Inalienable possession in locational constructions:
an apparent problem

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0. Introduction

In Broekhuis and Cornips (1995), it has been argued that Standard Dutch inalienable possession constructions such as (1a) and (1b) have the same underlying structure in (2a): (1a) is derived by means of an obligatory movement of the predicate of the BIJ-phrase into the specifier of the locational PP, as in (2b); (1b), in its turn, is derived from the structure in (2b) by incorporation of the functor BIJ into the verb, as a result of which the NP is assigned dative Case.\footnote{2}

This analysis of the examples in (1) is consistent with Hoekstra’s (1994) hypothesis according to which inalienable possession is syntactically encoded by means of a functor P (BIJ in this case) that takes the possessor as its internal and the possessum as its external argument: $[\text{sc } \text{NP} \text{Possessum}] [P [\text{sc } \text{NP} \text{Possessor}]]$.

\begin{enumerate}
\item a. Ik zet het kind bij Jan/hem op de linkerknie.
\begin{itemize}
\item I put the child with Jan/him on the left knee
\item ‘I put the child on John’s left knee.’
\end{itemize}
\item b. Ik zet Jan/hem het kind op de linkerknie.
\begin{itemize}
\item I put Jan/him the child on the left knee
\item ‘I put the child on John’s left knee.’
\end{itemize}
\end{enumerate}

(2) a. \ldots V \ldots [\text{sc PP} \text{NP} \text{BIJ NP}]$[\text{sc BIJ NP}]$  (underlying structure)
\item b. \ldots V \ldots [\text{sc BIJ NP}]$[\text{sc NP} \text{BIJ NP}]$  (= (1a))
\item c. \ldots BIJ $[\text{sc BIJ NP}]$  (= (1b))

A problem for this analysis is that the base structure never shows up at the surface. Still, evidence exists that the analysis in (2) is on the right track. Consider the unacceptable examples in (3). If we assume that extraction from PP must apply via SpecPP (which would be a reformulation of Van Riemsdijk’s 1978

\begin{enumerate}
\item We like to thank Marcel den Dikken for his useful comments on an earlier version of this article, and Dorothee Beermann, Elisabeth Kierchbaum and Henk van Riemsdijk for discussing the German data in this article with us.
\item Incorporation of the functor P is preceded by movement of the functor phrase into the specifier of some higher FP. Extraction of the BIJ-phrase from the locational PP is possible, since the latter is a complement of the verb. Consistent with this is that the dative construction in (2c) is excluded if the locational PP is an adjunct. For details like these, we refer to Broekhuis and Cornips (1995).
\end{enumerate}
theory on R-extraction), the ungrammaticality of the examples in (3) follows immediately; since SpecPP is occupied by (the trace) of the BIJ-phrase in (3), R-extraction skips a potential landing site, and minimality is violated (cf. Broekhuis and Cornips 1995 for a more detailed discussion).

(3) a 7*de knie waar ik het kind [pp [bij Jan] [pp op t1]] heb gezet
   the knee where I the child with Jan on have put

b 7*de knie waar ik Jan het kind op t1 heb gezet
   the knee where I Jan the child on have put

1. The problem

According to the proposal sketched above, an NP-argument that acts as a possessor in the inalienable possession construction always has dative Case. Since Case is not morphologically reflected in Dutch, this cannot be demonstrated on the basis of examples such as (1b). However, that dative Case is involved can be shown indirectly. First, since (1b) contains a direct (i.e., accusative) object, accusative Case cannot have been assigned to the possessor. Second, (1b) may undergo semi-passivization, which promotes the dative object to subject, as in (4) (Broekhuis and Cornips 1994).

(4) Jan/Hij kreeg het kind op de linkerknie gezet.
    Jan/he got the child on the left knee put

If the possessor-NP really must be assigned dative Case, examples such as (5) seemingly constitute a problem for this claim. To begin with, besides the possessor there is no other object present, so that there is no a priori reason to assume that it cannot be assigned accusative Case.

