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RIJKSUNIVERSITEIT GRONINGEN

NOUN INCORPORATION IN FRISIAN

Proefschrift

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door
Siebren Dijk
geboren op 13 januari 1953
te Heerenveen
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Acknowledgements

The origin of this work can be traced back to 1988. That was the year that Mark C. Baker's seminal work on incorporation appeared. It was also in 1988 that Germen de Haan and I edited a Festschrift on the occasion of the fiftieth anniversary of the Fryske Akademy. We cooperated very pleasantly in the preparation of the book, and when Germen asked me whether the time had come to write a doctoral dissertation, I hesitantly agreed. I hesitated, since all my office time at the Fryske Akademy was reserved for my work as a lexicographer for the Wurdboek fan de Fryske Taal. This meant that the work for the dissertation had to be carried out in the evening, which did not give a clear prospect that the job would ever be finished. Nevertheless, I agreed, thinking that one never can tell, and that the investment could produce a paper at the least. We were still in 1988, one year after Ineke Schuurman published an article about noun incorporation in the neighbouring Groningen dialect, which made me realize that a comparable phenomenon existed in Frisian. It had not been dealt with extensively in Frisian grammar, but it seemed to have some promising features, so this could be a fruitful subject, the more so as it looked that it had a serious syntactic impact, on which I hoped Germen, as a syntactical specialist, could give me some advice if I needed it. That in the course of time it appeared that the subject was less syntactic than I first thought it was is one of those unexpected things which keeps scientific inquiry worth doing.

The work on the project got an important impetus when I could join the department for linguistic inquiry at the Fryske Akademy in 1990 for two days a week. This gave me the opportunity to speed up; I am sure that without it the book would never have been finished. Nevertheless, I can not recommend that anybody become engaged for such a long time on one and the same subject. At least I myself am glad that I can now say farewell to Frisian noun incorporation and can have the mind inspired by other things.

A work such as this can not be accomplished without the help and support, if only moral, of a great many people. I want to thank them all, and mention here only those people who had a very direct influence on the realization of this book. First of all, there is my promotor Germen de Haan, who challenged me in the beginning and has remained a great stimulator ever since. Although there has always been a geographical distance between my working place and his, first in Utrecht, later in Groningen, he was always there when I needed him. He gave me the freedom to do things my way, and above all, he gave me the confidence that I could do things in any case.

For a long time, this project has been primarily an affair for two persons,
but in the end several others entered the picture who made invaluable contributions. So, reversing chronology, I am grateful to Trudy Childs for preparing the manuscript, and to Patrick McGivern, who has tried to transform my broken English into a more acceptable variety. Next, I want to thank the professors Eric Reuland, Jan Koster and Geert Booij for their work as members of my thesis committee. The latter deserves a special mention, since he was willing to read an earlier draft. The work benefitted considerably from his profound knowledge of morphology and his particular talent to discover unclear formulations. The earlier draft was also commented on by Peter Ackema and Jarich Hoekstra. I am very grateful for their functioning as devil's advocate. Their criticism uncovered some puzzles I had not realized myself before. Coping with these made the last stage of the project harder and longer to complete I thought at first.

Mentioning Jarich Hoekstra immediately means mentioning Willem Visser. For years we have formed a grammatical troika within the Fryske Akademy, and it is a funny coincidence that we finished our dissertations in one and the same year. Although it is claimed that by receiving a Ph.D. one has reached a certain scientific maturity, I hope that we may maintain our youthful enthousiasm for the study of Frisian grammar, and that we can keep stimulating each other in our future work.
1 Introduction

This book is about noun incorporation in Frisian. What is noun incorporation? Here is a selection from the literature of what could be called "definitions":

"The combination into one word of the noun object and the verb functioning as the predicate of the sentence" (Kroeber 1909, 254).
"The characteristic fact about the process is that certain syntactic relations are expressed by what in varying degree may be called composition or derivation" (Sapir 1911, 282).
"In this construction (...) a N stem is compounded with a V stem to yield a larger, derived V stem (...). Interestingly, all languages which exhibit such morphological structures also have syntactic paraphrases" (Mithun 1984, 847-8).
"A process (...) in which an argument such as a direct object can be fused with the verb to form a single morphological complex" (Spencer 1991, 255).
"The (...) combination of a Noun with a Verb of which it is an argument within a single word" (Anderson 1992, 23).
"The process by which the head noun complement of the verb (usually a 'direct object' or unaccusative 'subject' (...)) is realized as a constituent of the complex verb" (Miller 1993, 97).

From this compilation two elements can be distilled that seem essential. One is that a noun and a verb have been fused to form one complex verb, let us say of the format \([NV]_v\). The other is that a parallel syntactic construction exists in which this noun is the head of an NP that figures as an argument of the verb. I will take this neutral or minimal conception of noun incorporation as a point of departure. It should be mentioned, however, that Mohanan (1995) requires an additional condition for a construction to be called noun incorporation, namely that the incorporated noun is "still retaining its syntactic status" (p. 75). I propose to let this point be a subject worthy of investigation in its own right and to stick to the traditional, broad concept of noun incorporation, which leaves room for varying manifestations of the phenomenon. As we will see in section 2.6, it is indeed the case that noun incorporation is not a unitary process by itself.

Let me illustrate the phenomenon by giving an example from Onondaga, an indigenous American language spoken in the state of New York. In (1)a we have a sentence with an ordinary direct object; in (1)b the head noun of the
object is incorporated:

(1)  a. wa’hahninu’ ne’ oyekwa’
     TNS.3sg.3N.buy.ASP ART 3N.tobacco.NM
     ’He bought the tobacco’
 b. wa’hayekahninu’n’
     TNS.3sg.3N.tobacco.buy.ASP
     ’He bought tobacco’

(from Rosen 1989, 295)

The most salient difference between these uses is word order. In (1)a the object is to the right of the verb, where it is to the left when incorporated. In the latter case, verb and object are not separated by affixes – the noun has no affixes of its own any longer – and the article is also missing. So, the noun simply shows up in its bare form. Furthermore, from the translation it can also be deduced that incorporation has an effect on meaning.

These features can also be observed in the following example from Chukchee, a language spoken in north-eastern Siberia:

(2)  a. Morganan mat-re-mne-ŋanet walat
     we-ERG 1pl.SUBJ-FUT-sharpen-3pl.OBJ knives
     ’We will sharpen our knives’
 b. Muri mät-ra-wala-nma-g’a
     We-ABS 1pl.SUBJ-FUT-knife-sharpen-1pl.SUBJ
     ’We will do some knife-sharpening’

(from Spencer 1991, 255)

In addition, one can observe in (2)b that the verb root (and also the future prefix) has undergone vowel harmony as a result of the incorporation of the root wala-. Furthermore, incorporation results in intransitivization, which has its effects on the agreement affixes on the verb and the case of the subject, which turns from ergative in the transitive sentence to absolutive in the case of incorporation.

Although the language does not possess such a rich inflectional system as Chukchee, the phenomenon of noun incorporation can also be observed in

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1 Here, and later on, within the limits of what is typographically feasible, I take over examples from foreign languages just as they were found in the literature, including glosses, abbreviations and translations, without further comment.
Frisian. To remain in the same domain as the Cukchee example, consider this pair of sentences:\(^2\)

\[\begin{align*}
(3) & \quad \text{a. Wy wolle de messen slypje} \\
& \quad \text{We want the knives sharpen} \\
& \quad \text{'We want to sharpen the knives'} \\
& \quad \text{b. Wy wolle messeslypje} \\
& \quad \text{We want knife-sharpen} \\
& \quad \text{'We want to sharpen knives'}
\end{align*}\]

When we compare these sentences,\(^3\) we see that in the spelling of \((3)\)b the object is concatenated to the verb, without a space separating the two. This reflects the standard feature of Frisian orthography to write compounds as one word. This, of course, is insufficient to conclude that the object makes up one lexical unit with the verb here. But there are more serious differences to be observed. In \((3)\)b the article \textit{de} is missing, which might be an indication that the object noun is no longer part of a phrasal NP. Another difference can be found in the translation, which is a reflection of a change in meaning. This issue will be taken up extensively in the next chapter, section 2.7.

