aj* *=mən* *mɜ=* *šəvɜllɜ-t:-ə* *kʷə* *nɜ* *warž-ə*
this me.DAT my child-PL-GEN PTCL NEG love-PRS.3SG
'This one does not love **my** children, after all.' (spoken corpus)

We have also seen above that dative possessors can be associated with adjuncts, e.g. with comitatives (15), which confirms that no specific relationship to the verb is required.

The dative possessor, whatever its status in the main clause, does not compete with any dative arguments of the verb, as seen in (18), where there are two datives: a possessive one and a recipient one.

(18) *wəj* *žawər-ɜn* *ba-lɜvar* *kot:-a* *wəm-ɜn* *jɜ=* *uš-ə*
that.DEM Z.-DAT PV-present do-PST.3SG that.DEM-DAT his wife-GEN
mašinɜ
car
'He presented **Zaur** with **his wife's** car.'

2.3 Summary

In this section, we have shown that dative possessors can replace genitive possessors in all contexts; neither the verb nor the type of the genitive relation constrains their usage. The motivation for using the dative construction instead of the genitive is probably pragmatic, but there is not enough data at present to draw a definitive conclusion. Straightforward characterizations in terms of topic or focus are impossible, because dative possessors can be either – they are clearly topical when expressed by pronominal enclitics (passim), but they can also be focused, as seen in (30) and (37) below.

It may be that the function of the dative possessor is merely to "raise" the possessor to clause level in order to make it available for separate syntactic manipulation (topicalization, focalization, extraction, etc.). The investigation of this subject is a topic for further study; in this paper, we will concentrate on the syntactic properties of dative possessors in Ossetic.

3   Position of the dative NP

3.1   Linear order

Like other prenominal dependents, genitive possessors in Ossetic are strictly pre-
nominal (19).

(19)   *ʒmbal **žawər-ə**
        friend Z.-GEN

        (intended: 'Zaur's friend')

Dative possessors strongly prefer the prenoinal position, as seen in all the
examples above. But the postnominal position is also available (20)–(21).

(20)   ...səma bəlvərd fe-nk'ard-dər   **jʒ=** qʒlʒš **šəlgojmag-ʒn**...
        as.if truly   PV-sad-COMPAR her voice woman-DAT

        '...as if truly **the woman's** voice became sadder...'   (ONC)

(21)   **jʒ=** žʒrdʒ **uš-ʒn**   bas-i   qarm...
        her heart woman-DAT PV-be.EXST warm

        '**The woman's** heart became warm...'   (ONC)

The only other elements that are regularly postnominal are certain quantifiers
(22), but it is not clear whether these are included in the NP: their position seems
to be freer than that of prenominal modifiers. Such quantifiers may have floating
status (Khomchenkova 2022). Thus, the variation in the positioning of the dative
possessor also suggests that it may in fact be clause-level; we will also see below
that, unlike most other dependents, it is separable from the possessum.

(22)   marinʒ-jʒn jʒ= binon-tʒ **iwwəldʒr** ʒmxʷəžon žənaɣ štə
        M.-DAT   her family-PL all   equal   dear be.PRS.3PL

        'All Marina's family are equally dear to her.'   (ONC)

3.2   Separability and pied piping

The genitive cannot be separated from its NP by any clause-level material (23),
including second position clitics (24).

(23)   a.   *fet:on*   **žawər-ə** ʒmbal
              see.PFV-PST.1SG Z.-GEN   friend

              'I saw Zaur's friend.'

       b.   ***žawər-ə** fet:-on   ʒmbal
              Z.-GEN   see.PFV-PST.1SG friend

(24)   **žawər-ə** ‹*=**mʒm** › ʒmbal ‹=**mʒm** › ʒrba-səd-i
        Z.-GEN   me.ALL   friend me.ALL   PV-go-PST.3SG

        'Zaur's friend came to me.'

In contrast, the dative can be freely separated from its NP (25)–(26). If the dative stands at the beginning of the sentence, the second-position clitic has to separate it from its NP; it cannot stand after the combination of the dative and the rest of the NP (27).

