[0705]   **THE VERBAL COMPLEX IN FRISIAN**[*]

Germen J. de Haan

1. Introduction

At the observational level, there appears to be consensus on the existence of three types of nonfinite sentential arguments in the Continental West Germanic languages:

(a)   extraposed nonfinite arguments;
(b)   split infinitival phrases in extraposition, where complements and/or modifiers can, but need not be separated from their verb;
(c)   verbal complexes, a row of verbs that cannot be interupted by nonverbal elements.

Let us illustrate these possibilities with the help of Frisian, a Continental West Germanic language spoken in the Northern part of the Netherlands. In Frisian, we distinguish the following nonfinite sentential argument types:

(a) - extraposed nonfinite arguments:

  (1) omdat er miende [dat ferwachtsje te kinnen][1]
       'because he supposed that expect to be able'

(b) - split infinitival arguments:

  (2) omdat er dat miende [ferwachtsje te kinnen]
       'because he that supposed expect to be able'

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[1].   This type has two subtypes according to complementizer selection: some complements are optionally introduced by *om*; others, among them the complement of *miene* 'suppose', do not have an overt complementizer: (i) * omdat er miende [om dat ferwachtsje te kinnen] 'because he supposed for that expect to be able'

In (2), the sentential object of *miene* 'suppose' is split up: *dat* 'that' is the direct object of *ferwachtsje* 'expect'.

(c) - verbal complexes:

(3) a. dat er it famke *helpt*
     'that he the girl helps'
  b. dat er it famke *helpe wol*
     'that he the girl help wants'
  c. dat er it famke *helpe wold hie*
     'that he the girl help wanted had'
  d. dat er it famke *helpe wold hawwe soe*
     'that he the girl help wanted have should'

The verbal complex is a string of verbs that cannot be interrupted by non-verbal elements.

Verbs can be classified in terms of these types of complement selection. Here we will discuss some properties of the Frisian verbal complex.[2]

2. The verbal complex

The defining characteristic of the verbal complex is the inseparability of the string of verbs. The string adjacency of the verbs in the verbal complex follows, if we assume the verbal complex to be a complex verb, i.e. a structure consisting of adjoined verbs, at least at surface structure. This leaves open the possibility for base generation or transformational derivation of the complex verb. As a first route, it seems reasonable to try to analyze the Frisian verbal complex against the background of proposals made with respect to German and/or Dutch.

In his 1975 dissertation Evers presents several arguments that point to a structural ambiguity of the verbal complex in German and Dutch. Evers offers a set of arguments for a complex sentence analysis, and an additional set for a complex verb analysis. He resolves this structural ambiguity by means of a transformational derivation of the surface string. In d-structure each verb of the verbal complex has its own sentential projection. The complex V in s-structure is

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[2]. See for a discussion of Frisian split infinitival arguments ('the third construction'), de Haan (1992).

derived by means of a transformation that Chomsky-adjoins a V to the first V up. This transformation, called V-Raising, has an adjunction site to the left in German, and to the right in Dutch, accounting for order differences in the verbal complex of these languages. The loss of the V causes its sentential projection to prune.

Since Evers (1975) this double structure analysis of the verbal complex of Dutch and German has become quite accepted, albeit implemented along somewhat different lines. Riny Huybregts proposed in unpublished work a vacuous adjunction rule applying both in Dutch and German, followed by a string changing local V-inversion in the left branch of the grammar of Dutch only. Haegeman & Van Riemsdijk (1986) modified this into the simultaneous representation of two structures, as an effect of reanalysis.

Recently the double structure analysis of the verbal complex has been challenged by alternative approaches. It is remarkable that these approaches, both revivals of old proposals, contain opposite claims. The first one is outlined in Kroch & Santorini (1991), which is an adaptation of an earlier proposal made by Zaenen (1979). Kroch & Santorini (1991) claim that the verbal complex is derived by Chomsky-adjoining a V to a dominating sentential node ('infinitive extraposition'). This approach assumes that the verbal complex is sententially complex, a complexity that is preserved at *s*-structure, i.e. no use is made of pruning. Furthermore, this derivation does not produce a complex verb at s-structure. Since the string adjacency character of the verbal complex does not follow from this approach, we will not discuss this alternative here.

The second one, outlined as early as in Hoeksema (1980), and more recently in Neeleman (1990), assumes that the verbal complex is not sententially complex in d-structure, but already base generated as a complex verb. This approach does not involve V-raising, nor pruning. Here we follow Hoeksema/Neeleman, for reasons that will become clear as we proceed.

3. *Nominalization as an argument for a lexical complex verb analysis of the verbal complex*

A particular strong argument in favor of a complex verb analysis of the verbal complex is based on Nominalization. Before we can present this argument, we have to discuss some relevant aspects of Frisian nominalization.

3.1. *Frisian nominalizations*

Frisian does have two morphologically different infinitives: one form, referred to here as INF_e, consists of a verbal stem and a schwa suffix (spelled as *-e*); the

other form, INF_n, consists of a verbal stem and a suffix -@*n* (spelled as -*en*). The latter has a pronunciation variant -*n*, in general an optional variant, but -@*n* is obligatory when the stem ends in a vowel, for example *fei+en* 'sweep'. These infinitives have the following distribution:

❍ the form INF_e is dependent on the presence of modals such as *kinne* 'can, *meie* 'may', *sille* 'shall', *doare* 'dare', *hoege* 'need', *wolle* 'want' and a perception verb such as *litte* 'let';

❍ the form INF_n is dependent on the presence of:
  a. perception verbs such as *sjen* 'see', *hearre* 'hear', *fiele* 'feel', and *fine* 'find';
  b. the preposition-like prefix *te* 'to';

❍ both infinitives can head a phrase that occurs in noun phrase positions.

This last observation is illustrated by the following examples:

(4) a. winne/winnen wie slimmer as ferlieze/ferliezen
       'win/win was worse than loose/loose'
    b. hy neamde winne/winnen slimmer as ferlieze/ferliezen
       'he called win/win worse than loose/loose'
    c. ferlieze/ferliezen hie er in hekel oan
       'loose/loose hated he'

Here we have INF_e as well as INF_n functioning as subject, object, prepositional object in argument (NP) position. The internal properties of phrases headed by INF_e and INF_n, respectively differ significantly. This becomes obvious if we enlarge the phrases of (4) with modifiers and/or complements:

(5) a. it (maklike) (wedstriden) *winne/winnen (mei ien nul) wie slimmer
       'it easy games win/win with one zero was worse'
    b. it (maklike) *winne/winnen (fan wedstriden) (mei ien nul) wie slimmer
       'it easy win/win of games with one zero was worse'
    c. maklik (wedstriden) (mei ien nul) winne/*winnen wie slimmer
       'easily games with one zero win/win was worse'

The examples (5a-b) indicate that phrases with INF_n have internal structural properties of noun phrases as opposed to phrases such as (5c) with INF_e:

❍ INF_n, but not INF_e, can be accompanied by a determiner;

❍ elements that modify INF_n have adjectival inflection with the suffix -@ (spelled as -*e*), whereas with INF_e they remain uninflected;

❍ direct objects can occur to the right of INF_n together with the obligatory presence of the preposition *fan* 'of'; this structure is not possible with INF_e, here direct objects can only occur to the left of the infinitive, as in sentential phrases.