Most important, however, is the form of the object in \((3)\)b: \textit{messe} \([\text{mes}]\). This form is different from both the singular, which is \textit{mes} \([\text{mes}]\), or in northern and western dialects with a long vowel, spelled \textit{més} \([\text{me:s}]\), and from the plural, which is always \textit{messen} \([\text{mesan}]\), the second syllable often syllabified to \([\text{mesan}]\). Significantly, the form \textit{messe} only occurs in compounds, for instance in \textit{messebak} (‘knife-tray’) or \textit{messeheld} (‘knife-hero’, i.e. knife fighter). Note further that for those dialects which have a long vowel in the singular, this segment must have undergone shortening to produce a short vowel in the surface (Tiersma 1979, 69-97; idem 1985, 18-20). Shortening

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\(^2\) In this book I intend to keep glosses as simple as possible. Incorporation is indicated by a hyphen between the incorporated noun and the verb. The glosses may be followed by a translation in English. Due to the indeterminacy of the cardinality of the incorporated noun, it is often hard to give an exact translation. I had to decide for only one of the various possibilities. In many cases this will be a bare plural (Ns), but that is not to say that a singular translation (\textit{a N}, or \textit{the N}), is then excluded, and vice versa. In those cases where the meaning is self-evident, I sometimes refrain from giving a translation.

\(^3\) Funny enough, the first also has an idiomatic reading, where the idiom \textit{de messen slypje} means something like 'prepare oneself for a fight or struggle'. With incorporation, only the literal interpretation is retained. This may be due to the general property of frozenness of idioms (cf. Fraser 1970).
may be involved in the derivation of plurals, diminutives and compounds, but it has never been reported to work across the boundaries of words.

That the form *messe* can not occur on its own can best be shown when we strand the object in sentences with Verb Second. Frisian is, with its West Germanic relatives Dutch and German, an SOV language, thus having the object canonically in a position to the left of the verb.\(^4\) This can already be seen in (3)a, where the main verb *slypje* is to the right of the object *de messen*. The order also shows up in embedded sentences:

(4) Hja sizzie dat wy [de messen]\_NP [slypje]\_V

They say that we the knives sharpen

'They say that we sharpen the knives'

The order is reversed in root sentences, where the verb is supposed to move to the head of the CP:

(5) a. Wy [slypje], de messen t_\_i

We sharpen the knives

b. * Wy de messen slypje

We the knives sharpen

With the object incorporated, this pattern is reversed:

(6) a. * Wy [slypje], messe t_\_i

b. Wy [messeslypje], t_\_i

Example (6)a shows that the form *messe* can not be stranded. Hence it may be concluded that it does not constitute a syntactic phrase by itself, in contrast to the form *de messen* in (5)a. Example (6)b shows, in addition, that *messe* must have been moved along with the verb. Since only a \(V_0\) may be fronted, it follows that it must be part of the (now complex) verb. We thus conclude that the structure of this verb must be something like [[messe]\_N[sllypje]\_V].

From the account above it can be distilled that there are a few good reasons which point at the existence of one complex NV verb in Frisian. But of course, *messeslypje* is not the only example. A search in the comprehensive dictionary *Wurdoek fan de Friske Taaal* (WFT) reveals hundreds and

\(^4\) Here, and further on, I follow the standard GB assumptions about the word order in West Germanic (see Koster 1975). Within the recently developed Minimalist (Chomsky 1993) and Kaynesian (Kayne 1994) framework proposals have been made (e.g. Zwart 1993) that opt for an SVO underlying order. As far as I can see, this has no consequences for the point at hand.
Introduction

hundreds of attested cases, in any case so many that at a certain point I stopped registering them. And the list could easily be enlarged by examples not attested in a dictionary. Although it is not true that every verb can incorporate its direct object – restrictions are discussed in Chapter 4 – it can surely be contended that noun incorporation is a productive process in Frisian. In section 2.3 several more tests will be adduced which only strengthen my claim that such formations have the properties of words.

Let us therefore assume for the moment that noun incorporation indeed exists in the language. With that feature, Frisian is not unique among the world's languages, although the examples from Onondaga and Chukchee suggest that cognates must be sought far from home. In general, about many of the indigenous languages of the Americas, Polynesia and Australia it has been reported that the phenomenon exists there as well; see Spencer (1991, 471, note 6) for more details. What these languages have in common is that, at least from a Western perspective, they are generally considered to be "exotic". This could be the reason that noun incorporation has not gained very much attention in linguistic theory. Only in the eighties did this situation change, especially since publications by Sadock (1980; 1985; 1986), Mithun (1984; 1986) and presumably foremost Baker (1988a). One consequence of the neglect may have been that some have tried to exclude the possibility of NV compounding in principle. Among them are Evers (1984), Sproat (1984, 224), Fanselow (1988, 111) and Boase-Beier (1987, 75). As the facts clearly point in an opposite direction, I will not comment on these proposals.

This book is about noun incorporation in Frisian. But what is exactly meant by "Frisian"? Frisian is a West Germanic language spoken in the province of Fryslân (Friesland), in the north of the Netherlands, where it is the mother-tongue of more than 300,000 people, the present author being one of them. Nowadays, virtually all speakers are bilingual in that they are also proficient in Dutch. The Dutch province of Fryslân is not the only region where Frisian can be found. In medieval times, the Frisian-speaking area stretched along a strip of North Sea coast all up and even across the river Weser in northern Germany, and along the west coast of Schleswig-Holstein, north of river Eider, which had also been settled by Frisians in the course of the Middle Ages. Although there the Frisian speaking area has been considerably reduced, some 10,000 speakers still use one of the many dialects of North Frisian. The present-day situation in what is traditionally called East Frisian, situated between the rivers Lauwers and Weser, is even far worse. Almost

5 In fact, even our example messeslypje is not, although its parallel form messlypje can indeed be found in the WFT. The difference between such varieties will be dealt with in section 2.5.
everywhere the Old Frisian language has been replaced by a Low Saxon dialect, or by the standard languages Dutch (in the Dutch province of Groningen) and German (in Ost-Friesland). Only one tiny little language island is left nowadays. It is Saterland, south-west of the city of Oldenburg, where in three villages some 1000 people still speak a Frisian dialect. Along with the other areas where Frisian is still alive it can be found on the following map:

We thus see that the heart of the Frisian-speaking area, at least from a quantitative point of view, now lies in the west. It is this West Frisian variety which is focused upon in this study; the dialects of East and North Frisian will only be touched on in Chapter 5. Until then, for reasons of efficiency, I will reserve the term "Frisian" exclusively for the language spoken west of the river Lauwers. For this area I have no indications that it exhibits any dialectical differences with respect to the phenomenon of noun incorporation, so I refrained from undertaking time-consuming dialectical investigations. My own native-speaker intuitions will be the main source for the data; in some places these will be complemented by citations from written publications.6

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6 Information on these works is listed in a separate bibliography References to Frisian texts.
This book is about noun incorporation in Frisian. This means that we only pay attention to the incorporation of nouns. In the literature, instances of incorporation of other categories, such as prepositions, verbs, adjectives or complementizers, are sometimes mentioned (cf. Baker 1988a). When we take te-infinitives as a typical context for incorporation, it could be inferred from examples like the following that Frisian also shows incorporation of adjectives or prepositions:

(7) Hy komt te tsjokiten
    He comes to fat-eat
    'He comes to gorge himself'
(8) Hy helpt te ynplakken
    He helps to in-stick
    'He helps to stick (photos in an album)'

Since this work deliberately restricts itself to noun incorporation, I will have nothing to say about these other categories. But also within the category of the noun some further restrictions and clarifications should be made, in that there can be found three other types of combinations between a noun and a verb which I would like to exclude from treatment, since these have properties that deviate from those of standard Frisian noun incorporation. Nevertheless, the first type has – somewhat unhappily – been dubbed "noun incorporation" indeed, in an article by Wegge-laar (1986). He mentions that it does not exist in English and German, but that it can be found in Dutch and Frisian, without giving evidence for the latter, however. Therefore, let us give some Frisian examples:

(9) skodholje (‘shake-head’, i.e. shake one's head)
    knarseltoskje (‘grind-thooth’, i.e. grind one's teeth)
    stoareagje (‘stare-eye’, i.e. stare)
    lühkearje ('pull-ear', i.e. move one's ear(s) (by nervous, angry horses))
    giselseurtsje (‘swing-tail’, i.e. swing with the tail)
    stampfuotsje ('stamp-foot, i.e. stamp one's feet)
    pülemülje ('bulge-mouth', i.e. murmur)
    hükkearzje ('squat-ass', i.e. sit on one's heels)
    skoksouderje ('shake-shoulder', i.e. shrug one's shoulders)
    sleepsoalje ('drag-sole', i.e. shuffle)

J. Hoekstra (1993) mentions a few differences between this type and standard Frisian noun incorporation. The most striking one is the opposite order of the constituents, as the left-hand member is not nominal but verbal. Weggelaar
counts some 25 members for Dutch, and according to J. Hoekstra (personal communication), the amount in Frisian will not deviate dramatically, although it is surely not the case that all Frisian examples could be translated literally into Dutch, and vice versa. The category does not seem productive, although Weggelaar and J.W. de Vries (1975, 107-108) did find some experimental attempts in Dutch literary sources. A severe restriction is that the noun is always a part of the body. It is mostly interpreted as an Instrument, not as a direct object, where the constituents are the opposite in the case of noun incorporation. Weggelaar (1986, 303) points at a further semantic peculiarity: the verbs refer to "automatic or inpremediated acts". This is indeed different from standard Frisian noun incorporation, which has as one of its important features that the action is under full control of the Agent. And to mention a last curious property of the type at hand: its members show elements of left-headedness, since the (verbal) category of the complex word is the same as the left-hand member, which, as J.W. de Vries (1975, 104) observed, is reflected in the semantics, since for instance *stamfuotsje* ('stamp-foot') is a particular way of *stampe* ('stamp'). This last point again differs from cases of noun incorporation, which undoubtedly have their head at the right side. Hence, I propose to put aside cases such as (9) from our account of Frisian noun incorporation.