(25) *žɜnɜg-ǯən*   **ɜldar-ɜn**   *a-mard*   **jɜ=** *uš*
posterity-PROP prince-DAT PV-die[PST.3SG] his wife
'The wife **of the prince** with children died.'   (ONC)

(26) **ir-ɜn**   *ni-či*   *a-mar-zɜn*   **jɜ=** *sin!*
Ossetia-DAT NEG-who PV-kill-FUT[3SG] its happiness
'No one will murder Ossetia's happiness!'   (ONC)

(27) a. **xɜzar-ɜn** *=nɜ*   **jɜ=** *xisaw* *či*   *u?*
     house-DAT we.ABL its master who.NOM be.PRS.3SG
     'Who of us is the master **of the house**?'   (ONC)

     b. *****xɜzar-ɜn** **jɜ=** *xisaw* *=nɜ*   *či*   *u?*
      house-DAT its master we.ABL who.NOM be.PRS.3SG
      ('Who **of us** is the master **of the house**?')

This behaviour is not consistent with the behaviour of Ossetic prenominal NP-internal dependents, which cannot be followed by second-positions clitics (28). Therefore, it suggests that the dative possessor does not form a constituent with its head.

(28) *žawər-ə* ‹*****=mɜm***› *fərt* ‹=mɜm› *ɜrba-səd-i*
Z.-GEN   me.ALL son   me.ALL
'Zaur's son came **to me**.'

Interrogatives and relative pronouns in Ossetic must be preverbal (Lyutikova and Tatevosov 2009; Erschler 2012; Belyaev 2014a). If the genitive possessor is questioned or relativized, the whole NP including it must appear in preverbal position, i.e. pied piping (29) is observed.

(29) a. *žawər-mɜ* [**kɜj**   *ɜfšəmɜr*] *ɜrba-səd-i?*
     Z.-ALL   who.GEN brother PV-go-PST.3SG
     '**Whose** brother came to Zaur?'

     b. *‹ɜfšəmɜr› žawər-mɜ **kɜj**   *ɜrba-səd-i*   ‹ɜfšəmɜr›?
      brother Z.ALL   who.GEN PV-go-PST.3SG brother

In contrast, dative possessors, when questioned, cannot be pied piped into the preverbal position together with their NPs. The dative interrogative must appear preverbally, but the corresponding NP cannot occur between the dative and the verb (30).

(30) a. **kɜm-ɜn** ba-šəɣd-i   **jɜ=** xɜzar?
       who-DAT PV-burn.INTR-PST.3SG his house
       '**Whose** house burned down?'

   b. ***kɜm-ɜn** **jɜ=** xɜzar ba-šəɣd-i?
       who-DAT his house PV-burn.INTR-PST.3SG

3.3 Clitic expression

Second-position clitics in Ossetic are always clause-level. Although genitive enclitics and possessive proclitics are largely identical in form, genitive possessors cannot be expressed by enclitics (31); genitive second-position clitics only mark direct objects (32), as well as genitive experiencers of certain verbs, whose subjecthood is unclear (33).

(31) *žawər **=ɜj**   ɜfšəmɜr-ə   fet:-a
      Z.   he.GEN brother-GEN see.PFV-PST.3SG
     ('Zaur saw his brother.')

(32) *žawər* **=ɜj**   fet:-a
      Z.   he.GEN see.PFV-PST.3SG
     'Zaur saw him.'

(33) *xɜrinag* **=mɜ** qɜw-ə
      food   I.GEN need-PRS.3SG
     'I need food.'

The dative possessor, however, can be freely expressed by a clitic, as seen above (16)–(17).

3.4 Coordination

Dative possessors cannot occur in coordinating constructions, as in (34b), where each conjunct is supposed to be associated with its own possessor. The same construction is fully grammatical with genitive possessors (34a).

(34) a. *žnon   **=mɜm** **žawər-ɜn** **jɜ=** uš   ɜmɜ **žɜlinɜ-jɜn** **jɜ=** lɜg
         yesterday me.ALL Z.-DAT his woman and Z.-DAT her man
         ɜrba-səd-əštə
         PV-go-PST.3PL

   b. *žnon*   **=mɜm** **žawər-ə** uš   ɜmɜ **žɜlinɜ-jə** lɜg ɜrba-səd-əštə
       yesterday me.ALL Z.-GEN woman and Z.-GEN man PV-go-PST.3PL
      'Yesterday Zaur's wife and Zalina's husband came to me.'

The only context where dative possessors are used with coordinate structures is where both conjuncts are coindexed with a single dative possessor (35). In this case the proclitic occurs on each possessor.

