

Prominent Internal Possessors and Backward Possessor Raising: Norwegian *ryggen på ham* ‘the back on him’

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Proceedings of the LFG’18 Conference

University of Vienna

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2018

CSLI Publications

pages 248–267

<http://csli-publications.stanford.edu/LFG/2018>

Keywords: Norwegian syntax, body part nouns, possessor raising, backward raising, prominent internal possessors

Lødrup, Helge. 2018. Prominent Internal Possessors and Backward Possessor Raising: Norwegian *ryggen på ham* ‘the back on him’. In Butt, Miriam, & King, Tracy Holloway (Eds.), *Proceedings of the LFG’18 Conference, University of Vienna*, 248–267. Stanford, CA: CSLI Publications. 

Abstract

Norwegian has a possessor with the preposition *på* 'on' which is used with body part nouns. It shares properties with the dative external possessor of e.g. German and French, but it differs from them in that it can be a part of the noun phrase with the body part noun. I show that the noun phrase-internal possessor should be considered a so-called prominent internal possessor, and propose that it is derived by the application of possessor raising "backward".

1. Introduction¹

The topic of this paper is Norwegian sentences such as (1)-(2).

- (1) De skar dypt i ryggen på ham.
they cut deep in back.DEF on him
'They cut deep in his back.'
- (2) De måtte fjerne leveren på ham
they must remove liver.DEF on him
'They had to remove his liver.'

These sentences contain body part nouns whose possessor is expressed in a PP with the preposition *på* 'on'. This possessor shares properties with the dative external possessor in e.g. German or French. Two French examples are (3)-(4).

- (3) On lui a tiré dans le ventre.
one him has shot in the stomach
'We shot him in the stomach.'
- (4) Je lui casse le bras.
I him break the arm
'I break his arm.'

An important difference from the dative external possessor construction is that the Norwegian possessor PP is - or can be - a part of the noun phrase with the body part noun. The purpose of this paper is to give an analysis of this construction, which was discussed in Lødrup (2009a). The proposal here is that this possessor is a so-called prominent internal possessor, which is derived by what could be seen as backward possessor raising.

¹ Versions of this work have been presented at Forum for Theoretical Linguistics (Oslo, January 2018), LFG18 (Vienna, July 2018), and Syntax of the World's Languages 8 (Paris, September 2018). I grateful for valuable input from the audiences. Special thanks to Joan Bresnan, Dag Haug, and Tanya Nikitina. I would also like to thank the reviewers and the proceedings editors for their good work.

The structure of the paper is the following: Section 2 discusses the European dative external possessor construction, which also existed in Old Norse (section 3). Section 4 shows that Modern Norwegian has the *på* possessor as a part of the body part noun phrase, or as a separate constituent. Section 5 discusses properties of the *på* possessor, and section 6 compares it with partitives. Section 7 discusses the role of affectedness. Sections 8 and 9 show how the *på* possessor should be treated in LFG, with possessor raising applying not only "forward", but also "backward".

2. Dative external possessors

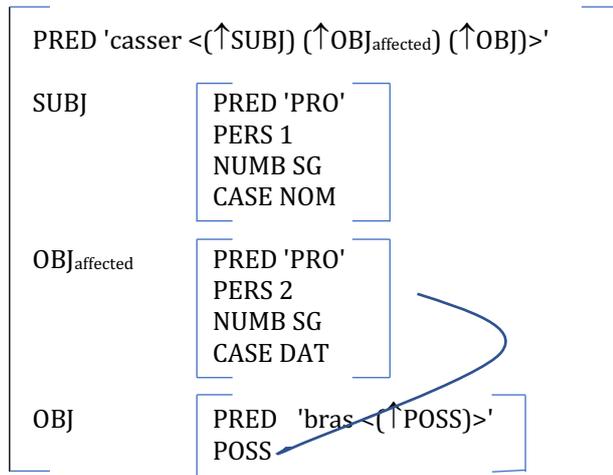
As a background for the Norwegian *på* possessor, it is useful to have a look at the Dative External Possessor - DEP - construction which is found with body part nouns in several European languages (see examples (3)-(4) above).

The DEP construction is rather similar in the European languages that have one (see e.g. König and Haspelmath (1998), Haspelmath (1999) for overviews). The dative is an "extra" argument of the verb, which is realized as an indirect object (LFG's OBJ_θ). It is understood as an affected argument, which means that the verb is understood to have an extra "affected" thematic role. At the same time, the dative is understood as the possessor of a body part noun which is not a part of the same phrase. There are two different ways to account for its relation to the body part noun phrase: A traditional idea is that the possessor is raised from the body part noun phrase to the sentence level (see e.g. Langacker 1968, Lee-Schoenfeld 2006). The alternative is to assume that the dative binds an invisible possessive element in the body part noun phrase (see e.g. Guéron (1985), Hole (2005); and Deal (2017) for general discussion). The former approach is often called possessor raising, and the present paper takes this kind of approach.