Another type of verbal combination with a noun is exemplified by the verbs in (10):

(10) dielnimme  ('part-take', i.e. participate)  
rjochtsprekke  ('law-speak', i.e. administer justice)  
stânhâlde  ('state-hold', i.e. hold out, persist)  
tanksizzie  ('thank-say', i.e. express one's gratitudes)  
pleatshawwe  ('place-have', i.e. take place)

In contrast to the foregoing type, these verbs have the "right" order noun-verb. What is crucial, however, is the stranding of the nominal part in Verb Second contexts:

(11) a. ... dat de bern oan 'e optocht dielnimme  
    ... that the children in the parade part-take  
    '... that the children participate in the parade'  

b. De bern [nimme] oan 'e optocht diel t,  
   The children take in the parade part

For this feature, compare (11)b to (6)b, where the incorporated noun is fronted along with the verb. In this respect, the type at hand acts in a similar way as particle verbs in Dutch, German, and also Frisian; for a recent treatment
see for instance Neeleman (1994). A further difference with standard noun incorporation is that the type under discussion is not productive. As (10) shows, it also suffers from semantic idiomatization. Moreover, these verbs lack syntactic counterparts with the noun acting as the head of an NP:

(12)  * [de stân\textsubscript{NP} hâlde
* [de pleats\textsubscript{NP} hawwe

Therefore, it may be clear that this type is really different from standard noun incorporation.

There is a third type I would like to exclude from treatment, although superficially it resembles noun incorporation very much: not only does it bear a noun at the left side, for instance in \textit{ierdkarkje} ('earth-chart'), but the whole complex verb is also moved under Verb Second:

(13) a. ... dat de boeren de hiele dei troch [ierdkarkje],
    ... that the farmers the whole day through earth-chart
    '... that the whole day through the farmers are carrying mud or dung
    in a three-wheeled cart'
    b. De boeren [ierdkarkje], de hiele dei troch t

Some other examples of this type are:

(14) terpmodderje ('terp-mud', i.e. enrich the soil with earth dug out
    off the artificial hills where the ancestors of
    present-day Frisians tried to keep their feet dry
    in times of extremely high water)
skimerjûnje ('twilight-evening', i.e. sit in the twilight)
toskedokterje ('tooth-doctor', i.e. pay one or more visits to a
    dentist)
knibblebanje ('knee-tape', i.e. put a tape around the knees of a
    cow)
boerefamje ('farmer-maid', i.e. do the work of a farm maid)
fuormanje ('feed-man', i.e. have the job of a \textit{fuorman}, a
    wagoner)

Despite its superficial similarity, of the three types to be excluded this one is in fact the most remote from noun incorporation. The point is that these combinations do not have a verb as their right-hand member. An indication can be distilled from \textit{knibblebanje} and \textit{fuormanje}, as verbs such as \textit{banje} and \textit{manje} can not be found in dictionaries. And where the right-hand members have been attested as verbs, for instance \textit{jûnje} or \textit{dokterje}, the left-hand noun can
be interpreted as an adjunct at most, a relationship which is not found in cases of real noun incorporation. Actually, something completely different is going on in the verbs of (14), which is already indicated by the given translations. When we analyze these examples as conversions, an operation quite common in Frisian morphology, then everything falls into the right place. The underlying compound, then, is not verbal, but nominal, and the structure to be assigned to this type is not incorporational [NV], but rather [[NN]v]. Therefore, the interpretation of for example boerefamje is not so much 'do the work of a faam ('maid') with respect to boeren ('farmers')', but rather 'do the work of a boerefaam'.

This does not exclude, however, that there may be examples which can be interpreted as being ambiguous between incorporation and conversion. In fact, our initial example of ierdkarkje may be a case in point. The most obvious reading is 'carry with a ierdkarre', a type of chart mostly used for the transport of earth. But a reading such as 'carry earth with a chart' is not to be excluded in principle. Nevertheless, it is important to keep in mind that cases of "incorporation" which appear strange at first sight could be solved by analyzing them as instances of conversion.

This book is about noun incorporation in Frisian. But why write a book about such a subject? In my opinion, a phenomenon which is situated so much at the intersection of morphology, syntax and lexicon, deserves a lengthy treatment of its own. As far as I know, up till now only one monograph has been devoted entirely to the construction, viz. Hanni Woodbury's (1975) "Noun incorporation in Onondaga". But that was more than twenty years ago, about a language with a very different grammatical structure, and written within a generative semantic framework which has been overtaken by many new developments in linguistic theory since then, so room enough should have been left for an investigation like this. As to the interest of the present work, I think there can be distinguished three levels, and related to that, three categories of readers, who might find something of importance in it.

First, the book is of course of interest for the study of the Frisian language itself. It describes and tries to shed some light on a phenomenon that has hardly been noticed in the Frisian grammatical tradition, let alone been analyzed in some detail. It is from this Frisian perspective that the book was written in the first place.

Yet, it might be hoped that it could be of some importance for wider circles than the small group of those interested in Frisian grammar. So, it might be interesting to see whether the analysis, or elements from it, could also be applied to noun incorporation in other languages as well. I have not

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7 The spelling of boerefamje with one a reveals that this word must have undergone shortening.
tried to investigate this, since it can better be left to students with a thorough knowledge of the relevant languages, who, of course, are better equipped for such a job. But it might be expected that they could profit from this study, as in turn I have profited from analyses of noun incorporation in other languages. All this could help to arrive at a better understanding of the phenomenon of noun incorporation in general.

Thirdly, it could be supposed that this book is of some interest on yet another level, namely that of linguistic theory. A salient feature of noun incorporation is that the incorporated noun, which is part of a word, can function as the head of a syntactic phrase in other constructions. So, noun incorporation is a typical borderline phenomenon. No wonder that it has been a topic in the debate about the demarcation between syntax and morphology, and even about the existence of the latter as a separate component. The position defended here is that noun incorporation in Frisian cannot be accomplished by syntactic means, but must rather be performed by lexical rules.

The general theoretical background of this thesis is generative grammar in a broad sense. I have made use of some lexicalist varieties in particular, especially in Chapter 4. In general, however, I have tried to make the exposition as informal as possible. Necessary technical or theoretical information will be provided at the relevant places; if this appears to be insufficient, the reader may have recourse to the well-known introductory textbooks and to the literature referred to in the text.

This book is about noun incorporation in Frisian. But what is it actually about? In essence, it tries to give an answer to four questions: what, where, how and why.

The question of what is taken up in Chapter 2. This chapter primarily has a descriptive character. Its main purpose is to give an overview of some basic properties of Frisian noun incorporation. It begins, as a natural starting point, with an overview of the existing literature on the subject. Then it is extensively demonstrated that the phenomenon really exists in the language. To that end, in addition to the arguments provided in the beginning of this introductory chapter, several more tests are given which all have as outcome that the combination of the noun and the verb counts as one word. After that follows a discussion of the distribution within the verbal paradigm, of the morpho-phonological linking between the noun and the verb, of the question of how Frisian noun incorporation can be classified typologically, and of aspects of its semantic interpretation.

Chapter 3 is concerned with the question where. It mainly deals with the problem of where the derivation of the complex verbs is taking place. Is it the lexicon where in a lexicalist tradition all word formation is situated? Or
should, in the light of the existence of parallel phrasal constructions, the syntax be thought of as doing the job? This standard question concerning instances of noun incorporation is taken up here with respect to Frisian. The outcome will be that at least in this language the complex verbs should be derived lexically.

But then, the question remains of how this should be done. This is the subject of Chapter 4. After an investigation of the restrictions on the process in simple transitive sentences, conditions are formulated for noun incorporation to take place. Having established this, the analysis is applied to more complex types of verbal complementation. A central issue of this chapter will be how to account for the striking parallelism between noun incorporation and de-transitivity.

There is one important question left, then, and that is why noun incorporation is possible in Frisian, where neighbouring languages seem to lack it. This problem is addressed in Chapter 5. The existence of two infinitival suffixes in the language will play a major role in the solution of the problem.