(35) *wɜd =ma **marinɜ-jɜn** jɜ= fəd   ɜmɜ jɜ= mad   =dɜr ɜgaš wəd-əštə*
   then still M.-DAT   her father and her mother ADD alive be-PST.3PL
   'At that time **Marina's** father and mother were still alive.'   (ONC)

3.5 Answers

It is not possible to use either genitive or dative alone to answer a question, but it is possible to use either together with the possessum (36)–(37).

(36) ***kɜj***   *ɜfšəmɜr-ə   fet:-aj?*   — ***žawər-ə*** **(*fšəmɜr-ə*)**
   who.GEN brother-GEN see.PFV-PST.2SG   Z.-GEN   brother-GEN
   'Whose brother did you see? — Zaur's *(brother).'

(37) ***kɜm-ɜn***   *je= fšəmɜr-ə*   *fet:-aj?*   — ***žawər-ɜn*** **(*je=***
   who-DAT   his brother-GEN see.PFV-PST.2SG   Z.-DAT   his
     fšəmɜr-ə)
     brother-GEN
   'Whose brother did you see? — Zaur's *(brother).'

3.6 Summary

The data in this section can be summed up in the following table:

	genitive possessor	dative possessor
linear order	left	left or right
separability	inseparable	separable
pied piping	yes	no
clitic expression	no	yes
coordination	yes	no
question answers	yes	yes

These results indicate that dative possessors should be analyzed as clause-level dependents rather than NP-level dependents. The only piece of evidence that contradicts this generalization is their behaviour in question-answer pairs. However, too little is known of the constraints on answers in Ossetic to draw any conclusive evidence from this single data point.

4 Relationship between the dative and the proclitic: Anaphora or structure sharing?

Since dative possessors are, in most contexts, clause-level constituents, the nature of the relation between the dative and the possessive proclitic has to be investigated. Two questions seem relevant: first, whether the relationship is structural (structure sharing) or anaphoric; second, whether the relationship is local (clause-mate) or not.

Since the construction is rather limited in scope and lexical content, few tests can definitively differentiate between structure sharing and anaphora. There is one semantic diagnostic that points at the former option, viz. the fact that the proclitic may have no split antecedents (38).

(38) *žawər alan-ɜn fet:-a   še= fšəmɜr
       Z.   A.-DAT see.PFV-PST.3SG their brother
       ('Zaur saw his and Alan's brother.')

Locality constraints can also help differentiate between anaphora and structure sharing. The possessive proclitic, when used by itself, behaves as an ordinary pronominal, i.e. it can be coreferent with an antecedent outside of its clause. If the relationship between the dative and the proclitic is more local than that, this would make an anaphoric analysis implausible, as proclitics will have to have separate binding constraints depending on whether the antecedent is the dative possessor.

The path between the possessor and the clitic can cross several NP boundaries, i.e. the dative can serve as the possessor of an NP that is itself a possessor of another NP, genitive (39a) or dative (39a).

(39) a. **mɜn-ɜn me=** fšəmɜr-ə   uš   universitet-ə   kuš-ə
          me-DAT my   brother-GEN wife   university-IN work-PRS.3SG
          'The wife of **my** brother works at the university.'

      b. **mɜn-ɜn me=** fšəmɜr-ɜn   jɜ= uš   universitet-ə   kuš-ə
          me-DAT my   brother-DAT his wife university-IN work-PRS.3SG
          'The wife of **my** brother works at the university.'

In this case, the position of the dative is as free as in other syntactic contexts. For example, it can occupy the preverbal position, and the corresponding NP is not pied piped together with it, see (40).

(40) **kɜm-ɜn** kuš-ə   universitet-ə **je=** fšəmɜr-ə   uš?
      who-DAT work-PRS.3SG university-IN his   brother-GEN wife
      '**Whose** brother's wife works at the university?'

However, unlike ordinary pronominal anaphora, the relation between the dative and the possessive proclitic cannot cross clause boundaries, regardless of clause type: this is ungrammatical in both complement (41) and adverbial (42) clauses.

(41) a. mɜn   fɜnd-ə,   [sɜmɜj **=dən**   **dɜ=** mad   šk'ola-mɜ
          me.GEN   want-PRS.3SG   PURP   thee.DAT thy   mother school-ALL

          ɜrba-sɜw-a]
          PV-go-SBJV.3SG

          'I want **your** mother to come to school.'

b. *mɜn   =dən   fɜnd-ə,   [sɜmɜj **dɜ**= mad   šk'ola-mɜ
    me.GEN thee.DAT want-PRS.3SG   PURP thy mother school-ALL

    ɜrba-sɜw-a]
    PV-go-PST.3SG

(42) žawər ‹***alan-ɜn**› ba-sin   kot:-a,   [‹**alan-ɜn**› **je**= fšəmɜr
      Z.   A.-DAT   pv-happiness do-PST.3SG   A.-DAT   his brother

      kʷə   rba-səd-i],   wɜd
      when PV-go-PST.3SG then

      'Zaur was happy when **Alan's** brother came.'