In Lexical Functional Grammar (LFG), possessor raising could be implemented as structure sharing. A complication is then that OBJ_θ and POSS do not have identical requirements concerning form - typically OBJ_θ is dative, while POSS is genitive. This fact can be stipulated using the restriction operator (see e.g. Butt et al. 2003).

The f-structure of sentence (4) above is (5), on the next page.

(5)



A terminological note: In the literature, the term possessor raising is used about two phenomena that are both similar and different. The DEP construction is primarily a European phenomenon (Haspelmath 1999). More common in the languages of the world is the kind of possessor raising that can be found in e.g. *She washed him in the face* (see e.g. Levin 1993:71-72). The possessor is realized as a direct object, or an unaccusative subject. Stump and Yadav (1988:310) call this kind of possessor raising possessor-to-host raising, because the possessor (in derivational terms) takes the underlying function of the body part noun phrase.

3. Diachrony

From a diachronic point of view, the Norwegian *på* possessor is clearly related to the European DEP construction. Old Norse had this construction, see Faarlund (2004:170-71). One example is (6.)

(6) konungr steig á bak hesti sínum.
king.NOM mounted on back.ACC horse.DAT his.REFL
'The king got on the back of his horse.'

The possessive dative was not a part of the same phrase as the body part noun (Faarlund 2004:111). The dative could precede the body part noun, or follow it (Skard 1951:13).

A PP with the preposition *á* 'on' was used as an alternative to the dative, and later replaced it. This preposition corresponds to Modern Norwegian *på* 'on' - the preposition of the modern construction. The Old Norwegian (7) (from Skard 1951:56) is from the 14. century.

- (7) þu skalt ei vita fyr en ek hifur uppi iliannar a þer.
 you shall not know before than I raise up heels on you
 'I will throw you upside down before you notice.'

4. The *på* possessor in Modern Norwegian

In Modern Norwegian, the *på* possessor construction is still used with nouns denoting body parts, as in (1)-(2). Swedish and Danish give the impression of being like Norwegian in relevant respects, but this has not been investigated. This possessor PP is mentioned briefly in König and Haspelmath (1998:559), Haspelmath (1999:123), Stolz et al. (2008:231-238), Dahl (2015:168), and discussed more in Lødrup (2009a), Johannessen et al. (2014).

The *på* possessor in Norwegian, Swedish and Danish is assumed to be a constituent of the sentence, and not a part of the body part noun phrase in König and Haspelmath (1998:584), Haspelmath (1999:123), and Dahl (2015:168). However, Lødrup (2009a) shows that standard constituency tests indicate that the body part noun and the *på* possessor can have an analysis as one constituent in Modern Norwegian. The PP can be a part of a phrase that is topicalized to first position, as in (8), which is sufficient evidence for constituency. Clefting is also possible, as in (9).

- (8) I ryggen på ham skar de dypt.
 in back.DEF on him cut they deep
 'In his back, they cut deep.'
- (9) Det var i ryggen på ham de skar dypt.
 it was in back.DEF on him they cut deep
 'It was in his back they cut deep.'

The old situation with the *på* possessor as a separate argument can still be found, however. When the body part noun is the object of the verb, as in (10), constituency tests give evidence that both options are available. In (11) and (12), the *på* possessor is topicalized and clefted with the body part noun, indicating that the sequence is one constituent. In (13) and (14), the body part noun is topicalized and clefted alone, indicating that the body part noun and the *på* possessor are two constituents.²

² Norwegian could here be compared to French, which can - to some extent - use the dative equivalent PP with *à* with a non-pronominal external possessor.

- (i) On a cassé le bras à ce garçon. (Kayne 1975:143)
 one has broken the arm on that boy
 'We broke that boy's arm.'

Kayne (1975:143-44) argues that the PP is not a part of the phrase headed by the body part noun, using clefting and pronominalization as arguments. This view is accepted in the literature (see e.g. Vergnaud and Zubizarreta 1992: 618).

- (10) De måtte fjerne leveren på ham.
 they must remove liver.DEF on him
 'They had to remove his liver.'
- (11) Leveren på ham måtte de fjerne.
 liver.DEF on him must they remove
 'His liver, they had to remove.'
- (12) Det var ikke bare leveren på ham de måtte fjerne.
 it was not only liver.DEF on him they must remove
 'It was not only his liver that they had to remove.'
- (13) Leveren måtte de fjerne på ham.
 liver.DEF must they remove on him
 'They had to remove his liver.'
- (14) Det var ikke bare leveren de måtte fjerne på ham.
 it was not only liver.DEF they must remove on him
 'It was not only his liver that they had to remove.'

There are also other options for the body part noun and the *på* possessor to be two constituents (Lødrup 2009a). Unaccusatives and passives can have the body part noun as a subject, as in (15)-(16). The *på* possessor is then a separate constituent or a part of the subject.

- (15) Hendene skjelver på ham. / Hendene på ham skjelver.
 hands.DEF shake on him / hands.DEF on him shake
 'His hand are shaking.'
- (16) Neglene må klippes på ham. / Neglene på ham må klippes.
 nails.DEF must cut.PASS on him / nails.DEF on him must cut.PASS
 'His nails must be cut.'