INF_n-phrases are not only NP-like internally, they have also some remarkable

internal properties that make them different from ordinary NPs. For instance: the head of an INF_n phrase allows not only for an inflected (adjectival) modifier, but also for an uninflected (adverbial) one:

(6)   it maklik winnen wie slimmer
        'it easy win was more bad'

Furthermore, prepositonal phrases and direct objects do not occur exclusively to the right of the head, as is normal for NPs, but they can also show up to the left of the INF_n. In the case of direct objects, the preposition *fan* has to be omitted:

(7) a.   it winnen mei ien-nul wie slimmer
           'the win with one zero was worse'
    b.   it mei ien-nul winnen wie slimmer
           'the with one zero win was worse'
(8) a.   it winnen fan wedstriden wie slimmer
           'the win of games was worse'
    b.   it wedstriden winnen wie slimmer
           'the games win was worse'
    c. *   it fan wedstriden winnen wie slimmer
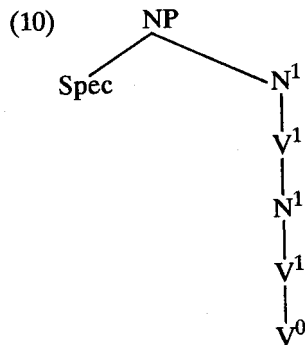   'the of games win was worse'

It is even possible to combine noun- and verb-like properties within one and the same INF_n-phrase:

(9) a. it maklik winnen fan dizze wedstriden
       'the easily win of these games'
    b. it maklike wedstriden winnen
       'the easy games win'

It appears to be the case then that INF_n-phrases, being externally NP, have internally noun- and verb-like properties. In the literature several proposals have been made in order to account for this mixed character of nominal infinitives.[3] Here we will not commit ourselves to a specific analysis, but assume, for the sake of the argument, that the essentials follow from a 'mixed structure' analysis. Within this analysis, the maximal projection of INF_n-phrases is NP; the specifier dominated by the maximal projection, is $[Spec,N^1]$, and the head is V^0. The mixed
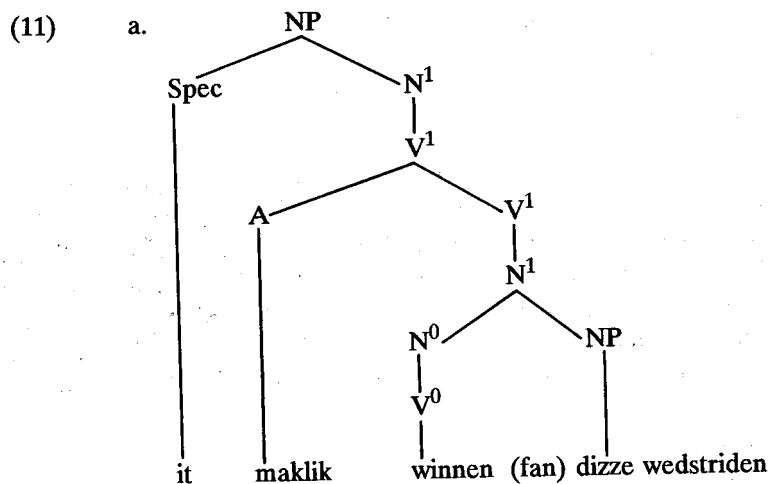
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[3]. See among others Reuland (1983), Dik (1985), van Haaften et al. (1985), Hoekstra (1986), Zubizarreta & van Haaften (1988), Visser (1989), Abraham (1989) and Looyenga (1990).
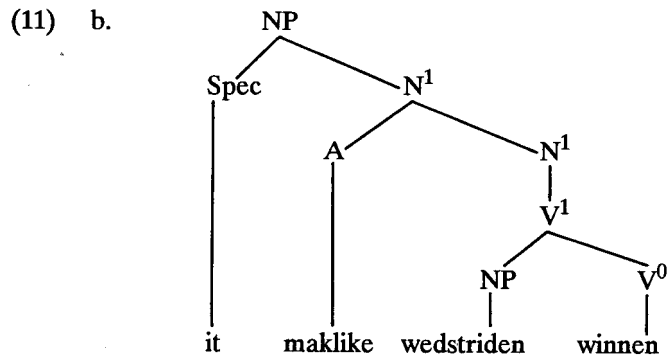
nature of INF_n-phrases is due to the assumption that all nonmaximal categories on the projection line of INF_n-phrases can be converted into their nominal or verbal counterpart (see Abraham (1989), for discussion of this possibility). We will represent this as follows:

(10)

$$
\begin{array}{c}
\text{NP} \\
\overset{\diagup \diagdown}{\text{Spec} \qquad N^1} \\
\mid \\
V^1 \\
\mid \\
N^1 \\
\mid \\
V^1 \\
\mid \\
V^0
\end{array}
$$

It is clear to me that this approach overgenerates considerably, but that is not relevant for the point I am trying to make.

In Frisian, phonetic representations of INF_n-phrases show alternative conversion possibilities. Examples (9a,b) would have PF-input structures such as (11a) and (11b):

(11)　　a.

$$
\begin{array}{c}
\text{NP} \\
\overset{\diagup \diagdown}{\text{Spec} \qquad N^1} \\
\qquad\qquad V^1 \\
\overset{\diagup \qquad \diagdown}{A \qquad\qquad V^1} \\
\qquad\qquad N^1 \\
\qquad \overset{\diagup \diagdown}{N^0 \qquad NP} \\
\qquad V^0
\end{array}
$$

it　　maklik　　winnen　(fan)　dizze wedstriden

(11) b.

```
                    NP
              Spec      N¹
                     A      N¹
                            V¹
                        NP      V⁰

         it    maklike  wedstriden   winnen
```

The conversion of V^0 into N^0 and subsequent projection into N^1 gives rise to structure (11a) in which a direct object can only be realized to the right of a N^0 head due to whatever factor is responsible for nominal head-complement relations. Since the nominal head does not assign Case, the direct object has to be realized in a prepositional phrase with the Case assigning preposition *fan*. In (11a), N^1 is converted into V^1; modification of this phrase by means of an element of the category A will be realized adjectivally.

An alternative is represented in (11b). Here the category V^0 of the INF_n-phrase is projected into V^1 followed by conversion into N^1. Here the direct object can be realized to the left of a verbal head within a V^1. Since it receives its Case from V^0, the insertion of the preposition *fan* is prohibited; hence the ungrammaticality of (8c).

Of course such an approach raises a lot of important questions. For our purposes, we can leave them unanswered here.

3.2. Nominalization and V-Raising

Evers (1975) presented several arguments in favor of a complex verb analysis for the verbal complex (in Dutch and German, and since Frisian is similar to German in relevant aspects, per implication for Frisian). A particular strong argument is based on nominalized infinitives discussed in the foregoing section. Since nominalization of a verbal complex is possible, compare the examples in (9), such a complex is analyzed as a unit by the Nominalization rule:

(12) a. dat er blommen ferkeapje wol
         'that he flowers sell wants'
     b. it blommen ferkeapje wollen
         'the flowers sell wanting'

  c. it ferkeapje wollen fan blommen
   'the sell wanting of flowers'
(13) a. dat er boeven rinne lit
   'that he criminals walk lets'
  b. it boeven rinne litten
   'the criminals walk letting'
  c. it rinne litten fan boeven
   'the walk letting of criminals'

Evers shows that Dutch and German facts corresponding to (12b-c) and (13b-c) follow straightforwardly from a nominalization of a transformationally derived complex verb.
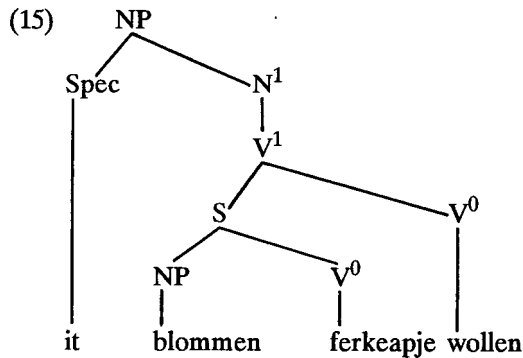
 It is important to note that this argument makes use of a transformational account of nominalization. Nowadays nominalization of this type is approached lexically, however, that is, nominalization structures have to be available in the base. The consequences of this position for Evers' argumentation in favor of a transformational V-raising process are noted by Hoeksema (1980), and recently by Neeleman (1990). Both authors point out that nominalization remains a strong argument for analyzing the verbal complex as a complex verb, but that a lexical approach to nominalization is problematic for a transformational derivation of complex verbs,[4] but not for base generation. In applying Neeleman's arguments to (12b-c) (albeit in somewhat different form, cf. his fn. 11), we attempt to show that a transformational analysis of complex verbs is indeed problematic.