Thus, the use of the dative possessor is strictly limited to the same clause as the possessum. This strongly speaks in favour of structure sharing, rather than anaphora, as the correct analysis.

5   Syntactic analysis

In this section, we will first provide a general overview of noun phrase structure in Ossetic and then discuss the status of the proclitic in the dative possessor construction, the c- and f-structure positions of the dative possessor, and the relationship of the latter with the proclitic.

5.1   Noun phrase structure in Ossetic

Ossetic noun phrases generally have a head-final word order with fixed order of constituents, which can be schematically represented as in (43). The positions GEN1 and GEN2 are distinguished by referentiality: possessive (referential) genitives attach at the left edge of the noun phrase, before the demonstrative: *žawər-ə wə-sə ɜmbal* (Z.-GEN that-DET friend) 'that friend of Zaur'; non-referential, relational genitives attach after the numeral, cf. *dəwwɜ gɜxxɜt:-ə šəf-ə* (two paper-NMR[4] leaf) 'two pieces of paper'. NPs can never be broken up by other material.[5]

(43)   GEN1 – DEM – NUM/Q – ADJ – GEN2 – N

It is not clear whether Ossetic should be analyzed as having a DP, as definitive criteria for or against DPs have not yet been firmly established in LFG, see the overview in Börjars and Lowe (2023). Erschler (2019) argues in favour of a DP based on the behaviour of the preposition *ɜd* 'with', which may attach to noun phrases with a limited range of dependents, viz. only adjectives and numerals from among the elements in 43. If only full XPs may serve as complements of adpositions, then, indeed, Ossetic NPs should be analyzed as having the structure

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4. The numerative suffix marks nouns in the nominative accompanied by numerals and certain quantifiers. Although homonymous with the genitive, the numerative should be analyzed as a distinct number affix on both synchronic (Belyaev 2017) and diachronic (Sims-Williams 1979; Kim 2022) grounds.

5. Dependents in oblique cases, as in *dur-ɜj mɜšəg* (stone-ABL tower) 'tower (made) out of stone' (Axvlediani 1969, 47), seem to allow somewhat more freedom, but their structure has not been studied in detail.

along the lines of (44) for the .

(44)
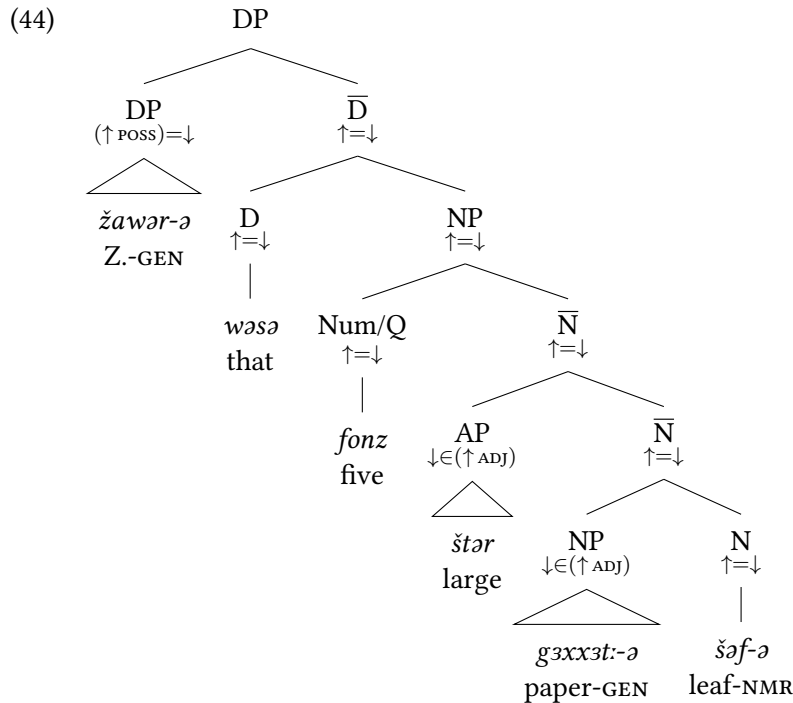
The status of relational genitives (GEN2 in 43) deserves some discussion. At c-structure, they be analyzed either as adjuncts, like adjectives, or NP complements. There is currently no conclusive evidence, but all corpus examples involve the order ADJ – GEN2 rather than GEN2 – ADJ, thus we tentatively assume that these NPs attach in complement position. Categorially, we view such genitives as NPs because they cannot attach any dependents higher than adjectives,[6] as in (45), although having demonstratives as modifiers would be infelicitous here on purely semantic grounds as well.