It is possible to find sentences in which the body part noun and the *på* possessor are not continuous. An example is (17).³

- (17) (Det) dreide hodet trill rundt på ham.
 it turned head.DEF completely around on him
 'It turned his head around completely.'

When the *på* possessor is a part of the body part noun phrase, I will call the construction the internal *på* possessor construction. The external *på* possessor construction is the one with the *på* possessor and the body part noun as two separate constituents.

³ Example (17), as well as a number of the example sentences to come, are from www texts, either directly, through Google searches, or indirectly, through the NoWaC corpus of Norwegian web texts. Some orthographic corrections have been made silently.

At some point in time, the *på* possessor must have been reanalyzed from a separate constituent to a part of the body part noun phrase. This kind of reanalysis from external to internal possessor is also known from some other languages, an example is Hungarian (Nikolaeva 2002).⁴

The evidence for two constituents might be dismissed as involving discontinuous constituents. On the other hand, it is not unexpected that there could be a "residue" from the diachronic development from two to one constituent. It will be assumed here that there is an option for a two constituent analysis. This question is not decisive to the present paper, however, because it is the one constituent construction that raises the interesting questions.

5. Properties of the *på* possessor construction

The *på* possessor construction shares important properties with the DEP construction in e.g. German or French. These properties seem to be unrelated to the status of the *på* possessor, as a separate constituent or a part of the noun phrase with the body part noun.

Restrictions on the head noun

In the DEP construction, the central type of possessum is a body-part noun. This group can be extended to some extent, varying between languages (see e.g. König and Haspelmath 1998:531-33). With the *på* possessor, body part nouns and garments - worn by the owner - are the only possible possessums.

- (18) De sparket i hodet / *bilen på ham.
they kicked in head.DEF / car.DEF on him
'They kicked his head / car.'
- (19) Noen stappa ting ned i bukse på ham.
some put things down in pants.DEF on him
'Somebody put things down his pants.'

⁴ König and Haspelmath (1998:587) hint that this development might have taken place in Icelandic. This seems to be correct, judging from examples in Thráinsson (2007:94-95 and Stolz et al. (2008:114-16) where the body part noun and the PP occur together preceding a finite verb. Even so, Icelandic, like Norwegian, must still have an option for a two constituent analysis, because a possessor PP can precede or follow the body part noun, see Lødrup (2009a:242).

A restriction on modification

In the DEP construction, a non-restrictive adjective cannot modify the body part noun (König and Haspelmath 1998:534-36, Guéron 2006:618).⁵ Example (20) is from Vergnaud and Zubizarreta (1992:603).

- (20) Pierre lui a lavé les mains (*sales).
Pierre him has washed the hands dirty
'Pierre washed his (dirty) hands.'

The *på* possessor construction shows the same restriction, as (21)-(22) show.

- (21) Hun vasket grundig (*den skitne) ryggen på ham.
she washed thoroughly the dirty back.DEF on him
'She washed his (dirty) back thoroughly.'
(22) (*Den skitne) ryggen på ham vasket hun grundig.
the dirty back.DEF on him washed she thoroughly
'She washed his (dirty) back thoroughly.'

A restriction on number

In the DEP construction, a body-part noun always occurs in the singular when it denotes something that we have only one of, such as the mouth (see e.g. König and Haspelmath 1998:581-83). If the possessor is plural, there is a distributive reading⁶. Example (23) is from König and Haspelmath (1998:581).

⁵ This restriction is also known from other constructions that involve definite body part nouns. One case is the construction in (i) in which the subject is a possessor (König and Haspelmath 1998:534-35, Lødrup 2010 on Norwegian). Another case is possessor-to-host raising, as in (ii) (Lødrup 2009a:245).

(i) Han løfter (*de vakre) øynene fra boken.
he raises the pretty eyes.DEF from book.DEF
'He raises his (pretty) eyes from his book.'

(ii) Hun slo ham i (*det skitne) hodet.
she hit him in the dirty head.DEF
'She hit him in the (dirty) head.'

⁶ This restriction is also known from other constructions that involve definite body part nouns. One case is the construction in which the subject is a possessor, as in (i) (König and Haspelmath 1998:581-83, Lødrup 2010 on Norwegian). Another case is possessor-to-host raising, as in (ii) (Lødrup 2009a:244).

(i) De nikket med hodet / *hodene.
they nodded with head.DEF / heads.DEF
'They nodded their heads.'

(ii) Hun slo dem i hodet / *hodene.
she hit them in head.DEF / heads.DEF
'She hit them in the head.'

- (23) Tu leur as photographié la bouche / *les bouches.
 you them have photographed the mouth / the mouths
 'You photographed their mouths.'

This is also the case with the *på* possessor construction, as (24)-(25) show.

- (24) Hun stappet kaker i munnen / *munnene på dem.
 she popped cakes in mouth.DEF / mouths.DEF on them
 'She popped cakes into their mouths.'
- (25) I munnen / *munnene på dem stappet hun kaker.
 in mouth.DEF / mouths.DEF on them popped she cakes
 'Into their mouths, she popped cakes.'