 Within a mixed structure analysis of nominal infinitives, the essential part of the base structures of (12b,c) could roughly look like (14a-b):

(14) a. NP   b.   NP

    Spec N^1 Spec N^1

       V^1 N^0

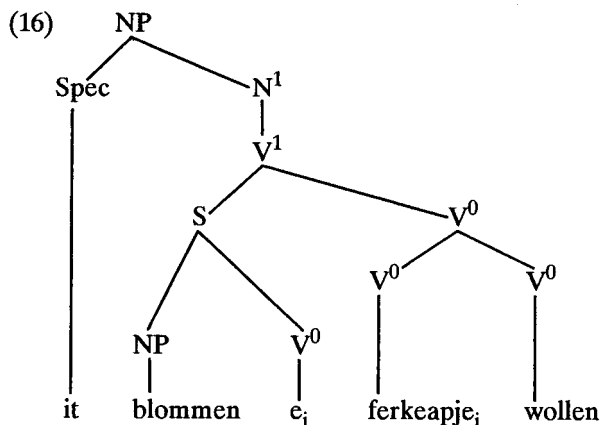 V^0 V^0

    it wollen   it wollen

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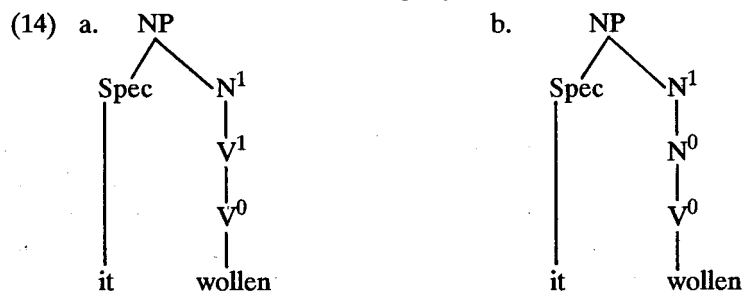
[4]. This is also noted by Visser (1989), but Visser does not draw the conclusion that a lexical approach is called for.

Within a transformational approach to the verbal complex, the respective d-structures of (12b) and (12c) will still have a complex sentential structure underlying the verbal complex. In an INF_n- structure with a projection of the verbal head, V^0, into V^1, the sentential complement of *wolle* 'want' will be generated to the left of this verbal head (as is generally the case with sentential complements of verbs):

(15)

```
            NP
          /    \
       Spec     N¹
                 |
                 V¹
               /    \
             S'       V⁰
           /   \
         NP     V⁰
         |      |
         |      |
         it   blommen   ferkeapje wollen
```

V-raising applies to (15) and Chomsky-adjoins *ferkeapje* 'sell' to the leftside of *wolle* 'want':

(16)

```
            NP
          /    \
       Spec     N¹
                 |
                 V¹
               /    \
             S'       V⁰
           /   \     /  \
         NP    V⁰  V⁰    V⁰
         |     |    |     |
         it blommen eᵢ ferkeapjeᵢ wollen
```

If we want to consider (16) as the wellformed s-structure of (12b), we will have to assume that the NP *blommen* 'flowers' is Case-marked, that is V-raising has to leave behind a Case-assigning trace. In this way we can derive (12b) from (15).

We cannot derive (12c) from this base: in particular, it is not clear why the the object should have to move the post-head position, and why a Case assigning

preposition is inserted. But there is still a base structure available, i.e. with the V^0 *wollen* 'want' converted into N^0 with subsequent projection into N^1 (compare (14b)). It seems reasonable to assume that the categorial restrictions on thematic and Case assigning properties of a nominalized INF_n are determined in this case by its being a N^0: *wollen* 'want' of the category N^0 cannot assign Case; complements of *wollen* 'want' will be generated to the right of the nominal head (as is generally the case with sentential complements of N^0):

(17)
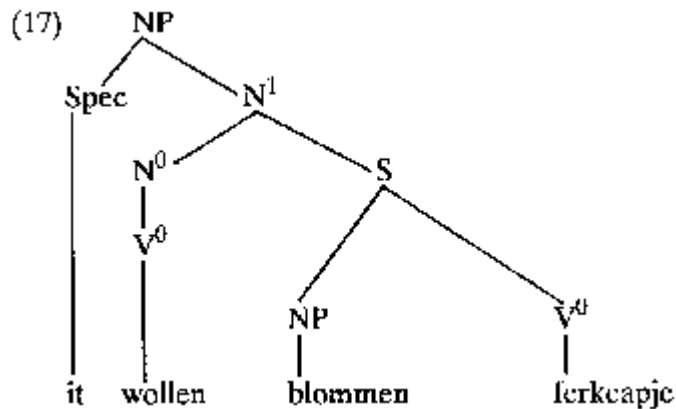
Now transformational raising of *ferkeapje* 'sell' to *wol* 'want' is possible only if we allow for movement of *ferkeapje* to V^0, or N^0, indicated in (18a-b), respectively:
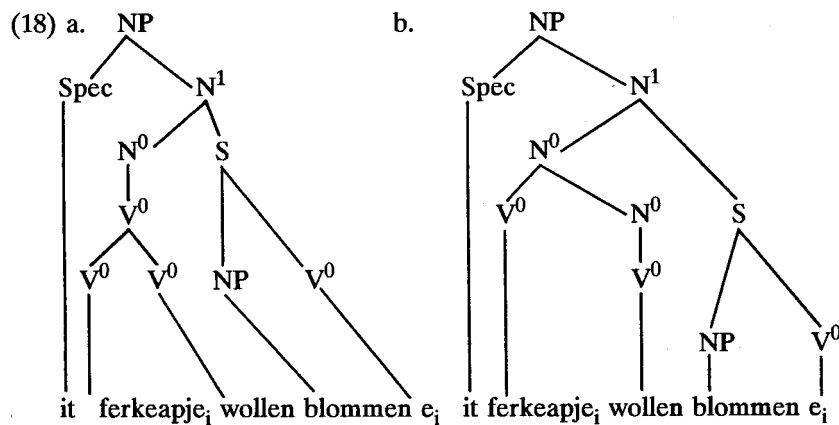
Even if we assume that both types of adjunctions are allowed by universal grammar, it is not very likely that these derivations are wellformed. A serious problem with both derivations is that sentential complements of N are barriers

generally; so the verb incorporation is blocked.

There is another problem: the movement of V may not leave a (Case assigning) trace; otherwise the NP *blommen* 'flowers' is Case-marked within its internal clause, and it is predicted that the sentence that corresponds to (18) is grammatical:


(19)* it ferkeapje wollen blommen
'the sell want flowers'

This prediction is clearly incorrect. If we assume loss of the trace, the NP will not be Case-marked (indirect Case-marking via the complex verb is out due its being dominated by N^0). Now the derivation can be saved by insertion of the preposition *fan*, compare (12c). The problem for this approach is that we have to assume both that V-raising leaves a Case assigning trace (witness the discussion of (12b)), and does not leave a trace.
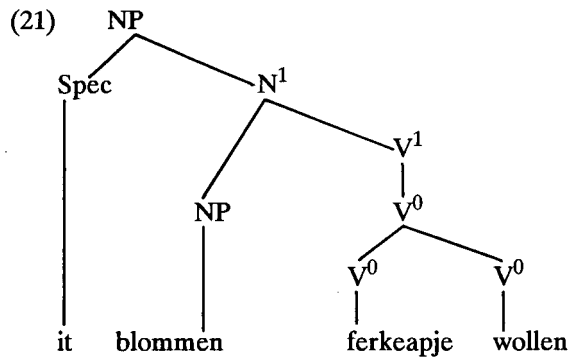
A transformational V-raising applying to a projection of a nominal INF_n requires:
❍   a barrier violation of this adjunction;
❍   that V-raising both leaves and does not leave a Case assigning trace.
Things look more simple, if we assume nominalization of a base-generated complex verb for the verbal complex. We can have V^0-to-N^0 conversion, or V^0-to-V^1 projection, as illustrated in (14). Conversion of the complex verb *ferkeapje wol* 'sell want' produces an N^0, which has the 'nominal' properties of theta role, and case assignment. Consequently we expect the direct object of *ferkeapje* 'sell' to occur to the right of the nominal head in a PP phrase:

(20)
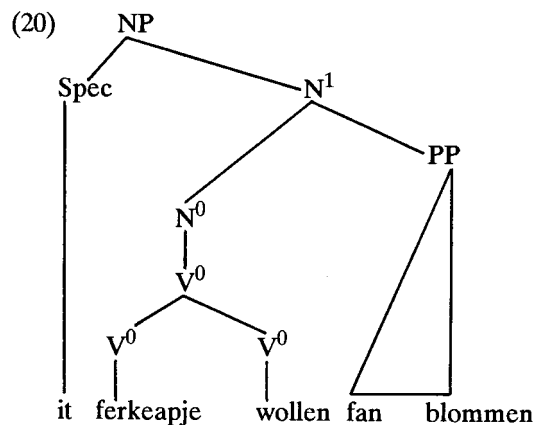
The projection of V^0 into V^1 preserves the possibility (and hence, the necessity) of realizing theta roles and Case within the verbal projection:

(21)

```
        NP
       /  \
   Spec    N¹
    |     /   \
    |   NP     V¹
    |   |      |
    |   |      V⁰
    |   |     /  \
    |   |   V⁰    V⁰
    |   |    |     |
    it blommen ferkeapje wollen
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Of course this approach needs an adjusted theory of theta role distribution (see Neeleman (1990)).

The argumentation in favor of the verbal complex as a lexically derived complex verb is strongly disputed by Kroch & Santorini (1991), although they admit that 'the grammaticality of bare infinitive nominalizations follows straightforwardly' (p. 292) from the assumption that a complex verb is involved in the nominalization process. However, they do not accept this argument, since verb sequences containing *te*-infinitives have no corresponding nominalizations, according to Kroch & Santorini, even though they are part of the verbal complex: 'Thus, the nominalization argument cuts against the verb cluster analysis of verb raising in the case of *to*-infinitives' (p. 292).

In order to support this factual claim, they cite German examples, with *zu*-infinitives, but we feel that the ungrammaticality of these examples is in need for another explanation (that is, if we want to maintain an uniform theory for German, Dutch, and Frisian), since nominalization of verbal complexes with *te*+INF in Frisian (and Dutch, for that matter) are quite acceptable, as expected under a lexically derived complex verb analysis:

(22)   dat wij blommen besykje te ferkeapjen
          'that we flowers try to sell'
(23)a. it blommen besykje(n) te ferkeapjen
          'the flowers try to sell'
      b. it besykje(n) te ferkeapjen fan blommen
          'the try to sell of flowers'
(24)   dat wij gjin blommen hoege te ferkeapjen

        'that we no flowers have to sell'
(25)a. it gjin blommen hoege(n) te ferkeapjen
        'it no flowers have to sell'
    b.it net hoege(n) te ferkeapjen fan blommen
        'it not have to sell of flowers'

As far as Frisian (and Dutch) is concerned, bare infinitives and *te*+INFs behave alike under nominalization, supporting a lexical approach to verb clusters.

    Besides the alternative solution for nominalized bare infinitive sequences, suggested by Kroch & Santorini, cannot be duplicated for Frisian. What they suggest is, that structures such as (12b-c), repeated for convenience, should be treated as lexical compounds of nominalized infinitives:

(12)b.it blommen ferkeapje wollen
        'the flowers sell wanting'
    c. it ferkeapje wollen fan blommen
        'the sell wanting of flowers'

Recall that nominalized infinitives in Frisian are morphologically characterized by the suffix -@*n*. So lexical compounds of nominalized bare infinitives would look like (26):

(26)a. * it blommen ferkeapjen wollen
         'it flowers sell want'
    b.*it ferkeapjen wollen fan blommen
         'it sell want of flowers'

It is clear that nominalized bare infinitive sequences cannot be viewed of as lexical compounds of nominalized infinitives.

    There is another reason why we can not interpret bare infinitives (12) as nominalized lexical compounds. Such compounds have the properties of Frisian nouns as far as theta role and case assigning is concerned, i.e. the assign theta roles to the right and do not assign Case. Therefore the grammaticality of (12b) remains unexplained, under such an analysis.

    Kroch & Santorini (1991) try to explain German counterexamples such as (12b) away by claiming that they are to be derived by morphological incorporation of nonmaximal projections. This attempt is not very convincing to my mind, especially not with respect to Frisian. This alleged process of noun incorporation differs crucially from more generally accepted cases of morphological noun incorporation.

    Dyk (1990) notes that Frisian has structures which should be analyzed as

morphological incorporation of nouns into verbs:

(27) Heit is nei de polder te *bitewjudzjen*
　　　'daddy is to the polder to beet weed'
(28) Buorman *jerappeldolt* al sûnt fan 'e moarn fiif oere ôf
　　　'neigbour potato digs already from this morning five o'clock on'

The following characteristics of this type of noun-verb incorporations are relevant in this context:
❍　　the incorporated noun cannot have any overt complements, or modifiers;
❍　　the noun cannot have a plurality suffix;
❍　　in a negative context, the negation *net* has to be used, instead of the nominal modifier *gjin* (this follows from the first characteristic).
　According to these criteria, nominalized verb clusters accompanied with a direct object do not represent cases of morphological incorporation. Note first that *blommen* in (12b) contains a plurality suffix. Further the object can be modified and/or complemented:

(29)　it reade blommen ferkeapje wollen
　　　'the red flowers sell want'

Finally, the negative nominal determiner *gjin* is possible, compare (25a).[5]

This concludes my nominalization argument in favour of a lexical analysis of the Frisian verbal complex. Let us turn to an additional, more minor, argument now.

3.3. Morphological processes affecting argument structure

An argument for verbal complexes as complex verbs is given by Zubizarreta (1985), based on the idea that base-generated complex verbs undergo morpho-lexical processes. This argument is taken up for Dutch by Coopmans (1985) and Coopmans & Everaert (1988) with respect to causative *laten* 'let'. Here we will apply it to the Frisian counterpart *litte*.
　Litte appears to have passive-like properties:

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[5]. This section draws freely on Visser (1989) and Neeleman (1990). Both observe the incompatibility of Nominalization and a transformational operation V-raising, although they draw different conclusions from this. My analysis applies Neeleman's line of reasoning to Frisian.