(45) *iw **rɜštɜmbiš kar-ə** šəlgojmag arxajt:-a   calx-imɜ*
      one middle   age-GEN woman   work-PST.3SG wheel-/COM

      'One **middle-aged** woman (lit. **of middle age**) worked with a wheel.'

(ONC)

At f-structure, they should be analyzed as adjuncts rather than possessors, because they are never subcategorized for by any noun and cannot be replaced by dative possessors: as seen in (10) above, when this is attempted, the possessor receives a different, referential interpretation.

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6. Pseudopartitives like *ɜrtɜ čərɣɜd-ə kartof-tɜ* (three basket-GEN potato-PL) 'three baskets of potatoes' (ONC) are another candidate for the NP complement position, if the structure of such examples is indeed "potatoes of three baskets", as its word order would suggest. However, these constructions have not been studied in any detail yet, and the position of the head is not clear.

5.2   Status of the proclitic

The genitive possessor and the possessive proclitic (1) are in complementary distribution (46).

(46)   *žawər-ə   je=   fšəmзr
        Z.-GEN   his   brother

('Zaur's brother')

Furthermore, both genitives and proclitics occupy the same position with respect to other NP dependents: immediately to the left of the demonstrative (47). Therefore, they can be viewed as occupying the same c-structure position, which was argued to be Spec DP above, as displayed in (44).

(47)   **žawər-ə /   mз=   wə-sə   zзbзx   зfšəmзr**
        Z.-GEN   my   that-DET   good   brother

'that good brother **of Zaur** / **of mine**'

This structure can be introduced by the c-structure rule in (48). This rule captures the fact that the position is occupied either by a genitive NP or by a non-projecting pronoun (possessive proclitic) that is not assigned a case feature.

(48) $\text{DP} \rightarrow \left\{ \begin{array}{ccc} \text{DP} & \vee & \widehat{\text{D}} & \vee & \varepsilon \\ (\uparrow \text{POSS})=\downarrow & & (\uparrow \text{POSS})=\downarrow & & \neg(\uparrow \text{POSS}) \\ (\downarrow \text{CASE}) =_c \text{GEN} & & & & \end{array} \right\} \; \overline{\text{D}} \atop \uparrow=\downarrow$

When this position is empty, the NP is explicitly prohibited from having a possessor introduced elsewhere by a negative constraint. This constraint is required due to our structure sharing analysis of dative possessors. Otherwise, there would be nothing to prevent the dative possessor from being used without a possessive proclitic, which, as shown in (2) above, is ungrammatical.

When the proclitic is used without a dative possessor, it receives a pronominal interpretation (1b). Since we have established that dative possessors are structure shared with an NP-internal position, this means that in their presence the proclitic is an agreement marker. This can be captured by making the PRED feature on the proclitic optional (49).

(49)   jз= $\widehat{\text{D}}$ $(\uparrow \text{NUM}) = \text{SG}$
                                       $(\uparrow \text{PERS}) = 3$
                                       $\big((\uparrow \text{PRED}) = \text{'pro'}\big)$

The proclitics are thus analyzed in the same way as subject markers in pro-drop languages, as discussed in detail e.g. in Bresnan et al. (2016).

5.3   Position and function of the dative possessor

5.3.1   C-structure position

It is clear that dative possessors have no fixed position at c-structure, because they appear in all positions where clausal arguments and adjuncts may appear: to the left of the verb (22), in the preverbal focus position (30), to the right of the verb (25), expressed by an enclitic (16). Therefore, at the very least, we have to

assume that dative possessors can appear at clause level, introduced by the same rules and annotations that license other clause-level arguments and adjuncts (i.e. $(\uparrow \text{GF}) = \downarrow$).