A restriction on function

With the DEP construction, the body part noun is usually not a subject, except to some extent with unaccusative and passive verbs (e.g. König and Haspelmath 1998:538-39). This fact is related to the body part noun's interpretation as an affected argument of the verb. Both this restriction and its exception are reflected in the *på* possessor construction, as in (26)-(27).

- (26) *Hodet på ham traff et bord. / *Hodet traff et bord på ham.
 head.DEF on him hit a table / head.DEF hit a table on him
 'His head hit a table.' (e.g. when he fell) [intended]
- (27) Neglene på ham må klippes. / Neglene må klippes på ham.
 nails.DEF on him must cut.PASS / nails.DEF must cut.PASS on him
 'His nails must be cut.'

Restrictions on the predicate

In the DEP construction, there is a requirement that the possessor is affected, which has been discussed several times (see e.g. Haspelmath (1999:112), Hole (2005:220), Deal 2017, Lee-Schoenfeld (2006), Lee-Schoenfeld and Diewald (2014) - Landau (1999) says that Hebrew is different in this respect). The *på* possessor construction seems to have the same requirement, as indicated by the unacceptability of (28)-(29) with non-affected body part nouns. The affectedness requirement is discussed further in part 7.

- (28) *Legene diskuterte ryggen på dem.
 doctors.DEF discussed back.DEF on them
 'The doctors discussed their backs.' [intended]
- (29) *Legene tenkte på ryggen på dem.
 doctors.DEF thought of back.DEF on them
 'The doctors thought about their backs.' [intended]

Locality

The DEP construction requires that the possessor and the body part noun phrase are arguments of the same clause (see e.g. Guéron (1985:47-49) on French). For the Norwegian case, locality works the same way in the external *på* possessor construction. In the internal construction, the body part noun phrase must be an argument of the relevant verb.

Some of the restrictions mentioned in section 5 seem to be difficult to state in a natural way. It is striking that the *på* possessor imposes the same restrictions independently of its status as external or internal. Furthermore, the internal possessor imposes restrictions on elements that are not local to it in c-structure. This possessor is a modifier of the body part noun, but it is this modifier that restricts e.g. the type of verb (examples 28-29). The analysis proposed in section 9 gives a way of solving these problems.

6. Partitives

It is necessary to distinguish between the *på* possessor and other PPs with *på* 'on'. There are PPs with *på* and a body part noun that might be seen as regular partitives, and/or locatives, with no connection to the topic of this paper. Examples are (30)-(32).

- (30) Sår i underlivet på den drepte viste også at ...
wounds in abdomen.DEF on the killed showed also that ..
'Wounds in the abdomen of the murdered person also showed that ...'
- (31) Ser fortsatt det søte fjeset på babyen jeg drømte om.
see still the sweet face.DEF on baby.DEF I dreamed of
'(I) still see the sweet face of the baby I dreamed about.'
- (32) Hodene på dem var jevnhøye med furutoppene. (Fairytale)
heads.DEF on them were on.a.level with pine.tops.DEF
'Their heads were on a level with the tops of the pine trees.' [about trolls]

In the partitive construction, the restrictions described for the *på* possessor construction in section 5 do not apply. The body part noun phrase does not have to be local to the verb (cf. 30), it can be modified non-restrictively (cf. 31), it can be plural (cf. 32), it can be a subject (cf. 32), and there is no affectedness interpretation (cf. 30-32).

7. Affectedness

In Lødrup (2009a), it was claimed that a *på* possessor in the external construction is interpreted as an affected participant in the event - just like a dative possessor - while a *på* possessor in the internal construction is not interpreted as a participant. This was criticized briefly in Eik (2014:52-53). She says that an internal possessor is interpreted as affected in relevant sentences such as (33)-(34) (from Lødrup (2009a)). This observation seems to be correct.

- (33) Noen stappa ting ned i buksa på ham.
some put things down in pants.DEF on him
'Somebody put things down his pants.'
- (34) Jeg sprutet insektmiddel i håret på ham.
I sprayed insecticide in hair.DEF on him
'I sprayed insecticide in his hair.'

It was mentioned in section 5 that the DEP in e.g. German and French has a condition that the possessor must be affected by the action. However, there are different ways of using the term affected in the literature, as pointed out by Lee-Schoenfeld and Diewald (2014:291). Sometimes it is used of a typical patient. However, the use that is interesting in this context is a different one:

'taking part in the situation as an empathetic, necessarily animate co-participant', i.e. sharing some features of a typical agent, without, however, being an agent because not having control (Lee-Schoenfeld and Diewald 2014:288)

I assume that the *på* possessor is normally affected by the verbal action, independently of its realization as external or internal.⁷ This is difficult to demonstrate conclusively, however, one problem being the boundary between *på* possessors and partitives. In Lødrup (2009a:237), it was claimed that example (35) is an example of a *på* possessor that is not affected by the verbal action.