Of course, my attempts to give an answer to the above questions will surely not be the last words ever to be said about noun incorporation in Frisian. But it is my hope that they constitute a step forward in the understanding of this complex subject, and that they may inspire others to pay attention to this intriguing phenomenon as well.
2 A First Acquaintance

2.1 Introduction

This chapter is intended to get the reader acquainted with some basic facts of Frisian noun incorporation. It mainly has an observational character, and is not meant in the first place to give a thorough analysis. But it provides a foundation on which later chapters can be built.

There are six sections to follow. First there is a – necessarily short – overview of existing literature about the subject. This also induces me to touch on the issue of productivity. Then, in section 3, it is extensively argued why the incorporated noun and the verb together form one complex word, and why the incorporated noun thus is a part of it. At the same time this gives me the opportunity to show various phonological, morphological and syntactic properties of the construction. In section 4 the occurrences of the complex verb across the verbal paradigm are investigated. It appears that noun incorporation is possible almost everywhere, but that some contexts are more preferred than others. This section is also used to present some authentic examples of noun incorporation from Frisian texts. Section 5 is devoted to the external form of the complex verbs, to be precise, to the boundary between the nominal and verbal part. This is the place where linking phenomena like intermediate phonemes and morphemes can occur. Furthermore, it is a well-known fact that not all instances of noun incorporation have the same appearance across the world's languages. In section 6 it will be inquired under which type the Frisian case could be subsumed. Finally, in section 7, attention is given to some semantic properties of Frisian noun incorporation.

2.2 Previous literature

It is not unusual to start a treatise with an overview of the existing literature about the subject. In the case of Frisian noun incorporation this matter can remain a modest enterprise. The reason is simple: the literature itself is very modest. Not even a single article is entirely devoted to the subject. Some of the reference grammars mention it in passing, the most extensive treatments to be found in P. Sipma (1949, 60) and Knop (1954, 256), although their accounts do not extend to the length of a paragraph, and the latter source is restricted to the relatively deviant Frisian dialects of the island of Skylge (Dutch: Terschelling). Given this state of affairs, even columns in papers and periodicals discussing linguistic matters can become important as sources of information. Examples are J. Hoekstra (1993), De Jong (1987; 1991) and Wadman (1986). Even idiomatic textbooks like Douma (1946, 9) or Tam-
minga (1948, 68) could be of some relevance, although this is mainly restricted to the fact that it can be deduced from them that the phenomenon indeed exists.

What, in all their brevity, can we learn from these sources? First, of course, that Frisian has compound verbs with a noun as left-hand member. Several authors note that there seem to be no restrictions with respect to the inflectional use of these verbs, in contrast to the few existing compounds in Dutch, which can not be used felicitously as participles or as finite verbs. It is further noted that in the latter case, Frisian compounds remain inseparable, that is, the incorporated noun can not be stranded under Verb Second, as we already saw in the introductory chapter. The issue of inflectional use will be investigated in more detail in section 2.4 below.

Some authors also give some information about the nature of the constituting noun and verb. Wadman mentions in passing that only activity verbs can stand at the basis of the formation. Others, among them P. Sipma (1949) and J. Hoekstra (1993), observe that the incorporated noun is standing in a grammatical relationship to the verb. Mostly it can be interpreted as a direct object, but interpretations such as places or instruments, and even subjects (Knop 1954), are not excluded. We will deal with such restrictions extensively in Chapter 3, and especially in Chapter 4.

A final subject about which statements are being made is productivity. J. Hoekstra (1993) and Wadman (1986) consider noun incorporation in Frisian a productive process. In the light of the huge amount of attested cases and the easiness of producing (new) ones, and following the well-known view on productivity of Schultink (1961, 113), i.e. "the possibility which language users have to form an in principle uncountable number of new words unintentionally, by means of a morphological process which is the basis of the form-meaning correspondence of some words they know",¹ it is indeed also my impression that Frisian noun incorporation is productive, at least within the limitations to be discussed in Chapter 4. Wadman mentions as examples what he feels to be new combinations like tüntsjeriere ('barrel-stir'), tonkjefrije ('tongue-pet') and kontsjeneuke ('ass-fuck'). Also in less informal areas of life new formations can indeed be formed without any problem. To mention one example, from the non-Germanic words artikel ('article') and kopyearje ('copy'), the compound artikelkopyearje is readily made.

To say that the process is productive does not imply, however, that occasional cases could not suffer from the phenomenon of blocking (cf. Aronoff 1976, 43-45). A fine example could be fytsride ('bicycle-ride'), on which the WFT gives a citation from a literary source from 1899, i.e. from

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¹ English translation from Dutch to be found in Booij (1977, 4).
2.3 wordhood

the time that this environment-friendly vehicle was introduced on the Frisian roads. Although autoride ('car-ride'), hynsteride ('horse-ride') or reedride ('skate-ride') are perfectly common words nowadays, this is not the case with fytsride, which sounds odd to my ears. The reason must be that riding a bicycle is referred to with the help of the verb fytsë, a conversion of the noun fyts. However, such an example can not undermine the impression that noun incorporation in Frisian is a productive process.

2.3 Wordhood

In the introductory chapter I gave some indications which pointed to the existence of noun incorporation in Frisian. This conclusion was more or less confirmed in the overview of the existing literature in the preceding section. What I plan to do now is adduce more evidence and in a more systematic way. This will not alter the net result, however: whether seen from a morphological, phonological or syntactic angle, everything points to the conclusion that the according N+V combinations should be considered as words.

Let us start with some morphological evidence. We already mentioned in the previous chapter that incorporated nouns can appear in a form which can only be met in compounds, and not when the noun heads a noun phrase. An example was messe in for instance messelypje. Taking a reversed stand, if it really were the case that the noun was the head of an NP, then one would expect that it could be pluralized. But that is not possible. Frisian has two productive plural morphemes, -en and -s. When incorporated, the nouns with a plural -s always show up in their singular form:

(1) Heit jerappel / *jerapps dolt de hiele dei
    Father potato / potatoes digs the whole day
    'Our father is digging potatoes all day long'

Nouns taking -en as their plural morpheme may appear as singular or with the special -e-transition just exemplified in messe. The plural morpheme -en itself, however, is prohibited in incorporation:

(2) Heit byt / bite / *biten wjuddet de hiele dei
    Father beet / beet-E / beets weeds the whole day

An additional fact is that the incorporated noun can not be accompanied by any determiners:
(3) De buorlju sieten bûtên te *de / *dy / *sokke wyndrinken  
   The neighbours sat outdoors to the / that / such / wine-drink  

In the same vein, modifiers are out:  

(4) * Heit sit te grouwe jerappelskilen  
   Father sits to huge potato-peel  
   'Father is sitting, peeling huge potatoes'  

(5) * Heit sit te jerappel mei in soad spruten skilen  
   Father sits to potato with a lot of sprouts peel  
   'Father is sitting, peeling potatoes with a lot of sprouts'  

If the noun were the head of a phrase, these restrictions would not have been applicable; the possibility to pluralize or to take determiners or modifiers is just what could be expected then. These exclusions are readily explained, however, when we assume that the incorporated noun is a head N° which can not be projected higher up.  

If, on the other hand, the incorporated noun were part of a word, one might expect that the according complex word obeys Williams' (1981) Right-Hand Head Rule. This is indeed borne out both categorically and semantically. Jerappelskile ('potato-peel'), for instance, is a verb, as is its right-hand member skile ('peel'), and jerappelskile remains a kind of peeling, be it that it is only applied to potatoes.  

As Shibatani & Kageyama (1988, 479) and Neeleman & Weerman (1993, 439) argue, if a certain combination has the possibility to be the input for further derivational morphology, then this is an indication that it can be assigned word status. Probably, one has to be cautious to use this as an argument, since for instance Hoeksema (1988) showed that to a certain extent phrases can also be involved in word formational processes. Nevertheless, as to Frisian NV-formations, it indeed turns out that they can stand at the basis of new words, be it with severe restrictions. In the area of composition, for instance, verbs are in general not involved on a large scale in Frisian. The

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2 If the modifier builds a tight, non-compositional relationship with the noun, then these combinations can become more or less acceptable. Reade biten ('beetroots', literally 'red beets') is an example, for instance in

(i) Heit is oan it reade bitewjudzjen  
   Father is ON IT beetroot-weed  
   'Father is weeding beetroots'  

But this does not alter the point, since such frozen formations have broader word formational possibilities anyway, for example in nominal compounding, as in reade bitesop ('beetroot juice').
only productive candidates for compounding with a right-hand complex verb would be a combination with a left-hand preposition, and of a recursive application of NV-compounding itself. The latter would result in structures like \( [N[NV]_{\text{y}}]_{\text{v}} \). But it appears that such cases of "double incorporation" simply do not exist. The possible reasons for this exclusion will be discussed in Chapter 4.