(30)a. ik bou it hûs
     'I build the house'
  b.it hûs wurdt (troch mij) boud
     'the house is (by me) built'
  c. hij lit mij it hûs bouwe
     'he lets me the house build'
  d.hij lit it hûs bouwe (troch mij)
     'he lets the house build (by me)'

The claim is that *litte* blocks the syntactic realization of the external argument of the embedded verb.[6] One piece of evidence for this 'passive'-like behavior is that unergative and unaccusative verbs have different properties with respect to embedding under *litte*. Unergative verbs are intransitive verbs with an external argument; unaccusative verbs are intransitive verbs with an internal argument (which can not receive Case from its verb). Assuming that morphological passivization involves verbs with external arguments, we expect passivization of unergative verbs to be possible, as opposed to unaccusative verbs, which lack such arguments:

  (31)   de bern laken
       'the children laughed'
  (32)   der wurdt lake (troch de bern)
       'there is laughed (by the children)'
  (33)   de bern foelen
       'the children fell'
  (34) * der wurdt fallen (troch de bern)
       'there is fallen (by the children)'
  (35) * de bern wurde fallen
       'the children are fallen'

Note that example (35) is out, not for reasons of Case, or theta role assignment, but because passive morphology requires a verb with an external argument (that has to be surpressed).

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[6]. Apparently, *litte* 'let' does not preclude allows for case and theta role assignment to the internal argument of the embedded verb, witness (30d); presumably, this means that in (30d), objective case is assigned to *it hûs* 'the house' by *litte*; *it hûs* receives its theta role from *bouwe*. Note that in (30c) *litte* presumably assigns objective case to *my* 'me'.

That *litte* has passive-like properties is demonstrated by the following sentences:

(36)   hij lit de bern graach laitsje
        'he lets the children gladly laugh'
(37)   hij lit graach laitsje (troch de bern)
        'he lets gladly laugh (by the children)'
(38)   hij lit de bern wol gauris falle
        'he lets the children often fall'
(39) * hij lit wol gauris falle (troch de bern)
        'he lets often fall (by the children)'

These facts follow from the assumption that *litte* blocks the syntactic realization of the external argument of the embedded verb. Note that the grammaticality of (30c) and (36) shows that *litte* does not have this passive-like property in all its occurrences, since the external argument is syntactically realized here.

Following Zubizarreta (1985) I claim that crucial properties of *litte* follow from the assumption that this verb has morpho-syntactic status, in addition to its morpho-phonological character. That is, *litte* not only acts as an morpho-phonologically independent element, but its also involved in morpho-lexical processes that are shared with phonological affixes. In her paper, Zubizarreta discusses the following morpho-lexical processes that are relevant to both causative and perception verbs ('syntactic affixes') and phonological affixes in the Romance languages:

❍ blocking of the syntactic realization of the external argument (a consequence of passive morphology);

❍ adding of an internal argument (a consequence of a specific type of prefixation);

❍ anticausativization: deletion of the agentive external argument of a transitive verb (triggered by a specific overt morpheme (*se/si*);

❍ externalization of an internal argument (by morphemes such as *-ed*, *-able*).

Litte is a word from a morphological point of view, but it behaves also as a morphosyntactic bound morpheme: it blocks the syntactic realization of the external argument as does passive morphology.

Morphological passivization blocks the syntactic realization of an external argument, and consequently only applies to transitive and unergative verbs. Frisian allows for passivization of internal arguments (of transitive verbs) and impersonal passives (of unergative verbs):
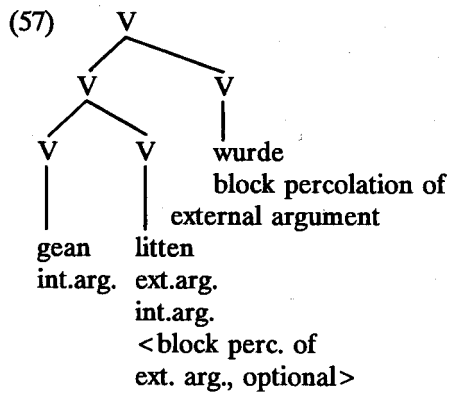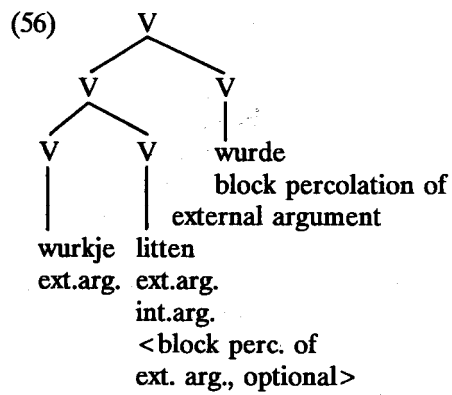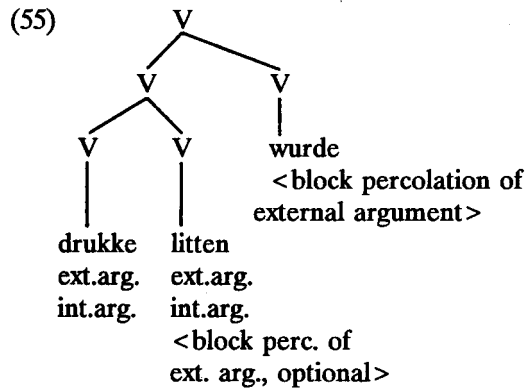
(40)a. Pyt drukt dit boek
        'Pyt prints this book'

    b. dit boek wurdt drukt
       'this book is printed'

(41) a. de bern wurkje wol gauris yn 'e tún
       'the children work often in the garden'

    b. der wurdt wol gauris yn 'e tún wurke
       'there is often in the garden worked'

(42) a. Pyt giet nei hûs ta
       'Pyt goes home'

    b.*der wurdt nei hûs ta gien
       'there is home gone'

A complex verb analysis of *litte* explains in an interesting way the interplay between morphological passivization and structural properties of *litte*.

(43)   hij lit Pyt dit boek drukke
       'he lets Pyt this book print'

(44) * Pyt wurdt dit boek drukke litten
       'Pyt is this book print let'

(45)   hij lit dit boek drukke
       'he lets this book print'

(46)   dit boek wurdt drukke litten
       'this book is print let'

(47)   ik lit de bern wol gauris yn 'e tún wurkje
       'I let the children often in the garden work'

(48) * de bern wurde wol gauris yn 'e tún wurkje litten
       'the children are often in the garden work let'

(49)   ik lit wol gauris yn 'e tún wurkje
       'I let often in the garden work'

(50)   der wurdt wol gauris yn 'e tún wurkje litten
       'there is often in the garden work let'

(51)   ik liet Pyt nei hûs ta gean
       'I let Pyt home go'

(52)   Pyt wurdt nei hûs ta gean litten
       'Pyt is home go let'

(53) * ik liet nei hûs ta gean
       'I let home go'

(54) * der wurdt nei hûs ta gean litten
       'there is home go let'

Under a complex verb analysis, the underlying structures corresponding to (46), (50) and (52), are the following:

(55)