- (35) Det fløy en fugl over hodet på ham.
there flew a bird over head.DEF on him
'A bird flew over his head.'

⁷ Some fixed expressions do not require affectedness, e.g.

- (i) Jeg tåler ikke trynet på ham.
I stand not snout.DEF on him
'I cannot stand his face.' [i.e. I don't like him]

It is not clear, however, that this PP should be seen as a *på* possessor. One argument is that the noun phrases could be made plural, as in example (36) (Lødrup 2009a:229), which is not too different in relevant respects. (Remember from section 5 that a body-part noun always occurs in the singular in the *på* possessor construction.)

- (36) (De) har avfyrt varselskudd rett over hodene på demonstrantene.
 they have fired warning.shots right over heads.DEF on
 demonstrators.DEF
 'They have fired shots of warning above the heads of the demonstrators.'

Lee-Schoenfeld and Diewald (2014:291) say that the dative external possessor is the prototypical strategy for expressing inalienable possession in German. In Norwegian, the *på* possessor construction seems to be more marked and more colloquial. It is especially called for when the action is dramatic, with real consequences for the possessor, as in (37). The event does not have to concern life and death, however, as in (38). There are also more or less fixed expressions with a metaphorical meaning, cf. (39).

- (37) Skjær ut innvollene på ham!
 cut out guts.DEF on him
 'Cut out his guts!'
 (38) (De) stakk tunga i munnen på hver sin soldat.
 they put tongue.DEF in mouth.DEF on each their.REFL soldier
 'They each put their tongue into the mouth of a soldier.'
 (39) De kloke ordene gikk rett til hjertet på ham.
 the wise words.DEF went straight to heart.DEF on him
 'The wise words went straight to his heart.'

A regular possessor could have been used in the above examples. However, the possessor is then not depicted as a participant in the event. For example, replacing the *på* possessor in (37) with regular possessors gives sentences which are not easy to contextualize. They give an impression that cutting out somebody's guts is an ordinary thing to do, or that the possessor's dead body is given an autopsy.

- (40) Skjær ut innvollene hans!
 cut out guts.DEF his
 'Cut out his guts!'
 (41) Skjær ut Olas innvoller!
 cut out Ola's guts
 'Cut out Ola's guts!'

- (42) Skjær ut innvollene til Ola!
 cut out guts.DEF to Ola
 'Cut out Ola's guts!'

In some sentences with a *på* possessor, an alternative with a regular possessor would sound very strange. In some cases, there is also a question of how a counterpart with a regular possessive should look, if the body part noun should be singular or plural, etc. For example, in (43), it is not clear to me which possessive construction could be chosen as an alternative - none of them sound good.

- (43) (Jeg vil) sette en pil i nakken på alle som kødder med skogen vår.
 I will put an arrow in neck.DEF on all who mess with
 forest.DEF our
 'I will put an arrow in the necks of all people who mess with our forest.'

8. Prominent internal possessors

The *på* possessors that are external to the body part noun phrase are similar to dative possessors, and can be treated the same way grammatically (assuming that the preposition is a kind of grammatical marker). It is the internal *på* possessors that are interesting theoretically. Even if they are not constituents of the clause, they behave as arguments in some respects. They are interpreted as a clausal argument, and they impose grammatical restrictions that apply above their local domain (restricting e.g. the type of verb, and the option of being a subject - see section 5).

Possessors that behave as arguments in some respects are well known from other languages. They are often called prominent internal possessors, and they can be found in a number of unrelated languages (see e.g. Ritchie 2016, 2017). For example, the possessor can play a part in verb agreement. Ritchie (2017:663) gives sentences (44)-(46) from Chimane (unclassified, Bolivia).

- (44) Juan täj-je-'_i [un mu' Sergio]_{j-s}_i
 Juan(M) touch-CLF-3SG.F.O hand(F) the.M Sergio(M)-F
 'Juan touched Sergio's hand.'
- (45) Juan täj-je-te_j [mu' Sergio]_j [un=che']_i
 Juan(M) touch-CLF-3SG.M.O the.M Sergio(M) hand(F)=SUPERESSIVE
 'Juan touched Sergio on the hand.'
- (46) Juan täj-je-bi-te_j [un **mu' Sergio**]_{j-s}_i
 Juan(M) touch-CLF-POSS.APPL-3SG.M.O hand(F) **the.M Sergio(M)-F**
 'Juan touched Sergio's hand.'

In (44), there is an object with a regular internal possessor. The possessor agrees with the head of the object 'hand'. The object decides object agreement. In (45), there is an external possessor. This possessor does not agree with 'hand'. However, it triggers object agreement on the verb. The crucial example is (46), in which the verb has an applicative suffix. The possessor agrees with the head of the object 'hand'. However, this possessor also triggers object agreement on the verb. Similar cases with the possessor triggering verb agreement can be found in other languages, see e.g. Stump and Yadav (1988), Meakins and Nordlinger (2017). Ritchie (2016) stresses that prominent internal possessor constructions "are not a homogeneous phenomenon and require different types of analysis for different languages" (Ritchie 2016:623).