(5) a De hond beet Peter/hem in het been.
    the dog bit Peter/him in the leg

b Marie kuste Peter/hem op het voorhoofd.
    Marie kissed Peter/him on the forehead

Further, there is in fact a strong reason to assume that Peter/hem is assigned accusative Case. In order to see this, consider the (semi-)passive examples in (6) and (7). The a-examples illustrate that regular passivization is possible, which indicates that the object in the examples in (5) can be assigned accusative Case. The b-examples, on the other hand, demonstrate that semi-passivization is excluded. If we are correct in claiming that semi-passivization is a productive syntactic process in Standard Dutch, this provides a counterargument for the assumption that the object can be assigned dative Case.
(6)  a  Peter/Hij werd (door de hond) in het been gebeten.
      Peter/he was by the dog in the leg bitten
   b  *Peter/Hij kreeg (van de hond) in het been gebeten.
      Peter/he got by the dog in the leg bitten

(7)  a  Peter/Hij werd (door Marie) op het voorhoofd gekust.
      Peter/he was by Marie on the forehead kissed
   b  *Peter/Hij kreeg (van Marie) op het voorhoofd gekust.
      Peter/He got by Marie on the forehead kissed

If the object indeed has accusative Case, we may have to conclude that the examples in (1b) and (5) cannot be treated on a par. This would be very unfortunate, however, since the examples in (5) show the same alternation as the example in (1a), which is demonstrated in (8). Furthermore, the examples in (5) and (8) resist R-extraction from the locational phrase, just as we have pointed out to be the case with the examples in (1) by means of the ungrammaticality of the examples in (3). This is illustrated for (5a) and (8a) in (9).³ In order to account for these facts, we will argue in this article that at least a subset of these cases can be analyzed in a way similar to the examples in (1).

(8)  a  De hond beet bij Peter/hem in het been.
      the dog bit with Peter/him in the leg
   b  Marie kuste bij Peter/hem op het voorhoofd.
      Marie kissed with Peter/him on the forehead

(9)  a  *Het been waar de hond Jan in beet.
      the leg where the dog with Jan in bit
   b  ?*Het been waar de hond bij Jan in beet.

2. The proposal: structural ambiguity

There are various ways to circumvent the conclusion that the examples in (1b) and (5) cannot be treated on a par. For instance, we may argue that the possibility of the regular passive is not sufficient to argue that the object is assigned accusative Case.⁴ This will not be the way in which we will tackle the facts in

³ Example (9b) seems more or less acceptable if het been is interpreted as ‘the bone’. In this case, we are of course not dealing with the possession reading of the bij-phrase, which rather acts as an adverbial phrase of place (cf. Corver 1990/1992, Broekhuis and Cornips 1995).
⁴ That such an assumption is needed can perhaps be argued independently on the basis of the examples in (i) and (ii). In (ib), regular passivization is applied to the double object construction in (ia), and the direct object een hoog loon is promoted to subject, which is clear from the fact that the
(5), (6) and (7), though. What we will claim is that the examples in (5) are in fact structurally ambiguous. We will argue that the fact that regular passivization is possible in (6a) and (7a) is due to the fact that the object in (5) can be assigned accusative Case. But we will also argue that the object can be assigned dative Case, and that only in this case we are dealing with inalienable possession of the sort that is under discussion in this article. In short, we claim that e.g. (5a) is ambiguous between (10a) and (10b). The construction in (10a) has the structure in (2c), in which the locational PP acts as a predicative complement of the verb; the question what acts as the external argument of the locational predicate will be the topic of section 4. The construction in (10b), on the other hand, is a case of a regular transitive construction in which the locational PP acts as an adverbial locational phrase.

(10) a De hond beet Peter_{acc}/hem_{acc} in het been.
    b De hond beet Peter_{acc}/hem_{acc} in het been.

Note that by claiming that only (10a) involves inalienable possession, we do not wish to imply that in the case of an accusative object no possession relation is expressed, but only that this must be of a different type, e.g. it may be a case of metonymy in the sense of Vergnaud and Zubizarreta (1992:§4.2). Note further that Vergnaud and Zubizarreta assume that the accusative object and the PP in examples such as (10b) constitute a Small Clause. We do not agree on this, since this would wrongly predict that R-extraction from the locational PP in (10b) would be acceptable, i.e., that (9a) with Jan in the accusative would be fine.

auxiliary agrees with it. However, if the direct object is dropped, as in (iia), the object de arbeiders is promoted to subject, which is clear from the plural agreement on the passive auxiliary in (iib). This may indicate that the way in which regular passivization applies depends on whether the direct object is (overtly) present or not. The examples discussed here differ from those in (5)-(7), however, in that semi-passivization is possible, irrespective of whether the direct object is present or not. This is illustrated in (iii).