On the other hand, a combination with a particle, resulting in a particle verb, although not very common, is certainly not prohibited, as the following citations\(^3\) may show:

(6) Moast mar oan-prikkebarne
Should-2.sg [particle] on – dry stick – burn
'You should intensify the burning of dry sticks'

\((Hiem, \text{p.} 53)\)

(7) Lucht, dy't wy ynsykelje
Air, that we in-breath-take
'Air, that we breathe'

\((\text{D. Uitterdijk, S. en R. (1910), p.} \text{259})\)

(8) Ik lit net mei my om kedsjenemne\(^4\)
I let not with me around-cob-drive
'I refuse to be pissed around'

(private source in WFT)

(9) Nou kinne wy mar ta brijite
Now can we [particle] to porridge-eat
'Now we have plenty of porridge to eat'

\((\text{Folksforhalen, p.} \text{104})\)

Furthermore, complex verbs may appear as a left-hand member of a compound. An example is \textit{jerappelskyldersmeske}, 'potato peeler', literally 'potato peel knife', which could be ascribed a structure \([[[[\text{jerappel}][\text{skyl}][\text{i}][\text{ers}][\text{mes-DIM}][\text{N}]]_{\text{N}}]\), where the element -\textit{ers} functions as a linking morpheme.

Being the input for further word formation, NV-formations also encounter serious restrictions in the area of derivation, especially with respect to suffixation. Of the suffixes attachable to the verb, several candidates are excluded beforehand. One reason can be that the potential suffix binds a theme

\(^3\) The sources from which these citations are drawn are bibliographically accounted for in \textit{References to Frisian texts}, at the end of this book.

\(^4\) In the citation in the WFT, \textit{om} is typographically not concatenated to the complex verb. That \textit{om} in this use should nevertheless be interpreted as belonging to a particle verb is argued for in Dyk (1991). A comparable case can be observed in the next citation.
argument. An example is -sel. So, from the verb bakke ('bake') one can form the noun baksel, which refers to the thing which is baked. But from an incorporation verb like koekjebakke ('cookie-bake') it is not possible to derive *koekjebaksel, possibly because of a theta-criterion violation (cf. Chomsky 1981), since the theme argument would be expressed twice, one time by the incorporated noun, the other by the suffix itself. Another category where derivation from incorporation verbs is blocked is in the case of suffixes which predicate over the theme argument. One example is adjective building -ber. So, from steapelje ('stack') one can form the adjective steapelber ('stackable'). Thus, an object-verb combination like kisten steapelje (literally: boxes stack) is related to predicative (10) and attributive (11):

(10) Dy kisten binne steapelber  
    Those boxes are stackable
(11) De steapelbere kisten  
    The stackable boxes

However, from an incorporation verb like kistesteapelje such an operation results in an ungrammatical *kistesteapelber. The theme argument, needed for the subject position or the head of the modified NP, is not available in this case because of incorporation.5

Among the suffixes which could take an incorporation verb as input, those referring to Agents and Events, such as -er and -erij, would be the best candidates. And indeed, kistesteapelder ('box-stacker') or kistesteapelderrij ('box-stacking') can readily be built. But for the point at issue, even these are not conclusive examples, since at first sight they could also be analyzed as having a right-branching structure [[N]][[V]][suffix]IN.6 Therefore, when we want to find out whether incorporation verbs can be the input to derivation, we can better look at prefixes. And indeed, here it appears that further derivation is certainly not excluded. Tamminga (1954, 94), for instance, mentions with respect to the nominalizing prefix ge-formations such as gehûshimmel (PREF-house-clean), geboatsjefar (PREF-boat-sail), gebriefeskriuw (PREF-letter-write), gebûthûsskrob (PREF-stable-scrub) or gekofjedrink (PREF-coffee-drink). With the prefix fer-, one can find in the WFT such examples as ferhânbûtse (PREF-hand-beat, i.e. hurt oneself by beating one's hands about one's body, in order to create some warmth), ferkaartspylje (PREF-card-play,

5 This, and the foregoing case, could possibly also be explained by the requirement that the according suffixes take transitive verbs. As we will come to see, noun incorporation in Frisian results in an intransitive complex verb.

6 This touches on the issue of synthetic compounds, of course. In this book, I leave this complicated issue aside.
2.3  

i.e. waste by playing cards) or reflexive *fersypedrinke* (PREF-buttermilk-drink, i.e. damage oneself by drinking too much buttermilk). Also the prefix *be*- could be used, for instance in

(12)  

\[
\text{Wat bepopketekenest de hiele tiid?} \\
\text{What PREF-figurine-draw-2.sg the whole time?} \\
'\text{Why the hell are you drawing figurines all the time?}'
\]

This overview is certainly not meant as an exhaustive account of all the cases where incorporation verbs can or can not function as input for further derivational morphology. But it should have made clear that such an operation is not excluded in principle. With the reservation mentioned earlier in mind, this in itself could be one of the indications that the NV-formation is a word, and that the incorporated noun is a part of it.

From a phonological point of view there are also indications that the incorporated noun builds one word with the verb. As already signalled in the previous chapter, in Frisian long vowels may undergo shortening. This can occur when a suffix (plural, diminutive, derivative) or a member of a compound is added to the stem. However, the process of shortening, which by itself is fairly irregular, does not extend the boundaries of a word. Now, shortening can also be observed in the realm of noun incorporation. Examples are *aai* [a:j] ('egg'), which shortens to [aj] in *aisykje* ('egg-seek'), or *pipe* [pi:pa] ('pipe') which becomes [pip] in *pypsmoke* ('pipe-smoke'). The latter also shows another relevant phonological clue, since it appears that the final schwa of the noun has been dropped. Tiersma (1979, 137-138; idem 1985, 17-18) reports that this Truncation, as he dubs it, may occur when a noun acts as a first member of a compound.

Furthermore, the process from which Frisian presumably acquired its greatest fame in linguistic circles, viz. so-called "Breaking" (Tiersma 1979, 17-67; idem 1985, 20-24; Van der Meer 1985; Booij 1989c; Schane 1995), can also be observed within the context of Frisian noun incorporation. By breaking, a centralizing diphthong may be transformed into a rising one. An example is *stien* [sti.an] ('stone'), which becomes *stienen* [stjlnan] when pluralized, *stientsje* [stjlnstsja] in the diminutive, or *stienkrobbe* [stjInkroba] ('wood louse', literally: 'stone-beetle') in a nominal compound. Now, this same broken form also surfaces in an incorporation verb like *stienbikje* [stjInblkja] ('stone-chip'). Breaking and shortening display many similarities, see Tiersma (1979, 92-99) for discussion. One essential correspondence is

\footnote{Unfortunately, in most cases breaking is not reflected in the official spelling of Frisian.}
that the instigating factor, loosely to be formulated as a syllable added to the right of the stem, must be contained within the same word as the diphthong or vowel to be broken or shortened. This condition is met when it is assumed that the noun which undergoes the process builds a compound with the triggering verb. When not, the stem of the noun remains unchanged:

(13)  * [in stien (= [stjIn])]NP bikje
      a stone chip
      'chip a stone'

So we see that some phonological processes also prove that the incorporating noun is building one word with the verb.

A difference in pronunciation between the two constructions also manifests itself within the area of stress, although it must be admitted that the observation is subtle. This is caused by the fact that whenever an object noun functions as a head of a phrase or as incorporated, in both cases the noun receives the main stress, and not the verb. But there is a difference, though. When we compare the combination of a verb and a (bare) phrasal object as \textit{wetter drinke} [[wetter]NP [drinke]YP] (water drink, i.e. 'drink water') with an incorporational construction \textit{wetterdrinke} [[wetter]N [drinke]YP, it then strikes the ear that the verbal part seems to be a little more prominent in the case of the phrasal construction. In other words, with incorporation the accentual contrast between the nominal and the verbal part is more distinct.

A difference can also be observed in the area of intonation. In a certain boasting speech style the main emphasis, with a typical raising and falling pitch, falls on the last word of the sentence (see J. Hoekstra 1991, 100-101 for a tentative description):

(14)  Dy fint koe goed [dy messen]NP SLPJE!
      That guy could well those knives sharpen
      'How well could that guy could sharpen those knives!'

When the object is incorporated, the emphasis no longer is on the verbal part \textit{slypje}, but on the incorporated noun as well:

(15)  a. * Dy fint koe goed masseSLYPJE!
     b.  Dy fint koe goed MESSESLYPJE!