There is no evidence that dative possessors have an additional "in situ" position within the NP. They are always freely separable from their heads, and while the order "possessor – possessum" may be the most frequent, even in this configuration the two do not form a constituent. This is seen from the following: they must be broken up by clitics (27), they cannot be coordinated with other possessor + possessum combinations (34); when the dative possessor is an interrogative, the possessum is not pied piped together with it (30), as opposed to genitive possessors, which are (29). Therefore, we are dealing with a construction whose sole function is to extrapose the possessor to some clause-level position.

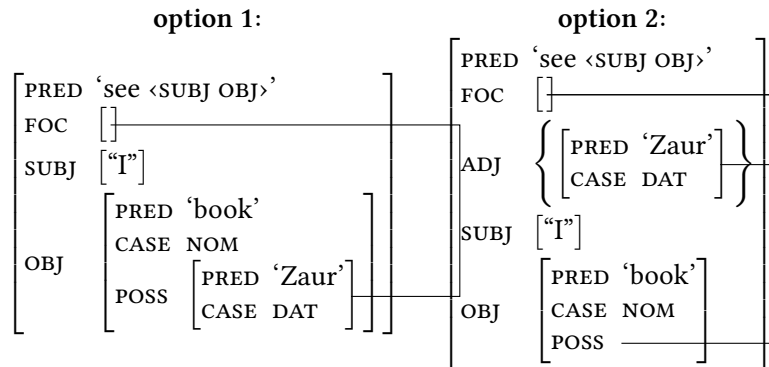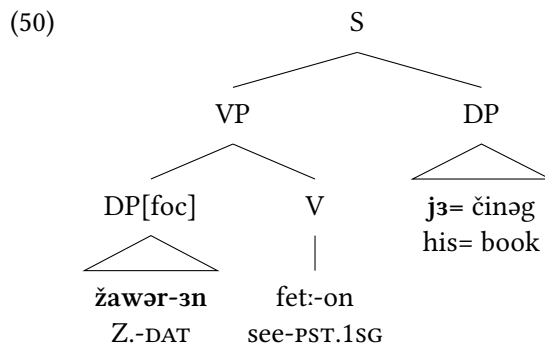### 5.3.2 Grammatical function in NP

As seen in section 2.1 above, the dative possessor can replace the genitive-marked dependent of any nominal head, including relational nouns and postpositions. We also saw that the relationship between the possessor and the proclitic does not show propreties that are characteristic of anaphora. In terms of LFG, then, the dative should be viewed as structure shared with the NP-internal grammatical function of the possessor, which we believe should be viewed as POSS. There has been some debate in the LFG literature on the nature of this grammatical function. Some authors proposed abandoning it altogether in favour of SUBJ, at least in some contexts (Sulger 2015), while others argued that both SUBJ and POSS are needed to account for different types of possessive constructions (Chisarik and Payne 2003; Laczkó 2009, 2017; Laczkó and Rákosi 2019). In Ossetic, at the present stage of our understanding, we see no reason to treat dative and genitive possessors differently in terms of their GF; at the very least, the choice of the GF is independent of dative or genitive marking (just as Laczkó and Rákosi 2019 argues for Hungarian). Therefore, we assume that both genitive and dative possessors map to POSS. Genitive possessors appear directly in the NP per the rule in (48), while dative possessors appear at some external clause-level position.

5.3.3 Grammatical function at clause level

As for the function of the dative possessor at f-structure, there seem to be only two options: either it is a clause-level adjunct (ADJ), or it only acts as the possessor of its noun phrase without having any other GF in the clause. Since the dative possessor is not specifically associated with any discourse function, or with the preverbal focus function, it should not be inherently annotated as any DF at either f- or i-structure.[7] Both options are illustrated in (50), which uses a simplified

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7. In some LFG literature, notably Dalrymple, Lowe, and Mycock (2019), it seems to be assumed that all displaced material occupies a set-valued attribute DIS (for displacement), which replaces the earlier "grammaticalized discourse functions" TOPIC and FOCUS used to model long-distance dependencies, see Bresnan et al. (2016). An earlier version of this paper used the newer approach, but an anonymous reviewer suggested that it is not correct to use DIS for displaced material at f-structure, because f-structure does not model linear or structural displacement. I agree with this suggestion,

version of Ossetic clause structure. In this example, the dative is focused; based on the prosodic and syntactic arguments found in Belyaev (2014a) and Belyaev (2022), we assume that preverbal focus in Ossetic is located within VP. However, it must be stressed that, as discussed in section 2.3, the dative can also appear in other positions that are not associated with focus; therefore, we do not analyze it as being constrained to any specific DF or linear position, and this example is for illustrative purposes only.