(i) a Hij betaalt zijn arbeiders een hoog loon.
    He pays his workers a high wage
    There is/are his workers a high wage payed
    b Er wordt/*worden zijn arbeiders een hoog loon betaald.
(ii) a Hij betaalt zijn arbeiders goed.
    He pays his workers well
    b Zijn arbeiders worden/*wordt goed betaald.
(iii) a Zijn arbeiders krijgen een hoog loon betaald.
    b Zijn arbeiders krijgen goed betaald.

5 Distinguishing a special metonymic construction is needed for independent reasons, since English has a construction similar to (10b), e.g., Bill hit him on the nose, but does not have a construction that is comparable to the examples in (1). In fact, possessive dative constructions do not arise at all in English.
Therefore, we must assume that the PP is an adverbial adjunct in this case. Evidence in favour of this assumption will be given in section 4 below.

3. Comparable data from German

Many of our assumptions in the previous sections receive support from German. The assumption that the possessor in examples such as (1b) is assigned dative Case, for instance, is supported by the German example in (11), taken from Drosdowski (1984:§1137), in which the dative marking is expressed morphologically.

(11) Er schlägt ihm das Handtuch um die Ohren.
he hits him the towel around the ears

The idea that the Dutch examples in (5) are structurally ambiguous also receives support from German, since the objects in (12) may have either dative or accusative Case (after Drosdowski 1984:§1136).

(12) a Der Hund hat mir/mich ins Bein gebissen.
   the dog has me_dat./me_acc. in-the leg bitten
   b Peter hat ihr/sie auf den Mund geküßt.
      Peter has her_dat./her_acc. on the mouth kissed

Given the fact that the object may occur with accusative Case in the examples in (12), it does not come as a surprise that these examples have a regular passive counterpart. This is illustrated for (12a) in (13a). Given the fact that the object may occur with dative Case as well, we would also expect the semi-passive to be possible. This, however, is not borne out, as is illustrated for (12a) in (13b).

Although this constitutes a problem for the hypothesis that semi-passivization is a productive syntactic process, it shows that the impossibility of the examples in (6b) and (7b) cannot be used for arguing against the claim that the object in the Dutch examples in (5) can be assigned dative Case.

(13) a Ich bin (von dem Hund) ins Bein gebissen geworden.
   I have by the dog in-the leg bitten been
   b *Ich kriege (von dem Hund) ins Bein gebissen.
      I got by the dog in-the leg bitten

Note that (12b) with dative Case is characterized as colloquial. As has been pointed out by Elisabeth Kriechbaum and Henk van Riemsdijk (p.c.), some speakers prefer accusative Case in all these examples. These speakers also allow for an accusative object in the examples in (14a,b) to be discussed shortly.
Note that if the PP is dropped in the examples in (12), the object must appear with accusative Case. In this context, it is interesting to note that a limited set of verbs preferably take a dative object (Drosdowski 1984: §1136). These verbs are often not felicitous without the locational PP, i.e., they cannot be used as regular transitive verbs (Henk van Riemsdijk, p.c). This is illustrated in (14a',b').

(14) a Ich boxe ihm$_{dat.}$/ihn$_{acc.}$ in den Magen.
   a' *Ich boxe ihm$_{dat.}$/ihn$_{acc.}$. I hit him$_{acc.}$ in the stomach
   b Ich klopfe ihm$_{dat.}$/ihn$_{acc.}$ auf die Schulter.
   b' *Ich klopfe ihm$_{dat.}$/ihn$_{acc.}$. I pat him$_{acc.}$ on the shoulder

This provides strong evidence for our hypothesis in (2); since the dative object is not an argument of the verb itself, but originates from within the locative PP, there is consequently no source for the dative object if the latter is dropped.