Since the last word of the sentence seems to be the area where this intonational pattern is operable, one must conclude that in (15)b this must be \textit{messa-slypje} as a whole. Therefore, even seen from an intonational point of view one
can not avoid the impression that the verb and the incorporated noun together build one word.

When we take a syntactic perspective, that view is not altered. If the incorporated noun and the verb indeed build one complex word, then it is to be expected that they are subject to the principle of Lexical Integrity, which states that parts of words are invisible to syntactic rules and principles (see, among others, Spencer (1991) and Ackema (1995)). This appears to be borne out by the facts, for instance with respect to movement rules. As we already saw in the introductory chapter, the incorporating verbal head itself may not be moved, for instance to a Verb Second position:

(16) * Wy [slypje], messe \_t
   We sharpen knife

The point is stated explicitly by S.R. Sipma (1932, 26) in a commentary on a translation from Dutch, to highlight a contrast between the two languages:

"Yn it Frysk hat men gaurus gearstalde tiidwirden, dy't by forfoarming net skaet wirde, byg.: ik aisykje, ik ierappeldol, ik weetsichtsje (...)"

('In Frisian one often meets complex verbs, which, when conjugated, are not separated, for instance: I egg-seek, I potato-dig, I wheat-reap (...)

If the verbal head may not be moved out of the complex verb, neither is this the case with the incorporated noun. This can be shown for instance by topicalization, (17)b, or scrambling, (18)b. As can be inferred from (17)a and (18)a, phrasal objects meet no difficulties at this point:

(17) a. \( \text{NP[De messen]}, \text{wolle} \ _{t} \ _{j} \text{hjoed} \ _{t} \ _{j} \text{slypje} \)
   The knives want we today sharpen
   'It are the knives that we want to sharpen today'

   b. * \( \text{Messe}, \text{wolle} \ _{t} \ _{j} \text{hjoed} \ _{t} \ _{j} \text{slypje} \)

(18) a. \( \text{Wy} \ _{t} \ _{j} \text{wolle} \ _{t} \ _{j} \text{NP[de messen]}, \text{hjoed} \ _{t} \ _{j} \text{slypje} \)
   We want the knives today sharpen
   'We want to sharpen the knives today'

   b. * \( \text{Wy} \ _{t} \ _{j} \text{wolle} \ _{t} \ _{j} \text{messe}, \text{hjoed} \ _{t} \ _{j} \text{slypje} \)

Furthermore, it is not possible to relativize the incorporated noun:

(19) a. \( \text{Wy} \ _{t} \ _{j} \text{wolle} \ _{t} \ _{j} \text{NP[de messen]}, \text{slypje}, \text{dy't}, \text{stomp wurden binne} \)
   We want the knives sharpen, which dull became have
'We want to sharpen the knives which have been gotten dull'

b. * Wy wolle messe, slypje, dy't stompt werden binne

Also with respect to a phenomenon like gapping one can observe a difference between the phrasal (20) and the incorporational (21) construction, in that the latter does not permit its verb to be deleted:

(20) a. Heit wol de biten wjudzje en buorman de jerapps wjudzje
Father wants the beets weed and neighbour the potatoes weed
'My father wants to weed the beets and our neighbour wants to weed the potatoes'

b. Heit wol [de biten] [wjudzje] en buorman [de jerapps] -----

(21) a. Heit wol bitewjudzje en buorman jerappelwjudzje
Father wants beet-weed and neighbour potato-weed

b. * Heit wol bite[wjudzje] en buorman jerappel-----

With respect to gapping, Mohanan (1995, 89) observes a similar state of affairs in Hindi noun incorporation. These facts become natural once we analyze the noun and the verb as contained in a complex word. By the way, deletion of the first occurrence of wjudzje in (20) (nor in (21)) does not cause any difficulty:

(22) Heit wol bite----- en buorman jerappel[wjudzje],

But as Booij (1985) has shown, this type of conjunction reduction is not uncommon in compounds.

That the incorporated noun has no XP-status can also be distilled from certain restrictions on the category. So, proper names, (23)b, and pronouns, (23)c, necessarily being XPs, are not allowed to incorporate:

(23) a. De slachter begint te koslachtsjen
The butcher begins to cow-slaughter
'The butcher begins slaughtering a cow'

b. * De slachter begint te Hiltsje 23-slachtsjen
The butcher begins to Hiltsje 23-slaughter

c. * De slachter begint te himslachtsjen
The butcher begins to him-slaughter

8 In Frisian, female animals are referred to with the help of masculine pronouns (Fokkema 1967, 39).
2.3 wordhood

Another fact which points to a word status for noun incorporation in Frisian is the inability of the noun and the verb to be divided by parentheticals (cf. for this criterion also Sadock (1980, 303) and Spencer (1991, 313)):

(24) a. We sille \_NP[de messen] – men hat der nea genôch fan – slypje  
   We will the knives – one has there never enough of – sharpen  
   'We will sharpen the knives – one has never enough of them'

   b. *We sille messe – men hat der nea genôch fan – slypje

Presumably, this is connected to problems with creating a pause between the incorporated noun and the verb (Sadock 1980, 303; Mohanan 1995, 94), compared to the ease of such an operation with respect to phrasal objects:

(25) a. We sille \_NP[de messen] .... slypje  

   b. ?  We sille messe .... slypje

To give one more conspicuous argument, let us look at the shape of negation. In Frisian, the general verbal negative is the adverb net ('not'). NPs may be negated by prenominal gjin ('no'):

(26) a. Ik haw net slipe  
   I have not sharpened

   b. Ik haw net in mês slipe  
   I have not a knife sharpened  
   'I have not sharpened a knife'

   c. Ik haw gjin mês slipe  
   I have no knife sharpened  
   'I did not sharpen any knife'

   d. Ik haw gjin messen slipe  
   I have no knives sharpened  
   'I did not sharpen any knives'

From (26)c and (26)d we can see that a phrasal object, both in the singular and the plural, may be negated by gjin. Now, the striking thing is that negation by gjin is excluded when the object is incorporated:

(27) *Ik haw gjin messeslipe  
   I have no knife-sharpened

The only remaining negator is net:
(28) Ik haw net messeslipe
    I have not knife-sharpened
    'I have not been sharpening knives'

From this pattern one can conclude that in (27) there is no NP to be negated. The only available nominal element is contained in the complex verb, hence leaving net as the only candidate for negation. 9

We thus see that there are abundant arguments, both from a morphological, phonological and syntactic perspective, which point to one and the same conclusion, namely that the incorporated noun in Frisian does not project to a noun phrase, but instead builds one complex verb with the verb. In fact, more arguments could be added. Some of them will emerge when we continue this study, as for instance the non-referentiality of the incorporated noun (section 2.7), or its defectivity to enter anaphoric relations (section 3.2). But at this point I think the picture is already clear enough.

2.4 Distribution

We just established that Frisian possesses a construction in which a noun and a verb are concatenated in such a way that together they build a complex verb. The zero option, then, would be that this verb can be inserted in all the positions where verbs usually show up, and by and large this is indeed the case. But it can be observed nevertheless that in the actual usage of noun incorporation the construction certainly has more preference for one context than for the other. The aim of this section is to give an overview of the occurrences of noun incorporation among the various verbal constructions. It is certainly not intended to provide a thorough analysis of these constructions themselves. The central question of this section is merely where noun incorporation can be found, seen from the perspective mentioned above. At the same time, this gives me the opportunity to present to the reader some authentic instances of noun incorporation excerpted from original Frisian texts.

One of the environments where noun incorporation is not uncommon is constituted by the typical Frisian te-infinitives. J. Hoekstra (1989) and (1992) divides te-infinitives into four types: verbal, adjectival, prepositional and sentential. The latter two appear to be absent in related West Germanic languages like Dutch and German. The most outstanding property of

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9 This argument has also been used with respect to the Groningen dialect by Schuurman (1987, 188) and to Dutch by Booij (1990b, 58-59) and De Haas & Trommelen (1993, 99).
prepositional and sentential *te*-infinitives is that elements like objects, some adjectives and particles may not occur outside the frame [te ... V]. Sentences (29) and (30), which contain separable particle verbs, provide examples of the prepositional and sentential type, respectively:

(29) Hja is nei it hok te oprèden
    'She is to the shed to up tidy'
(30) Hja helpt my te oprèden
    'She helps me to tidy up'

For the rest of the book, when I use the term 'te-infinitive', this refers to these two particular types. A more detailed description can be found in Hoekstra's papers and in De Haan (1987).