```
              V
          ╱       ╲
        V           V
      ╱   ╲         │
    V       V      wurde
    │       │      <block percolation of
    │       │       external argument>
  drukke   litten
  ext.arg. ext.arg.
  int.arg. int.arg.
           <block perc. of
            ext. arg., optional>
```

(56)

```
            V
         ╱     ╲
       V         V
     ╱   ╲       │
   V       V    wurde
   │       │    block percolation of
   │       │    external argument
 wurkje  litten
 ext.arg. ext.arg.
          int.arg.
          <block perc. of
           ext. arg., optional>
```

(57)

```
            V
         ╱     ╲
       V         V
     ╱   ╲       │
   V       V    wurde
   │       │    block percolation of
   │       │    external argument
  gean    litten
  int.arg. ext.arg.
           int.arg.
           <block perc. of
            ext. arg., optional>
```

Morphological passivization applies straightforwardly: in all three cases, the required external argument, i.e. the external argument of *litte*, is available in lexical structure, and will be surpressed. Note that (55) allows for (46), where the internal argument of *drukke* 'print' is realized in subject position for reasons of Case.[7] Since the internal argument of *drukke* is optional, we can also derive an impersonal passive (58):

(58) der wurdt drukke litten
     'there is print let'

(56) allows for the derivation of (50).[8]

Structure (57) corresponds to a wellformed sentence if the external argument of *litte* is blocked, and the internal arguments are syntactically realized. The latter part is responsible for the ungrammaticality of (54). In this impersonal passive, the (obligatory) internal argument of gean is not expressed. If it is expressed, we get the grammatical (52).

The question is next how to account for the ungrammatical examples of passivization ((44), (48), (54). For this examples, the lexical structures (55)-(57) are also relevant. The feature <block percolation of external argument> of the verb *wurde* 'become' percolates to the top V, and blocks not only the syntactic realization of the external argument of *litte*, but also of the one of *drukke* (in (55)) and of *wurkje* (in (56)), due to the cluster structure.[9] This explains the ungrammaticality of (54) and (58) in which the external arguments are syntactically expressed.

Zubizarreta accounts for similar properties of Italian by assuming that the Italian pendant of *litte* is not lexically specified for these functions, but functions as an indirect trigger of these processes by virtue of conjunctively having an

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[7]. The fact that Dutch does not have examples such as (46) may be related to the IPP-effect, see section 6. The passive morphology, which executes the blocking of the external argument, is missing.

[8]. The corresponding sentence in Dutch is unwellformed:
   (i) * er wordt laten drukken
        'there is let print'
   Passive morphology blocks syntactic realization of the external argument. I would suggest that in Dutch, passive morphology is missing here again due to the IPP-effect (see section 6), hence blocking will not take place.

[9]. Later we will see that we must prevent percolation of this feature to Vs higher up in the cluster; other wise we cannot derive
   (i) omdat er it hûs boud wurden seach
        'because he the house build be saw'
   It is not a head feature, but a rule feature.

external argument in its lexical structure and being the head of the derived, complex verb. She makes use of the following percolation conventions adapted from Lieber:

(59) *Percolation Conventions*
      a. if the head of a word is specified for feature A, then A percolates up to the mother node;
      b. if the sister of the head of a word is specified for feature B and the head is not, then B percolates up to the mothernode (unless the head specifies otherwise).

The external argument of the head takes precedence over the external argument of its sister (due to (59a)). The fate of the external argument of the adjoined verb is determined by the theory of lexical structure (blocking, deletion, or internalization). Assuming a complex verb analysis for Frisian *litte*, and treating *litte* as a trigger for lexical processes we derive the facts concerning the (non-) realization of external and internal arguments discussed above.

The examples (45) and (49) make clear that *litte* not always blocks syntactic realization of the external argument. We could try to tie the optionality of blocking to the structural environment of *litte*. The way Zubizarreta has formulated the percolation conventions ensures that in a complex verb the external argument of the adjoined verb is obligatorily affected. Conversely, if the external argument is syntactically realized, as is the case in (45) and (49), there is no complex verb structure, but the embedded verb has its own projection.

Nevertheless we would like to push here the position that verbal complexes with *litte* are complex verbs in general, for a variety of reasons.

First, it is not so clear why examples such as (44), (50) and (54) are ungrammatical, under a clausal analysis. Ideas of Fabb (1984) might be useful here, but we will loose a unified approach to *litte*-structures.

Second, there are arguments contra such a clausal analysis (see Neeleman (1990)).

Third, there are arguments pro a complex verb analysis. The evidence confirming a complex verb analysis of *litte* holds for *litte*-structures in general.

A first consequence of a complex verb analysis of all *litte*-structures is that percolation convention (59) has to be changed. We must allow for percolation of the external argument of the adjoined verb, even if the head itself has an external argument. Features of (the sister of) the head of a word are percolated upwards, unless specified otherwise by the head. The external argument of the head of a word only takes precedence over that of its sister, if its lexically specified to do so. The optionality of the blocking of external arguments by *litte* now follows from lexical specification.

According to Zubizarreta, Romance perception verbs also belong to the class of syntactic affixes. At first sight, Frisian perception verbs seem to block syntactic realization of the external argument:

(60) a.　hij seach mij it hûs bouwen
'he saw me the house build'
　　b.　hij seach it hûs bouwen
'he saw the house build'
(61) a.　hij hearde de bern beljen
'he heard the children ring'
　　b.　hij hearde beljen
'he heard ring'

Compare these examples with an adjoined unaccusative:

(62) a.　hij seach de bern wol gauris fallen
'he saw the children often fall'
　　b. *hij seach wol gauris fallen
'he saw often fall'

If in (60b), (61b) the external argument of the adjoined verb is blocked from syntactic realization, then it is lexically present and could be made visible by a *troch* 'by' -phrase, or adverbial modification, as can be done in the case of *litte*:

(63) a. *hij seach it hûs troch mij bouwen
'he saw the house by me build'
　　b. *hij seach it hûs sekuer bouwen
'he saw the house carefully build'
(64) a *hij hearde troch de bern beljen
'he heard by the children ring'
　　b. *hij hearde net opsetlik beljen
'he heard not intentionally ring'

The grammaticality contrast between (60b), (61b) and (63a-b), (64a-b) indicates that the external argument of the adjoined verb is not lexically present.

Perception verbs are not specified for blocking of an external argument, but for optional deletion. If the external argument is not deleted, another possibility is that it is prevented from syntactic realization by morphological passivization. That is, one may wonder whether passivization is possible also in the case of perception verbs in adjunction with transitives, unaccusatives, and unergatives:

(65)   dit boek wurdt drukken sjoen
          'this book is print seen'

(66) a.   der wurdt wol gauris yn 'e tún wurkjen sjoen
          'there is often in the garden work seen'

   b. *de bern wurde wol gauris yn 'e tún wurkjen sjoen
          'the children are often in the garden work seen'

(67) a.   Pyt wurdt nei hûs ta gean sjoen
          'Pyt is home go seen'

   b. *der wurdt nei hûs ta gean sjoen
          'there is home go seen'

Given a complex verb analysis, Zubizarreta would expect these judgements due to her percolation conventions. To me, they are a matter of lexical specification.

The following judgements need to be explained:

(68) a.   hij lit it hûs troch mij bouwe
          'he lets the house by me build'

   b. *hij lit it hûs troch mij boud wurde
          'he lets the house by me built be'

(69) a. *hij seach it hûs troch mij bouwen
          'he saw the house by me build'

   b.   hij seach it hûs troch mij boud wurden
          'he saw the house by me built be'

The grammaticality of (69b) shows that the rule feature <blocking of the external argument> does not percolate up to the top node of the cluster.