4. Semi-passivization

The discussion so far suggests that the Dutch examples in (5), just as the German ones in (12), have at least one interpretation that can be analyzed in a similar fashion as (1b). What we did not account for yet, however, is that semi-passivization of the examples in (5)/(12) is excluded (cf. the ungrammaticality of (6b), (7b) and (13b)). Of course, one could take recourse to the traditional view that semi-passivization is idiosyncratically constrained, and perhaps not even a syntactic process. Broekhuis and Cornips (1994) have argued, however, that semi-passivization should be viewed as a productive grammatical process. For instance, the only ‘transmission’ verb they came across that systematically resists semi-passivization is the verb geven ‘to give’. Consider the examples in (15).

(15) a Jan bezorgt/geeft de meisjes/hen het boek.
   Jan delivers/gives the girls/them the book
   b Het boek werd de meisjes/hen bezorgd/gegeven.
   the book was the girls/them delivered/given
   c De meisjes/zij kregen het boek bezorgd/*gegeven.
   the girl/they got the book delivered/*given

The impossibility of semi-passivization in (15c) with the verb geven was related to the fact that the intended contention can also be expressed by means of the example in (16). In other words, the impossibility of (15c) with the verb geven may be a case of syntactic ‘blocking’.
(16) De meisjes kregen het boek.

One might speculate that the impossibility of (15c) with geven is due to the fact that, besides the notion of ‘transmission’ itself, the verb geven has little or no content. This observation may be relevant for the topic we are dwelling on at this point, since examples such as (5) and (12) typically involve verbs that can be paraphrased as ‘to give an N’. A small sample is given in (17).\footnote{Note that this does not hold for examples such as (i), but these cases of course involve ergatives verbs, that is, the surface subject corresponds to the underlying direct object (cf. the discussion of these verbs in Broekhuis and Cornips 1995).}

(17) bijten ‘to bite’ = een beet geven ‘to give a bite’
kloppen ‘to knock’ = een klop(je) geven ‘to give a (gentle) blow’
kussen ‘to kiss’ = een kus geven ‘to give a kiss’
slaan ‘to blow’ = een slag geven ‘to give a blow’
stenen ‘to sting’ = een steek geven ‘to give a sting’
trappen ‘to kick’ = een trap geven ‘to give a kick’

So, we can paraphrase the examples in (5) with the dative object by means of the examples in (18). And these examples are of course structurally identical to the examples in (1b). Note for completeness that the examples in (18) also alternate with the periphrastic bij-constructions in (19).

(18) a De hond gaf Peter/hem een beet in het been.
the dog gave Peter/him a bit in the leg
b Marie gaf Peter/hem een kus op het voorhoofd.
Marie gave Peter/him a kiss on the forehead

(19) a De hond gaf een beet bij Peter in het been.
the dog gave a bit with Peter/him in the leg
b Marie gaf een kus bij Peter/hem op het voorhoofd.
Marie gave a kiss with Peter/him on the forehead

One way to account for the dative NP in (5) and (12) is by adopting Hale and Keyser’s (1993) proposal that denominal verbs may arise from a syntactic operation that adjoins the head of the (accusative) object to a syntactically present but morphologically covert verb. The examples in (5) and (8) can then be derived from those in (18) and (19) by adjoining the head noun of the direct object to the
covert verb. From this it would follow that they involve a similar syntactic structure as the examples in (1), with a trace in the position of the direct object.

The fact that the covert verb in (5) and (8) surfaces as _geven_ in (18) and (19) suggests that the covert verb and _geven_ can be more or less identified. If this is indeed the case, we of course also have an account for the fact that the examples in (5) may not undergo semi-passivization, since we have seen that _geven_ cannot undergo semi-passivization either. Here we illustrate this again by means of the examples in (20). For completeness note that the examples become perfectly acceptable if we drop the participle _gegeven_ (cf. the discussion of (15) and (16)).