As already said, noun incorporation in this construction is relatively frequent. Judging from some recent publications where noun incorporation is mentioned, Gerritsen (1991), Van Bree (1994), and also Schuurman (1987) for the neighbouring Low Saxon Groningen dialect, one could even easily get the wrong impression that the *te*-infinitive is the only construction where the phenomenon of noun incorporation can be found. Here are some examples I gathered from Frisian texts:

(31) Den kinste nei Noarwegen to balkesjouwen
    'Then you can go to Norway, lugging beams'
(32) Ruerd siet (...) to biezembinnen op 'e bank
    'Ruerd sat on the bench, binding (a) beson(s)'
    (Richt, p. 215)
(33) Dy mynhear kaem to breaweagen
    'That gentleman came in order to weigh the bread'
    (W. Dykstra, *S. en R.* (1890), p. 80)

There can be imagined at least two reasons why noun incorporation has such a prominent place in the context of *te*-infinitives. The first is that the con-

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10 This restriction may be too strong in the case of sentential *te*-infinitives, in the sense that violation does not directly lead to ungrammaticality. But then the infinitive belongs to the verbal type.
struction seems to demand a durative aspect (cf. J. Hoekstra 1989, 36), where, as we will come to see in section 2.7, noun incorporation is also inherently durative. The other is that the verb, as De Haan (1987) discovered, can not be expanded by for instance phrasal complements or adverbials, at least not between the element te and the verb itself:

(34)  * Ruerd siet te [in biezem]NP binen
       Ruerd sat to a bosen bind
(35)  * Ruerd siet te [faak]Adv binen
       Ruerd sat to often bind

Only verbs are allowed to the right of te:

(36)  Ruerd siet te binen
       Ruerd sat to bind
       'Ruerd sat binding'

If one, by any means, wants to express an object after te, one is obliged to incorporate it. This might be a further reason for the relatively high frequency of noun incorporation in this construction. Note, by the way, that if the restriction that only verbs are allowed after te is a valid one, this is then a further indication for the word status of Frisian noun incorporation.

11 At least, that is the general rule. For some speakers, it looks as if it begins to suffer from erosion, in that also bare phrasal objects are permitted. See section 5.7 for further discussion. Even for speakers who obey the rule, it can be relativized somewhat in a case where they try to express a double object. Jarich Hoekstra (p.c.) came up with the following example, which indeed does not sound too bad:

(i)  Hja begjint te blommen wetter jaan
       She begins to flowers water give
       'She begins to water the flowers'

From the plural suffix -en in blommen it can be deduced that the indirect object is not morphologically incorporated. And although it can not be seen easily at the surface, the discussion in section 4.8 will reveal that there are good reasons to suppose that the direct object wetter can not be incorporated either. So, phrasal objects are allowed in te-infinitives only when they are not able to be incorporated for independent reasons. But even then these cases are marginal, in that they seem to be restricted to actions with a high degree of habituality, which may lead to a certain degree of lexicalization. When we turn to a less standardized situation, the use of the construction would be far worse, if not impossible:

(ii) * Hja begjint te bern koekjes jaan
       She begins to children cookies give
       'She begins to give children cookies'
Fairly comparable to the te-infinitives is the oan it-construction. It invokes durative aspect, too (see Ebert & Hoekstra 1996; see also Smits 1987, 285 for the comparable aan het-construction in Dutch), and no separate words are allowed between oan it and the verb. But incorporation verbs do not suffer from these restrictions:

(37) Dy nachts wie 'r al oan 't barmmeanen
That night was-he already ON IT shoulder-mow.
'That night he was already mowing the shoulder'

(38) Hy is oan 't biggefangen
He is ON IT piglet-catch
'He is catching piglets'

(39) Sterke Thomas en Reade Ime binne oan 't bileslypjen
Strong Thomas and Red Ime are ON IT ax-sharpen
'Strong Thomas and Red Ime are sharpening axes'

Formally, the oan it-construction seems to consist of a preposition oan and a nominalized infinitive. The latter can be divided into a determiner it and an infinitive, which nominal character can be read off nicely from its special suffix -en. Its appearance in the oan it-construction already suggests that noun incorporation could also exist in an ordinary nominalization, and of course, given the fact that a noun can incorporate into a verb, it is to be expected that the resulting complex verb itself could be nominalized. This is indeed borne out by the following instances, where we find nominalized incorporation verbs in typical NP positions:

(40) It beamroegjen rekke oan 'e gong
The tree-dig up commenced
'The digging up of trees commenced'

(41) It is op 't lêst gjin botpoeren hwat se (...) dogge
It is at the end no f1ounder-sniggle what they do
'Eventually, they do something else than sniggling flounders'

The restriction on expandibility does not hold for the position to the left of oan it. In this respect there is no difference with Dutch aan het. See Smits (1987) for discussion.
De faem (...) is by harres foar 't bushimmeljen
The maid is at theirs for the milk can-clean
'Their maid's task is cleaning the milk cans'
(Swipe, p. 88)

So far, we only presented examples where the infinitival suffix -en shows up. It will play a prominent role in Chapter 5, so for further discussion I refer the reader to that part of the book. However, Frisian displays another infinitival form, ending in -e. Here, noun incorporation can be observed as well:

Sij kin Bibel-lezze, Krantje in Almanakje, brief-skriewe in alle Salmen
gled sjonge
She can bible-read, [read the] paper and the almanac, letter-write and
all the psalms smoothly sing
'She can read the Bible, the paper and the almanac, write letters and
sing all the psalms smoothly'
(Wiersizzerij, p. 6)

De mânlju ha allegearre nei baes skoenmakker (...) west om hjar
birdskrabje to litten
The men have all to boss shoemaker been [COMP] them beard-scrape
to let
'The men all visited the shoemaker in order to be shaved'

Incorporation can also be observed in participles:

Goed det wy jister net glès-wosken ha
Good that we yesterday not window-washed have
'It is a good thing that we have not cleaned the windows yesterday'
(Eigene, p. 17)

... höt der hânklaapt en foetstampt waerd
... how there hand-clapped and foot-stamped was
'... how there was applaused and stamped with feet'
(Wintergrien, p. 97)

We now enter the areas where noun incorporation meets more obstacles. These occur in a construction where the complex verb is finite or appears in an (om) te-infinitive. As to finiteness, it can certainly not be claimed that the process is prohibited there, but compared to an ordinary phrasal object it seems that a sentence with an incorporated object is a little strange:
2.4 distribution

(47) a. Hja bakt mei nocht [in bôle],\textsubscript{NP}
She bakes with pleasure a loaf
'Her bakes a loaf with pleasure'
b. ? Hja bôlebakt mei nocht
She loaf-bakes with pleasure
'Her is loaf-baking with pleasure'

As such, the question mark in (47)b suggests a too heavy load. Its only function is to indicate that, compared to (47)a, there is decreased acceptability, which can certainly not be ascribed to the Verb Second effect:

(48) ? ... dat se mei nocht bôlebakt
... that-she with pleasure loaf-bakes

Finite incorporation sentences can be patched up considerably by adding a durative adverbial, however:

(49) Hja bôlebakt al jierren mei nocht
She loaf-bakes already years with pleasure
'Her bakes loaves already for many years with pleasure'

A possible reason for this behaviour will be discussed in Chapter 4, section 4.\textsuperscript{13}

That the building of sentences with finite forms of incorporation verbs meets some difficulties can also be distilled from their rather low frequency in running texts. Yet, it is certainly not the case that this use is excluded principally. Here is a selection from the collection I gathered over the years:

(50) As it drok is, bêdmakket hjasels yn in hiele wike net
When it busy is, bed-makes she-self in a whole week not
'When it is busy, she does not make up the bed(s) for a whole week'
\textit{(Frou}, p. 153)

(51) Jy donglade net, mei jou smelle räch, master!
You dung-load not, with your narrow back, master!
'You, with your narrow back, do not load dung, master!'
\textit{(A. Boonemmer, Bijek.} (1855), p. 79)

\textsuperscript{13} For ease of exposition, I construe examples in finite form at many places in this work. Those readers who feel a little uncomfortable with such sentences now know that there is a possible reason why.
(52) Syn kreas wiif (...) fisksutelt, wjirmdolt en iezet as de bèste
His pretty wife fish-sells, worm-digs and baits as the best
‘His pretty wife sells fish, digs worms and baits like the best of them’
(Springtij, p.15)

(53) Hy noassnütte wakker
He nose-blew heavily
‘He heavily blew his nose’
(Fr.W., p. 201)

(54) As wy net mear leauwe meije dat God (...) sigaretssmoekt (...) en kofjedrinkt, dan wurd ik mar leaver atheïst
If we not more believe may that God cigarette-smokes and coffee­
drinks, then become I [particle] rather atheist
‘If we are not allowed any longer to believe that God smokes cigarettes
and drinks coffee, then I prefer to become an atheist’
(Minskrotten, p. 77)