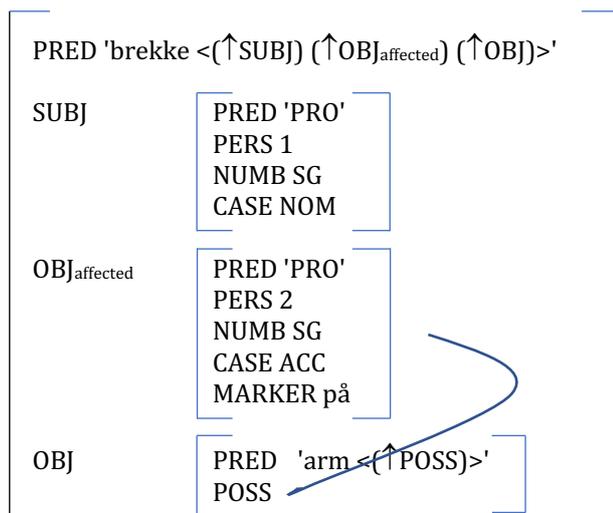
9. Forward and backward raising

The analysis of the external *på* possessor construction raises no new challenges. One can simply transfer one's favorite analysis of the DEP construction. Consider example (47), which is equivalent to (4) above.

(47) Jeg brekker armen på ham.
 I break arm.DEF on him
 'I break his arm.'

The f-structure of (47) with an external possessor is given in (48). It is almost identical to the f-structure of example (4), given in (5) above, except for a feature from the grammatical preposition *på* 'on'.

(48)



The question is then what kind of syntactic representation would be adequate for the internal *på* possessor construction. The simple answer seems to be that the internal and the external constructions should have the same f-structures. In both cases, there is a possessor that has a double function. In the external construction, one could talk about "forward" possessor raising - the well known type of possessor raising in which the phonologically realized affected object is also a possessor. The proposal here is that there should also be an option for "backward" possessor raising. This is what is needed in the internal construction, in which the phonologically realized possessor is also an affected object.

This proposal gives the basis for an account of the restrictions discussed in section 5. These restrictions are also relevant for other constructions with body part nouns (see notes 5 and 6), and their exact formulation is not at issue here. The point to be made concerns the problems with stating these restrictions, which were mentioned in section 5: First, the *på* possessor imposes the same restrictions independently of its status as external or internal to the body part noun phrase. Second, the internal possessor imposes restrictions on elements that are not local to it in c-structure (concerning e.g. the type of verb). These problems now disappear. When the external and internal possessor positions are structure shared, a restriction on one position is also a restriction on the other.

A comparison of possessor raising to raising and control of subjects could be enlightening. It is clear that possessor raising shares properties with raising and control of subjects of infinitives (Lødrup 2009b, Deal 2013, 2017). For most cases of possessor raising, the parallel to control is more relevant, because the raised possessor realizes a semantic role in both its positions - as a possessor in the body part noun phrase and as an affected participant at the clausal level.

Ritchie (2016, 2017) points out that a situation with a constituent in a low position that is shared with a function at a higher level has a parallel in what has been called backward control of subjects (Polinsky and Potsdam 2002, 2006). This kind of control must be assumed for languages in which the shared subject is phonologically realized in the low position, giving sentences that could be rendered as (49).

(49) tried [John to leave]

The shared argument is at the same time the subject of the main verb and of the subordinate verb. The difference from regular control is that it is phonologically realized in the subordinate position. To draw the parallel to subject control further than Ritchie does, one could say that there are languages with backward possessor raising, just as there are languages with backward control of subjects of infinitives. The important point is that the possessor has

two roles to play, as argument of the verb and as possessor of the body part noun.

The treatment of obligatory control of subjects has been discussed many times. Hornstein (1999) proposed an influential Minimalist treatment, in which the controller is moved from the controlled position to its surface position. This makes it very similar to subject-to-subject-raising; the difference is that a controller moves into a thematic position, while a raised subject moves into a non-thematic position. Polinsky and Potsdam (2002) see the existence of backward control as an argument for Hornstein's analysis; the difference between forward and backward control is only the position in which the moved element is to be pronounced.

In LFG, obligatory control and raising have been treated the same way since the theory was first introduced. The classical article is Bresnan (1982). LFG uses structure sharing, which means that two syntactic functions share one argument. Structure sharing is traditionally implemented as unification, as in the equation (50), which unifies the two subject positions in control and raising sentences.

$$(50) (\uparrow \text{SUBJ}) = (\uparrow \text{XCOMP SUBJ})$$

Unification is a symmetric relation, which says that all properties must be shared between the functions. This means that unification does not distinguish between forward and backward raising.