(20) a  Peter/hij kreeg (van de hond) een beet in het been (*gegeven).
      Peter/he got by the dog a bit in the leg given
b  Peter/hij kreeg (van Marie) een kus op het voorhoofd (*gegeven).
      Peter/he got by Marie a kiss on the forehead given

Independent evidence for assuming that the denominal verb is derived by means of N-to-V movement, if the object has dative Case, is provided by the German examples in (21), which illustrates that PP-over-V may not apply to examples such as (12) if the object has dative Case. This would follow from our proposal that in this case the locational constructions have the same structure as example (1b), so that the locational PP must be analyzed as the predicate of a complement Small Clause, which always resists PP-over-V (cf. Hoekstra and Mulder 1990). The fact that this Small Clause has no overt subject follows from the fact that it has incorporated into the empty verb, i.e., the subject is a trace.

(21) a  *Der Hund hat mir gebissen (ausgerechnet) ins Bein.
      the dog has me_dat bitten exactly in the leg
b  *Peter hat ihr geküßt (ausgerechnet) auf den Mund.
      Peter has her-dat kissed exactly on the mouth

The fact illustrated in (22) that PP-over-V is possible, if the object has accusative Case, on the other hand, shows that the locational PP is not the predicate of a complement Small Clause but rather acts as an adverbial adjunct, as has already been suggested in section 2.8

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8 As has been pointed out by Dorothee Beermann (p.c.), PP-over-V is not a very favoured option for many speakers of German from North-Germany. It is possible, however, if the subject and the prepositional complement are assigned contrastive stress. Addition of a focus element such as _ausgerechnet_ 'precisely' further improves the result for these speakers.
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(22) a Der Hund hat mich gebissen (ausgerechnet) ins Bein.
the dog has me acc. bitten exactly in-the leg
b Peter hat sie geküßt (ausgerechnet) auf den Mund.
Peter has her acc. kissed exactly on the mouth

5. A remaining question

The proposal in (2) raises the question why movement of the BIJ-phrase into the specifier of the locational PP is obligatory, that is, why it cannot remain in situ. Here, we would like to suggest a partial answer to this question, which undoubtedly can be improved in the future, that takes into account the nature of the position into which the BIJ-phrase moves.

In Broekhuis and Cornips (1995), it was noted that inalienable possession is excluded in postpositional locational phrases such as (23).

(23) a Ik duw het kind zijn armen in.
I push the child his arms into
b *Ik duw het kind bij Jan de armen in.
I push the child with Jan de arms into
c *Ik duw Jan het kind de armen in.
I push Jan the child the arms into

This would follow if we assume that the NP de armen occupies the specifier of the locational PP. Following Kayne’s (1994) proposal that all languages have a Specifier-Head-Complement structure in the base, the NP de armen must have been moved from a position to the right of the locational preposition. And given the fact that it blocks movement of the BIJ-phrase to the left, it must occupy the specifier of the locational PP (cf. the discussion of the examples in (3)).

Although it remains mysterious why the NP de armen may move overtly in (23a), it would follow from Chomsky’s (1995) Checking Theory that it applies for morphological reasons, i.e., for checking its Case feature with the prepositional head. If this assumption is on the right track, the following would hold:

(24) SpecPloc P is a Case-position.

From (24), it would follow that in case of the inalienable possession construction, (the trace of) the BIJ-phrase in the locational construction would occupy a Case-

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9 Following Chomsky (1995:chapter 3), we should have to say: SpecAGRP immediately dominating Ploc P is a Case-position. Following Chomsky (1995:chapter 4), however, the formulation in (24) would be the more proper one. In order to not complicate our discussion, we will not dwell on this issue here.
position. Although this may look strange at first sight, this would be consistent with analyses of locative inversion, according to which moving the predicate of a Small Clause into a Case position indirectly checks the Case feature of the subject of the Small Clause (cf. Mulder and Hoekstra 1990).

Now, if we assume that locative inversion must apply in overt syntax, the obligatory nature of the movement of the BIJ-phrase in the locational construction would follow. The obligatory nature of the application of locative inversion itself can perhaps be understood in the light of the stylistic contribution that the process makes — stylistic rules have a special phonological effect (viz. intonation), hence must be executed either before or at PF (Marcel den Dikken, p.c.). Moreover, since it is not plausible that languages differ in this respect, it would follow that this holds for all languages.

(25) Movement of the functor (BIJ-)phrase in the locational construction is obligatory across languages.