(50)

```
                        S
              ┌─────────┴─────────┐
             VP                   DP
        ┌─────┴─────┐          ┌───┴───┐
     DP[foc]        V       jɜ= činəg
      ┌──┴──┐       │       his= book
   žawər-ɜn       fet:-on
   Z.-DAT        see-PST.1SG
```

option 1:   **option 2:**

option 1:
$$\begin{bmatrix} \text{PRED} & \text{'see \textlangle SUBJ OBJ\textrangle'} \\ \text{FOC} & [\,] \\ \text{SUBJ} & [\text{"I"}] \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'book'} \\ \text{CASE} & \text{NOM} \\ \text{POSS} & \begin{bmatrix} \text{PRED} & \text{'Zaur'} \\ \text{CASE} & \text{DAT} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

option 2:
$$\begin{bmatrix} \text{PRED} & \text{'see \textlangle SUBJ OBJ\textrangle'} \\ \text{FOC} & [\,] \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'Zaur'} \\ \text{CASE} & \text{DAT} \end{bmatrix} \right\} \\ \text{SUBJ} & [\text{"I"}] \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'book'} \\ \text{CASE} & \text{NOM} \\ \text{POSS} & \underline{\quad} \end{bmatrix} \end{bmatrix}$$

At present, we see no independent linguistic evidence that could justify either option. The dative never marks adjuncts in Ossetic, but the case marking of the dative possessor is construction-specific anyway, so the adjunct analysis would be just as economical as any other analysis.

One argument in favour of the clause-level adjunct analysis is its relative parsimony with respect to Ossetic grammar. Ossetic is a discourse configurational language as defined by Snijders (2015, 144ff.). Specifically, as argued in Belyaev (2014a) and Belyaev (2022), Ossetic has a highly grammaticalized hierarchical clause structure where $\overline{\text{X}}$ positions are associated with discourse functions rather

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although it raises a wider issue of modeling long-distance dependencies in LFG which is beyond the scope of this paper. For Ossetic, I believe that there is evidence for a grammaticalized discourse function FOC (which could also be called OP, following Alsina 2008, or UDF, following Asudeh 2012) for the immediately preverbal interrogatives, which are involved in establishing coreference in correlatives, see (Belyaev 2014a; Belyaev and Haug 2014). All other information-structure based linear positions are not associated with any special syntactic functions and can be modeled through i-structure.

than grammatical functions. Therefore, all NPs and enclitic pronouns should be annotated as $(\uparrow \textsc{gf}) = \downarrow$, as is standard for languages of this type, see Austin and Bresnan (1996), Nordlinger (1998), and Snijders (2015). For adjunction to work properly, ADJ has to be included in the set GF, hence, dative NPs and clitics can already map to adjuncts – it is just that, by themselves, dative adjuncts will not receive any semantic interpretation, and the sentence will have no suitable proof. But if a dative is structure shared with a possessor, it will get interpreted at NP level.

If dative possessors are not analyzed as adjuncts, either all dative NPs and clitics must receive a special functional annotation that does not involve the default $(\uparrow \textsc{gf}) = \downarrow$, or all NPs and clitics in general must be analyzed as $(\uparrow \textsc{gf poss} *) = \downarrow$. Introducing such an overarching syntactic change for just one construction appears unwarranted. If the dative possessor is analyzed as an adjunct, however, no changes to the overall syntax are required; the possessive function can be defined lexically.

5.3.4 Licensing structure sharing

The dative, then, is a clausal ADJ structure-shared with an NP-internal POSS. We are now left with two options with respect to the licensing of the dative–proclitic relation. It can be licensed either by an outside-in expression, lexically defined with the dative noun (51),[8] or by an inside-out expression, lexically defined by the proclitic (52).

(51) *žawər-ʒn*   N $(\uparrow \textsc{pred})$ $=$ 'Zaur'
                        $(\uparrow \textsc{num})$ $=$ SG
                        $(\uparrow \textsc{case})$ $=$ DAT
                        $(((\textsc{adj} \in \uparrow)\ \textsc{gf poss+})$ $= \uparrow)$

(52) *jʒ=* $\widehat{\text{D}}$ $(\uparrow \textsc{num}) = $ SG
                        $(\uparrow \textsc{pers}) = 3$
                        $((\uparrow \textsc{pred}) = $ 'pro')
                        $(((\textsc{gf poss+} \uparrow)\ \textsc{adj}\ \underset{(\to \textsc{case})\ =_{\mathsf{c}}\ \textsc{dat}}{\in}) \ = \uparrow)$

Both options are compatible with most properties of the dative construction. In (51), the proclitic will be correctly licensed, because NPs without anything in Spec, DP are prohibited from having a possessor by the rule in (48). In (52), the external possessor is explicitly constrained to have dative case. The latter option is perhaps a bit more economical because the equation should only be included in the lexical entries for possessive proclitics – a closed class, as opposed to dative nouns, which are an open class. But the former option is much simpler in terms of the equation involved.