To account for Norwegian possessor raising, with both forward and backward raising, a corresponding equation is all that is needed. This equation must be a part of the lexical entry for verbs whose valency has been "expanded" to include the affected object. In (51), the equation is a part of the lexical entry for *brekke* 'break' (cf. (48) above).

$$(51) \text{brekke} \langle (\uparrow \text{SUBJ}) (\uparrow \text{OBJ}_{\text{affected}}) (\uparrow \text{OBJ}) \rangle' \\ (\uparrow \text{OBJ}_{\text{affected}}) = (\uparrow \text{GF POSS}), \text{ where GF is a local function}$$

To avoid overgeneration, the equation should also require the presence of the grammatical preposition *på* 'on'. It could be noted that Norwegian differs from the languages with the DEP construction in that $\text{OBJ}_{\text{affected}}$ and the noun phrase internal possessor have the same form in Norwegian. There is thus no need for the restriction operator (see section 2) in the account of Norwegian possessor raising.

We see, then, that a unification analysis gives a simple account of the situation in Norwegian with both forward and backward possessor raising.⁸

10. Conclusion

I have shown that the Norwegian *på* possessor can be realized within the body part noun phrase. It is then a prominent internal possessor, which must be related to the sentence level using backward possessor raising. The *på* possessor can also be realized at sentence level, so it is necessary to assume that possessor raising can apply both backward and forward. The existence of backward possessor raising strengthens the parallel between possessor raising and obligatory control and raising of subjects, and has consequences for our general understanding of these processes.

⁸ A unification analysis raises a more general question: If unification is used to account for raising of subjects and possessors, isn't the implication that all languages should have both forward and backward raising? This is clearly not the case, and there are two possible ways to handle this.

One option is a c-structure account. Concerning subject positions, one could point to the fact that e.g. an infinitival VP in Norwegian does not have a position for a phonologically realized subject. For possessor raising in e.g. French and German, one could make use of the difference in form between an affected object and a possessor in a noun phrase. The shared argument must be a dative nominal, and a dative nominal cannot be realized phonologically in the POSS position of a noun phrase.

Another option is to stay at the level of f-structure, and use subsumption instead of unification to relate the two positions. Subsumption is an asymmetrical relation in which the flow of information goes in one direction only (Zaenen and Kaplan 2002, Sells 2006). If one says that the sentential subject subsumes the infinitival subject, there will be forward control only. In the same way, one could say that the affected object subsumes the possessive in e.g. French and German, to achieve forward control only.

CORPUS

NoWaC (Norwegian Web as Corpus)

<http://www.hf.uio.no/iln/om/organisasjon/tekstlab/prosjekter/nowac/index.html>

REFERENCES

- Bresnan, Joan. 1982. Control and complementation. In Joan Bresnan (ed.) *The Mental Representation of Grammatical Relations*. Cambridge, MA: MIT Press. 282-390.
- Butt, Miriam, Tracy Holloway King, and John T. Maxwell III. 2003. Complex predicates via restriction. In Miriam Butt and Tracy Holloway King (eds.) *Proceedings of the LFG03 Conference*, Stanford, CA: CSLI Publications. 92-104.
- Dahl, Östen. 2015. *Grammaticalization in the North: Noun Phrase Morphosyntax in Scandinavian Vernaculars*. Berlin: Language Science Press.
- Deal, Amy Rose. 2013. Possessor raising. *Linguistic Inquiry* 37, 391-432.
- Deal, Amy Rose. 2017. External possession and possessor raising. In Martin Everaert and Henk van Riemsdijk (eds.) *The Wiley Blackwell Companion to Syntax. 2nd edition*. Hoboken NJ: Wiley. 1509-1540.
- Eik, Ragnhild. 2014. Setningar med possessivt objekt i norsk: Ein nykonstruksjonistisk analyse av setningar som «ho trakka han på foten». MA thesis. NTNU, Trondheim.
- Faarlund, Jan Terje 2004 *The Syntax of Old Norse*. Oxford: Oxford University Press.
- Guéron, Jacqueline. 1985. Inalienable possession, PRO-inclusion and lexical chains. In Jacqueline Guéron, Hans-Georg Obenauer and Jean-Yves Pollock (eds.), *Grammatical Representation*, 43-86. Dordrecht: Foris.
- Guéron, Jacqueline. 2006. Inalienable possession. Martin Everaert and Henk van Riemsdijk (eds.) *The Blackwell Companion to Syntax. Volume 2*. Malden, MA: Blackwell, 589-638.
- Haspelmath, Martin. 1999. External possession in a European areal perspective. Doris L. Payne and Immanuel Barshi (eds.), *External Possession*, 109-135. Amsterdam: John Benjamins.
- Hole, Daniel. 2005. Reconciling "possessor" datives and "beneficiary" datives - Towards a unified voice account of dative binding in German. In Claudia Maienborn and Angelika Wöllstein (eds.) *Event Arguments: Foundations and Applications*. Tübingen: Niemeyer, 213-242.
- Hornstein, Norbert. 1999. Movement and control. *Linguistic Inquiry* 30, 1, 69-96.