Note that the present proposal still does not fully account for the fact that the functor phrase cannot remain in situ, since we did not exclude a derivation in which no movement applies in overt syntax, and in which the subject of the functor phrase moves to SpecPP at LF. We leave this for future research, while noting that, at least in Dutch, PP-complements of P must generally surface to the left of P; instances of such constructions are the complex particle construction in (26), discussed in Den Dikken (1995).

(26) a dat Jan het boek [[in de kast], [neer t]] zet.
    that Jan the book in the bookcase down puts
   b *dat Jan het boek neer in de kast zet.

6. A note on French

In large measure, inalienable possession in the locational construction works the same in French as in Dutch and German. In (27), we give an example of inalienable possession in a locational construction with an overt direct object, taken from Kayne (1975:162). In (28a,b), we give some examples comparable to the German examples in (12), taken from Huffman (1983), in which the possessor may appear either as a dative or an accusative clitic. The example in (28c), taken from Kayne (1975), is comparable with the German examples in (14); the clitic may only appear with dative Case.

(27) Elle lui a mis une écharpe autour du cou.
    She him_dat. has put a scarf around the neck
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(28) a Je l’ ai frappé sur le nez.
I him\textsubscript{acc} has hit on the nose
b Je lui ai frappé sur l’épaule.
I him\textsubscript{dat} have patted on the shoulder
c On lui a tiré *(dans le ventre).
They him\textsubscript{dat} have shot in the stomach

It must be noted, however, that neither example (27) nor the examples in (28b,c) have an alternate with an à-PP (cf. (29)). These examples illustrate that the possessive dative in the locational construction (either with or without an overtly realized direct object) does not alternate with the periphrastic construction.\footnote{The examples in (29) can of course be paraphrased by means of a de-PP, but it is clear that it is the à-PP and not the de-PP that is the source of the dative clitic (see Kayne 1975:144ff.).} Why is this the case?

(29) a *Elle a mis une écharpe autour du cou à ce garçon.
She has put a scarf around the neck to this boy
b *On a tiré dans le ventre à ce garçon.
They have shot in the stomach to this boy

We think that the answer to this question is related to the generalization in (25), according to which the functor phrase must be moved into \textsubscript{SpecP}\textsubscript{l0C}. What we like to suggest is that this obligatory movement is blocked due to the rigid word order pattern in French. Consider the examples in (30).\footnote{Apparently, the generalization in (25) cannot be generalized to nonlocational constructions such as (30), in which the periphrastic and dative construction do alternate. Since the functor phrase is generated as the complement of the verb, the derivation of (30) applies as indicated in (i).}

(30) a Marie-Claire a embrassé le front à Paul.
Marie-Claire has kissed the forehead to Paul
b Marie-Claire lui a embrassé le front.
Marie-Claire him\textsubscript{dat} has kissed the forehead

\begin{itemize}
  \item \textsuperscript{10} In order to account for the fact that both (30a) and (30b) are possible, we must assume that SpecFP in (ib) is not a Case-position, and hence that we are not dealing with locative inversion. An argument in favour of this assumption is that movement to SpecFP also applies in (2c); since the movement in (2b) already served checking purposes, the subsequent movement to SpecFP in (2c) cannot be applied for the same reason, but is rather motivated by making incorporation of the functor possible. From this, it should follow that (25) does not apply in cases such as (30b), and hence that (30a) is possible as well.
\end{itemize}
The à-PP in the French examples in (30a) must follow the NP *le front*, that is, the position of the functor phrase is fixed. Leaving the à-PP in its base position in (29), however, would lead to a conflict with the requirement in (25), according to which the à-PP must be moved. Apparently, this conflict leads to the ungrammaticality of the examples in (29). However, if the complement of the à-PP is a clitic, movement of the functor phrase into SpecFP, which in (27) and (28b,c) accidentally proceeds through SpecP\_locP, is possible. From this, it follows that these clitic dative constructions are grammatical.

7. Conclusion

In this paper, we discussed inalienable possession in locational constructions without a(n overtly realized) accusative object. Following Hale and Keyser (1993), we argued that in a subset of these cases, the direct object has incorporated into the main verb, and hence that the analysis for inalienable possession in locational constructions with an accusative object in (2) covers these cases as well.

References