However, the evidence from coordination (section 3.4) supports the outside-in analysis, which predicts that features are spread to the whole coordinate set. The

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8. For simplicity, we do not use the lexical sharing analysis in Belyaev (2014b) and Belyaev (2021); in this analysis, the last two annotations would be introduced in a separate K/Case node.

inside-out analysis (if modified to allow going out of sets) does license examples like (35), but it also licenses ungrammatical examples like (53), where only one conjunct is linked to the dative. This behaviour is identical to across-the-board movement, and suggests that dative possessors in Ossetic behave like extracted constituents. The equation in (51), annotated on all datives, thus seems to be the correct formalization of the dative–proclitic relation.

(53)   *žnon   =mɜm   **žɜlinɜ-jɜn**   žawər-ə   uš   ɜmɜ   **jɜ=**   lɜg
       yesterday   me.ALL   Z.-DAT   Z.-GEN   wioman   and   her   man

       ɜrba-səd-əštə
       PV-go-PST.3SG

       ('Yesterday Zaur's wife and Zalina's husband came to me.')

6   Conclusions

In this paper, we have described and analyzed dative clitic-doubled possessors in Ossetic. We have demonstrated that these can be used almost interchangeably with genitive possessors. Their main difference is that, while the genitive is rigidly attached to the possessum NP, the dative possessor is in fact a clause-level constituent that can be placed in different c-structure positions associated with various information-structure functions. There is no evidence in favour of an NP-internal position for dative possessors, except for question-answer pairs, which deserve additional attention.

We analyze dative possessors in Ossetic as clause-level adjuncts structure shared with the grammatical function POSS within the NP. The doubling possessive proclitic acts as a kind of agreement marker; its overall behaviour is similar to subject inflection in pro-drop languages.

The Ossetic dative possessor construction is, of course, not unique. Apart from the Hungarian cnostruction, mentioned above, it bears a striking similarity to constructions with so-called "linking-pronouns" (Koptjevskaja-Tamm 2001) in Germanic and other European languages, such as *dem Vater sein Buch* (the:DAT father his book) 'the father's book' in colloquial German. One of these constructions, the Low Saxon one (where the possessor stands in the accusative and is doubled by a possessive pronoun), has been given an LFG analysis in Strunk (2004, 2005). The key difference between the Low Saxon construction and the Ossetic one is that in Low Saxon, the possessor DP forms a constituent with the possessum, as evidenced in particular by its appearing before the verb in the "verb-second" construction. The same is generally true for other Germanic constructions of this type, see e.g. Gavruseva (2000).[9] Consequently, Strunk situates the possessor in the specifier of DP, and the possessive pronoun in D. This approach is taken further by Charters (2014), who proposes that such possessors occupy an NP-internal

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9. Some Germanic languages do seem to allow extraction, e.g. West Flemish (Haegeman 2004) and Norwegian (Koptjevskaja-Tamm 2001). However, Haegeman argues against an extraction analysis of West Flemish data.

DF called ANCHOR. A similar conclusion has been reached in the transformational literature, cf. Haegeman (2004). In this paper, we have shown that a DP-internal analysis is impossible for Ossetic dative possessors, as they fail all tests for constituency. It is rather the *genitive* nouns, and the possessive proclitics, that are found in Spec, DP and thus correspond to the "peripheral possessors" in Germanic. In contrast, the dative is obligatorily extraposed outside the DP and can thus the construction can properly be called the *resumptive possessive pronoun construction* following Norde (1997). Therefore, while the Ossetic construction is superficially similar to the Germanic ones, it ultimately has a rather different structure. It remains to be seen whether this similarity is merely accidental or can be explained by similar patterns of diachronic development leading to quite different syntactic structures. Another topic for further study is what syntactic or pragmatic conditions cause the dative expression of the possessor to be chosen over the genitive one.

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