- Johannessen, Janne Bondi, Marit Julien and Helge Lødrup. 2014. Preposisjoner og eierskapsrelasjoner: et menneskesentrert hierarki. In Janne Bondi Johannessen and Kristin Hagen (eds.) *Språk i Norge og nabolanda: Ny forskning om talespråk*, 65-98. Oslo: Novus.
- Kayne, Richard S. 1975. *French Syntax: The Transformational Cycle*. Cambridge, MA: MIT Press.
- König, Ekkehard and Martin Haspelmath. 1998 Les constructions à possesseur externe dans les langues de l'Europe. In Jack Feuillet (ed.) *Actance et valence dans les langues de l'Europe*, 525-606. Berlin: Mouton de Gruyter.
- Landau, Idan. 1999. Possessor raising and the structure of VP. *Lingua* 107, 1-37.
- Langacker, Ronald W. 1968. Observations on French possessives. *Language* 44, 1, 51-75.
- Lee-Schoenfeld, Vera. 2006. German possessor datives: raised and affected. *Journal of Comparative Germanic Linguistics* 9, 2, 101-142.
- Lee-Schoenfeld, Vera. 2012. Case and affectedness in German inalienable possession constructions. *Linguistische Berichte* 232 399-416.
- Lee-Schoenfeld, Vera. 2016. The syntax of external and internal possessor variation in German inalienable possession. *STUF Language Typology and Universals*, 69, 1 113-129.
- Lee-Schoenfeld, Vera and Gabriele Diewald. 2014. The pragmatics and syntax of German inalienable possession constructions. *Annual Meeting of the Berkeley Linguistics Society*. Vol. 40. 286-310.
- Levin, Beth 1993 *English Verb Classes and Alternations: A Preliminary Investigation*. Chicago: University of Chicago Press.
- Lødrup, Helge. 2009a. External and internal possessors with body part nouns: The case of Norwegian. *SKY Journal of Linguistics* 22, 221-250.
- Lødrup, Helge. 2009b. Looking Possessor Raising in the mouth: Norwegian Possessor Raising with unergatives. In Miriam Butt and Tracy Holloway King (eds.) *Proceedings of the LFG09 Conference*, Stanford, CA: CSLI Publications. 420-40.
- Lødrup, Helge. 2010. Implicit possessives and reflexive binding in Norwegian. *Transactions of the Philological Society* 108, 2, 89-109.
- Meakins, Felicity, and Rachel Nordlinger. 2017. Possessor dissension: Agreement mismatch in Ngumpin-Yapa possessive constructions. *Linguistic Typology* 21, 1, 143-176.
- Nikolaeva, Irina. 2002. The Hungarian external possessor in a European perspective. In Cornelius Hasselblatt and Roger Blokland (eds.) *Finno-Ugrians and Indo-Europeans: Linguistic and Literary Contacts. Proceedings of the Symposium at the University of Groningen, November 22-24, 2001*. Maastricht: Shaker. 272-285.
- Polinsky, Maria and Eric Potsdam. 2002. Backward control. *Linguistic Inquiry* 33, 2, 245-282.

- Polinsky, Maria, and Eric Potsdam. 2006. Expanding the scope of control and raising. *Syntax* 9, 2, 171-192.
- Ritchie, Sandy. 2016. Two cases of prominent internal possessor constructions. In Doug Arnold, Miriam Butt, Berthold Crysmann, Tracy Holloway-King, Stefan Müller (eds.): *Proceedings of the Joint 2016 Conference on Head-driven Phrase Structure Grammar and Lexical Functional Grammar*. 620-40. Stanford, CA: CSLI Publications.
- Ritchie, Sandy. 2017. Agreement with the internal possessor in Chimane. *Studies in Language* 41, 3, 660-716.
- Sells, Peter. 2006. Using subsumption rather than equality in functional control. In Miriam Butt and Tracy Holloway King (eds.), *Proceedings of the LFG06 Conference*. Stanford CA: CSLI Publications.
- Skard, Vemund. 1951. *Dativstudien: Dativus sympatheticus und Dativus comparationis in der norrönen Sprache*. Skrifter (Det Norske videnskaps-akademi i Oslo) Historisk-filosofisk klasse. Oslo: Dybwad.
- Stolz, Thomas; Kettler, Sonja; Stroh, Cornelia and Urdze, Aina. 2008. *Split Possession: An Areal-linguistic Study of the Alienability Correlation and Related Phenomena in the Languages of Europe*. Amsterdam: Benjamins.
- Stump, Gregory T. and Ramawatar Yadav. 1988. Maithili verb agreement and the Control Agreement Principle. In *Chicago Linguistics Society (CLS)* 24, 2, 304-321.
- Thráinsson, Höskuldur. 2007. *The Syntax of Icelandic*. Cambridge: Cambridge University Press.
- Vergnaud, Jean-Roger and Maria Luisa Zubizarreta. 1992. The definite determiner and the inalienable construction in French and English. *Linguistic Inquiry* 23, 595-652.
- Zaenen, Annie and Ronald M. Kaplan. 2002. Subsumption and equality: German partial fronting in LFG. In Miriam Butt and Tracy Holloway King (eds.), *Proceedings of the LFG02 Conference*. Stanford CA: CSLI Publications, 408-26.