In (68b), the non-realization of the embedded external argument follows redundantly from both the blocking reading of *litte*, and the passive morphology. This redundancy is absent in (69b), since *sjen* does not induce passivization effects on its adjoined verb. Hence, a Principle of Morphological Nonredundancy, explains the judgement pattern in (68)-(69) (see Zubizarreta (1985: 278)).

4. Morphological selection

The morphology of the verbal complex in Frisian has the following properties. The verbs in the verbal complex can have the following form:

(a) *te*+INF: the stem of a verb preceded by *te*, followed by the suffix [@n] ('long infinitive'):

(70) a.   omdat er in boek skynt te lêzen
      'because he a book seems to read'
   b. *omdat er skynt in boek te lêzen
      'because he seems a book to read'

(b) INF$_e$: the stem of a verb, followed by the suffix [@]:

(71) a.   omdat er de bern in boek lêze lit
      'because he the children a book read lets'
   b. *omdat er de bern lêze in boek lit
      'because he the children read a book lets'

(c) INF$_n$: the stem of a verb, followed by the suffix [@n]:

(72) a.   omdat er de bern in boek lêzen sjocht
      'because he the children a book read sees'
   b. *omdat er de bern lêzen in boek sjocht
      'because he the children read a book sees'

(d) the past participle: compare the form *wold* in (73a-b), which is a past participle;

(73) a.   dat er it famke *helpe wold hie*
      'that he the girl help wanted had'
   b.   dat er it famke *helpe wold hawwe soe*
      'that he the girl help wanted have should'

(e) a finite verb, as witnessed by the examples (70)-(73).

The morphology of the verbal complex shows interesting cooccurrence restrictions. In order to see this, it is necessary to realize that certain verbs are selected for morphological properties of verbs in their domain. The perfective auxiliaries *hawwe* 'have' and *wêze* 'be' select past participle morphology, just like the passive auxiliary *wurde* 'be/become':

(74) a.   dat er *meand* hie
      'that he mowed had'
   b.   dat er *fallen* is
      'that he fallen is'
   c.   dat er *slein* wurdt'
      'that he hit becomes'

There is a set of verbs that select an INF$_e$: a bare infinitival form with a suffix -@ (written *e*), among others *kinne* 'be able', *meie* 'may', *wolle* 'want', *sille* 'shall', *litte* 'let':

(75) a. dat er *meane* kin/mei/wol/sil
      'that he mow can/may/wants/shall'
   b. dat er de bern *rinne* lit
      'that he the children walk lets'

There is another set of verbs that select an INF$_n$: a bare infinitival form, but instead of -@ it is formed with the suffix -@*n* (written as *en*): among others *sjen* 'see', *hearre* 'hear', *gean* 'go', and *bliuwe* 'remain':

(76) a. dat er de bern *rinnen* seach
      'that he the children walk saw'
   b. dat er *sitten* bliuwt
      'that he sit remains'

The nonfinite form of a verb is systematically dependent on another verb in the verbal complex. In example (73b), the verb *soe* 'should' determines the form *hawwe* 'have'; *hawwe* the form *wold* 'wanted'; and *wold* the form *sjen* 'see'.

(73) b. dat er it famke *helpe wold hawwe soe*
      'that he the girl help wanted have should'

The verb that determines the form, the *governor*, is immediately to the right of the verb whose form is determined, the *governee*.

The morphology of the verbal complex shows interesting local concurrence restrictions. Morphological selection is locally restricted in general. Assuming that it depends on sisterhood, we can maintain a restrictive theory on morphological selection within a framework that assumes that verbal complexes are analyzed lexically.

5. Word order of the verbal complex: te+V extraposition

As to the positional characteristics of the verbal complex we note that the finite verb is always in the final position in the complex. In this respect Frisian differs from Dutch, Dutch having (limited) inversion possibilities. Compare the following Dutch-Frisian sentence pairs:

(74)a.   dat er meand hie
     b. dat hij gemaaid had
(75)a. *dat er hie meand
     b. dat hij had gemaaid
(76)a.   dat er fallen is
     b. dat hij gevallen is
(77)a. *dat er is fallen
     b. dat hij is gevallen
(78)a.   dat er slein wurdt
     b. dat hij geslagen wordt
(79)a. *dat er wurdt slein
     b. dat hij wordt geslagen
(80)a.   dat er de bern rinne lit
     b. dat hij de kinderen lopen laat
(81)a. *dat er de bern lit rinne
     b. dat hij de kinderen laat lopen
(82)a.   dat er de bern rinnen seach
     b. dat hij de kinderen lopen zag
(83)a. *dat er de bern seach rinnen
     b. dat hij de kinderen zag lopen

It is clear that the order of the verbal complex is fixed in Frisian. This is also true with respect to verbal complexes consisting of more than two verbs. In that case the Frisian verbal complex is the mirror image of the Dutch one, and corresponds, for example, with the verbal complex of German, be it that Frisian lacks the inversion possibilities of German:

(84)a.   dat er it famke sjongen hearre wold hawwe soe
     b. daß er das Mädchen singen hören gewollt haben sollte
(85)a. *dat er it famke soe sjongen hearre wold hawwe
     b. daß er das Mädchen sollte singen hören gewollt haben
(86)a. *dat er it famke soe hawwe sjongen hearre wold
     b. daß er das Mädchen sollte haben singen hören wollen
(87)a. *dat er it famke soe hawwe wold sjongen hearre
     b. daß er das Mädchen sollte haben wollen singen hören

The observational statement that the order of the Frisian verbal complex is the mirror image of the order of the Dutch verbal complex has to be modified

slightly, if we take *te*+INFs into account.[10] As noted, there is a set of verbs that select a *te*+INF that is part of a verbal complex. The verbs *hoege*, *skine*, and *sitte* belong to this set. The distribution of Frisian *te*+INFs differs from that of *te*-less ('bare') infinitives. We compare Frisian examples with the corresponding Dutch ones:

(88)a. dat er dat net dwaan hoecht te kinnen
     b. * dat hij dat niet doen hoeft te kunnen
        'that he that not do needs to be able'
(89)a. dat er dat net dwaan skynt te kinnen
     b. * dat hij dat niet doen schijnt te kunnen
        'that he that not do seems to be able'
(90)a. * dat er dat net dwaan te kinnen hoecht
     b. dat hij dat niet hoeft te kunnen doen
        'that he that not needs to be able do'
(91)a. * dat er dat net dwaan te kinnen skynt
     b. dat hij dat niet schijnt te kunnen doen
        'that he that not seems to be able do'

It turns out that Frisian verbal complexes with *te*+INF are not the mirror image of their Dutch counterparts, compare (88a) and (89a) with (88b) and (89b). These examples make clear that Frisian *te*+INF has to be in the final position of the verbal complex. This fact is a systematic exception to the statement that the governed verb precedes the governing verb in Frisian. I assume the final position of *te*+INF in the verbal complex to be derived by an extraposition rule. We refer to this proces as *te*+V-Extraposition. I assume that this proces is accounted for by a transformation that (Chomsky-) adjoins te+INF to the right periphery of a V-domain, in line with the approach defended in Baltin (1982).

The following examples illustrate some additional properties of *te*+V-extraposition:

(92)a. *dat er graach boeken [te lêzen besykje wol]
        'that he gladly books to read try wants]
     b. dat er graach boeken [e$_i$ besykje wol] [te lêzen]$_i$
        'that he gladly books *ec* try wants to read'

Te+V-Extraposition is obligatory, compare the ungrammaticality of (92a).

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[10]. See for discussion de Haan (1987) (based on Overdiep (1937)).

Because of its nonlocal character, the distribution of *te*+INF cannot be accounted for lexically, compare (92b).

The following variant of (88a) shows that *te*+V-Extraposition does not allow for pied piping:

(94)* dat er dat net [e$_j$ hoecht] [dwaan te kinnen]$_j$
      'that he that not *ec* needs do to be able'

That pied piping is out, can also be seen in the following, slightly more complicated, examples:

(95)a. *dat er my graach [laitsjen hearre te wollen skynt]
           'that he me gladly laugh hear to want seems'
     b. dat er my graach [laitsjen hearre e$_i$ skynt] [te wollen]$_i$
           'that he me gladly laugh hear *ec* seems to want'
     c. *dat er my graach [e$_j$ skynt] [laitsjen hearre te wollen]$_j$
           'that he me gladly *ec* seems laugh hear to want'

These facts follow if we assume a left branching structure for the verbal complex. Consider for example the structure corresponding to (95a):

(96)
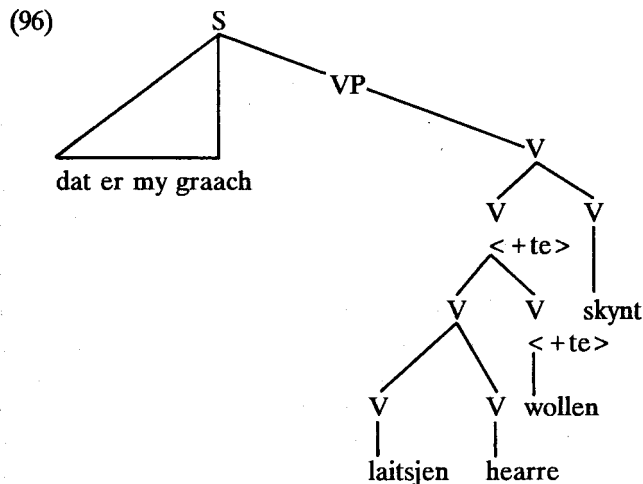
Note that *skine* 'seem' selects for a *te*+INF, a morphological property that percolates down to the (right hand) head *wolle* 'want'. This structure predicts correctly extraposition of the *te*+INF itself, *te wollen*. This structure does not allow for pied piping, nor for extraposition of *te*+INF together with *hearre*:

(97)* dat er my graach [laitsjen e_k skynt] [hearre te wollen]_k
      'that he me gladly laugh *ec* seems hear to want'

The string *hearre te wollen* is not a constituent in (107), let alone a constituent of the *te*+INF-type.

    This approach makes the following predictions with respect to verbal clusters with more than one *te*+INF:

(98)a. *omdat er boeken te lêzen te begjinnen skynt
        'because he books to read to begin seems'
   b. *omdat er boeken te lêzen skynt te begjinnen
        'because he books to read seems to begin'
   c. *omdat er boeken te begjinnen skynt te lêzen
        'because he books to begin seems to read'
   d. omdat er boeken skynt te begjinnen te lêzen
        'because he books seems to begin to read'
   e. *omdat er boeken skynt te lêzen te begjinnen
        'because he books seems to read to begin'

(99)a. *omdat er graach boeken te lêzen te besykjen skynt
        'because he gladly books to read to try seems'
   b. *omdat er graach boeken te lêzen skynt te besykjen
        'because he gladly books to read seems to try'
   c. *omdat er graach boeken te besykjen skynt te lêzen
        'because he gladly books to try seems to read'
   d. omdat er graach boeken skynt te besykjen te lêzen
        'because he gladly books seems to try to read'
   e. *omdat er graach boeken skynt te lêzen te besykjen
        'because he gladly books seems to read to try'

Note that this extraposition rule looks a lot like the rule that is responsible for the third construction in Frisian, see de Haan (1992). In fact one of my research goals has been to see whether both rules could be collapsed. It is not immediately evident that this can be done, since as noted in de Haan (1992), *te*+V-Extraposition in the third construction is subject to pied piping, whereas this is not the case with the rule that operates in the verbal complex. The question whether the two rules could be seen as one, remains a matter for future research.

6. The Infinitivus-pro-Participio Effect

Verbal complexes in Frisian and Dutch not only differ with respect to distributional properties -the order of the Frisian verbal complex being roughly the mirror image of the Dutch one- but also in the absence versus presence of the socalled *Infinitivus-Pro-Participio* effect (IPP-effect). In Frisian and Dutch, a perfective auxiliary selects generally a verb with past participle morphology. But if in Dutch this selected verb acts as a (morphological) governor in a verbal complex, then the expected past participle is 'replaced' with infinitival morphology:

(100) a.   dat ik hem heb gezien
            'that I him have seen'
      b. * dat ik hem heb zien
            'that I him have see'
(101) a. * dat ik hem heb gezien lopen
            'that I him have seen walk'
      b.   dat ik hem heb zien lopen
            'that I him have see walk'
(102) a.   dat ik hem wil hebben gezien
            'that I him want have seen'
      b. * dat ik hem wil hebben zien
            'that I him want have see'

The difference between (101) and (102) is that the verb *zien* 'see' that is selected by the perfective auxiliary is a governor in (101), but not in (102), hence replacement of the past participle morphology with infinitival morphology in the former case but not in the latter. Compare the Dutch examples (100)-(102) with their Frisian counterparts:

(103) a.   dat ik him sjoen ha
            'that I him have seen'
      b. * dat ik him sjen ha
            'that I him have see'
(104) a.   dat ik him rinnen sjoen ha
            'that I him walk seen have'
      b. * dat ik him rinnen sjen ha
            'that I him walk see have'
(105) a.   dat ik him sjoen ha wol
            'that I him seen have want'

   b. * dat ik him sjen ha wol
     'that I him see have want'

The contrast is clear: the Frisian example (104) shows no IPP-effect.

 It has been argued[11] that the IPP-effect is a consequence of verb clustering: for some reason, past participle formation can not take place, if it has to penetrate into a verb cluster.
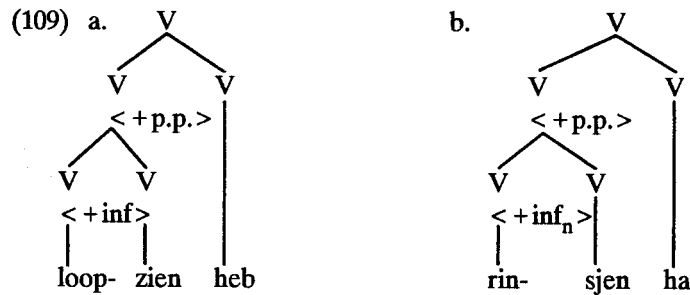
(106) stelen heeft ze nooit gewild/ *willen
   'steal has she never wanted/want'
(107) werken heeft ze nooit gehoeven/ *hoeven
   'work has she never needed/need'
(108) lopen heb ik hem nooit gezien/*zien
   'walk have I him never seen/see'

If such an approach is correct, it has to be claimed that the verbal complex involves no verb clustering in Frisian, in order to explain the absence of the IPP-effect. And this is indeed what we find in the literature. Of course this approach is incompatible with our argument that the verbal complex is a (base generated) complex verb in Frisian. Verb clustering may be necessary for the IPP-effect to occur, but it is not sufficient.

 An important difference between the Frisian and Dutch verbal complex is the order of the verbs. We assume here that both grammars base generate verbal complexes as complex verbs in the same way. The grammar of Frisian contains *te*+V-Extraposition, operating on the verbal complex, whereas a string changing local V-inversion in the left branch of the grammar of Dutch accounts for the mirror image order, as compared to Frisian. This implies that the verbal complex remains left branching in Frisian (with the exception of *te*+INF). The verbal complex in Dutch becomes right branching at the PF-level. If we assume that the spelling out of the verbal morphology takes place at the PF-level, we can take advantage of this difference in branching direction in order to explain the (non-) occurrence of the IPP-effect. In doing so, we follow a proposal made by den Dikken (1989).

 The s-structure of the Dutch and Frisian verbal complex of (101) and (104) looks roughly like (109a) and (019b), respectively:

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[11]. To the best of my knowledge, for the first time in Nieuwenhuijsen (1974).

(109) a.
```
           V
          / \
         V   V
      <+p.p.>
        / \    |
       V   V
    <+inf>
      |   |    |
    loop- zien heb
```

b.
```
            V
           / \
          V   V
       <+p.p.>
         / \    |
        V   V
     <+inf_n>
       |   |    |
      rin- sjen ha
```

(109b) also represents the Frisian complex verb at PF; according to Williams' Right Hand Head Rule, the feature <+p.p.> percolates down on the verb *sjen* 'see', and nothing blocks spelling out of past participle morphology. Due to local V-inversion in Dutch, the PF-representation of (109a) is (110):

(110)
```
      V
     / \
    V   V
    |  <+p.p.>
    |    / \
    |   V   V
    |   |  <+inf>
    |   |   |
   heb zien loop
```
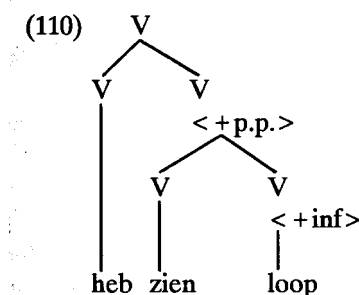
In this structure, the Right Hand Head Rule forces percolation of <+p.p.> down on the V *loop* 'walk', but since this V already bears an inflectional feature, it is not a correct landing site for the feature <+p.p.>. In any case, this feature can not land on the V *sjen* 'see'. There appears to be a default mechanism at work, that assign automatically infinitival inflection to an uninflected verb. So if the <+p.p.> selection requirement of a verb is satisfied by a complex verb, and if the target verb is on the left branch of this complex verb, then we will get the IPP-effect. It is important to stress that this approach is compatible with a complex verb analysis of the verbal complex in Frisian. This implies that the IPP-effect cannot be used as a diagnosis for verbal clustering.

In some Dutch dialects, the local V-inversion is optional in connection with some verbs. We expect a kind of mixture between the Frisian and (standard) Dutch possibilities:

(111) a. dat hij vissen geweest is
      'that he fish been is'
      that he has been fishing
    b. dat hij is wezen vissen
      'that he is be fish'
(112) a. dat hij zitten gebleven is
      'that he sit remained is'
    b. dat hij is blijven zitten
      'that he is remain sit'

Dutch West Frisian has both options systematically:[12]

(113) a. omdat ik komme kennen had/weune moeten had/vertelle leiten hew/begroipe
      willen hew/koupe hoeven hew/zitten bleven ben
      'because I come been able had/live had to had/tell let have/understand wanted
      have/buy needed have/sit remained am'
    b. omdat ik dat hew voele ankommen/ze hew hore skreeuwen/jou hew helpe
      poten
      'because I that have feel come/them have hear yell/you have help plant'

Hoeksema (1988) tries to relate the IPP-effect to the complexity of past participle derivational morphology, Frisian having a prefix-less past participle as opposed to the *ge*-forms of Dutch. His observation that languages with *ge*-less past participles do not have the IPP-effect is falsified by Dutch West Frisian, which has both *ge*-less past participles, and the IPP-effect.

Rijksuniversiteit Groningen
Frysk Ynstitút

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[12]. Taken from de Schutter (1974); the Dutch West Frisian data are from Taanman (1991).

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