As it looks that the possible difficulties with finite forms can be overcome, the
problems are becoming even more serious in the case of te-infinitives of the
verbal or adjectival type, to maintain Hoekstra’s (1989; 1992) distinction.
These often (but not always) are accompanied by the complementizer om; for
ease of reference I therefore dub them (om) te-infinitives. Curiously enough,
in such infinitives incorporation is not allowed. So, there is a remarkable
distinction between (om) te-infinitives and prepositional and sentential
te-infinitives, the latter on the contrary being a favourite context for incorpo­
ration, as we have seen. The pattern can be nicely illustrated with the help of
the verb helpe (‘help’), which can take both kinds of infinitive complements:

(55) a. Hja helpt my [te bushimmeljen]
She helps me to can-clean
‘She helps me cleaning cans’

b. * Hja helpt my [om te bushimmeljen]

In an (om) te-infinitive, the same message can only be expressed by placing
the object in front of the obligatory element te:

(56) Hja helpt my [om bussen te himmeljen]

That the restriction is a real one is proven by the virtual non-existence of noun
incorporation in this construction in written texts. I encountered only three
occurrences, which is just a fraction compared with te-infinitives, for
example. The pattern is further corroborated by Boelens & van der Woude's (1955) dialect survey. Sentence 82 of their questionnaire reads (in Dutch):

(57) Haar dochtertje is met een mandje naar 't bos gegaan om braambeïzen te plukken

'Her little daughter has gone to the wood with a bucket in order to pick blackberries'

Most responses have a construction with a (om) te-infinitive, which could be expected, since the Dutch question has such a construction, too. Once this option is chosen, all the answers show a bare plural object between om and te, just as in the Dutch original. Put in standard Frisian terms it reads something like this:

(58) ... om toarnbeien te sykjen

However, a minority of the respondents uses an infinitive without om, which could be considered to be a te-infinitive. Here the object never precedes te, but rather follows it:

14 The most notorious place is this:
(i) Op in iere moarn gyng se der op út om to iersykjen
On an early morning went she there on out COMP to ear-glean
'Once, early in the morning, she went out gleaning ears'

(Histoarje, p.197)

I for one would certainly formulate this differently, so with the pattern om + NP + te + V, or with a te-infinitive te + N + V. Vital as it looks, the restriction can be superseded by those (lexicalized) incorporation verbs that are not able to build an alternative with their incorporated noun occurring in a NP satellite. Sykhelje (literally: 'breath-take', 'to breathe') is an example:

(ii) a. Hy sykhellet rëstitch
    He breath-takes quietly
    'He breathes quietly'

b. * Hy hellet rëstitch (de) sike
    He takes quietly (the) breath

Occurrence of this incorporation verb in a (om) te-infinitive, then, is not unnatural:
(iii) Moatst net ferjitte om te sykheljen
    Should-2 pers. not forget COMP to breath-take
    'You should not forget to breathe'

(iv) Hy skynt noch te sykheljen
    He seems still to breath-take
    'He seems to breathe, yet'
(59) ... te toarnbeisykjen

Significantly, an intermingled answer with the order

(60)  \textit{om} + \textit{te} + N + V

is not attested.

So, here we have a context where noun incorporation is not allowed. I suppose the reason for this behaviour must be sought in a special property of the element \textit{te}, which in the \textit{(om) te}-construction could be an infinitival prefix. Note that these facts of noun incorporation verbs resemble those of particle verbs in Frisian and Dutch. Take as an example \textit{opblaze} ('blow up'), where in \textit{(om) te}-infinitives the particle is also separated from the verb by the penetrating \textit{te}:

(61) a. ... \textit{om it op te blazen}
    b. * ... \textit{om it te opblazen}

Significantly, in Dutch, the participal prefix \textit{ge-} also separates the particle from the verb:\textsuperscript{15}

(62) a. \textit{opgeblazen}
    ('blown up')
    b. * \textit{geopblazen}

The phenomenon seems to be sensitive to stress, since it only shows up when the main stress is on the first part of the complex verb. This is the case with the big majority of particle verbs and with incorporation verbs as well.

In the meantime, the separability of the incorporated noun and the verb in the case of \textit{(om) te}-infinitives might lead one to think that Frisian noun incorporation should be performed by syntax. This, however, is not necessarily the case. Both Booij (1990b) and Neeleman & Weerman (1993) extensively argue that Dutch particle verbs should be derived lexically. And this even given the circumstance that particle verbs can be split up in more contexts than noun incorporation can. Verb Raising in Dutch is an instance, and also Verb Second. There only the verbal part of a particle verb is fronted, leaving the particle behind at its sentence-final base position:

\textsuperscript{15} Frisian builds participles without a prefix, and can therefore not be involved in the comparison.
2.5 Linking

When, in Frisian noun incorporation, a noun is combined with a verb to build a new, complex, verb, the most simple solution, as far as the outer form is concerned, would be to just add the noun stem. This is indeed what happens in a lot of cases:

(65)  

- balsmite (ball-throw)  
- rúthimmelje (window-clean)  
- lymsnuve (glue-sniff)  
- apelite (apple-eat)

However, as we already saw in the introductory chapter and in section 2.3, the point of connection between the noun and the verb can also be filled by a linking schwa:

(66)  

- bitefuorje (beet-feed) (< byt)  
- blommesnije (flower-cut) (< blom)  
- blêdesharkje (leaf-rake) (< blêd)  
- messeslypje (knife-sharpen) (< mês)

It appears that this linking phoneme figures at the same time in Frisian nominal compounding. There, one can also encounter another linking phoneme, -s-.
That element does not show up in the context of noun incorporation, however.

The linking schwa can not turn up in every instance of noun incorporation. The major restriction is that the incorporated noun itself should have -en as its plural suffix.\footnote{Something similar obtains in Dutch nominal compounding, where the linking element -e(n)- is also restricted to compounds with a left-hand member which has -en as its plural ending (cf. Mattens 1984, 336; De Haas & Trommelen 1993, 404).} Those in (66), for example, indeed choose this particular suffix when they pluralize:

\begin{itemize}
  \item \textit{biten}
  \item \textit{blommen}
  \item \textit{blêden}
  \item \textit{messen}
\end{itemize}

Apart from -\textit{en}, Frisian obtains another plural suffix, viz. -\textit{s}. Here are some instances:

\begin{itemize}
  \item \textit{apels}
  \item \textit{biezems}
  \item \textit{finsters}
  \item \textit{auto's}
\end{itemize}

\begin{itemize}
  \item ('apples')
  \item ('brooms')
  \item ('windows')
  \item ('cars')
\end{itemize}

\begin{itemize}
  \item (< \textit{apel})
  \item (< \textit{biezem})
  \item (< \textit{finster})
  \item (< \textit{auto})
\end{itemize}

It turns out that nouns taking a pluralizing -\textit{s} never show up a linking -\textit{e}- when they are incorporated; in that case such nouns invariably occur without a linking phoneme:

\begin{itemize}
  \item \textit{apel(e)ite}
  \item \textit{biezem(e)bine}
  \item \textit{finster(e)fervje}
  \item \textit{auto(e)waskje}
\end{itemize}

\begin{itemize}
  \item (apple-eat)
  \item (broom-bind)
  \item (window-paint)
  \item (car-wash)
\end{itemize}

Generally speaking, it is not the case that potential -\textit{en}-plurals obligatorily take a linking phoneme; they can also be incorporated without (compare (66)):\footnote{There might be some individual variation here. Jarich Hoekstra informs me that he strongly prefers the forms without schwa. I myself have a less strong preference in this respect, and also in texts and dictionaries a linking schwa is not uncommon.}
Furthermore, there is a large class of substantives for which it can not be decided whether they show a linking phoneme or not. These nouns, all selecting a plural suffix -en, have a final schwa of their own in the singular:\(^{18}\)

\[
\begin{align*}
\text{(70)} & \quad \text{bytfuorje} \\
& \quad \text{blomsnije} \\
& \quad \text{blëdharkje} \\
& \quad \text{messlypje}
\end{align*}
\]

The restriction that -e-linking only occurs with nouns taking an -en-plural suggests that there is some connection with plurality itself. This is confirmed by the fact that mass nouns, which can not be pluralized in principle, also never carry an -e-linking. But what is exactly the connection involved? Or to put it differently, what is the difference with a variant without linking? The latter can also express plurality. A sentence like

\[
\begin{align*}
\text{(72)} & \quad \text{Ik sil hjöed stekfervje} \\
& \quad \text{I will today fence-paint} \\
& \quad \text{'Today, I will paint a fence/fences'}
\end{align*}
\]

can also be uttered when I plan to paint more than one fence. However, this is not sure; by (72), the number of fences to be painted is left open; it could be one, it could be more. According to my intuition, this is different in a case of stekkefervje. In a sentence like

\[
\begin{align*}
\text{(73)} & \quad \text{Ik sil hjöed stekkefervje} \\
& \quad \text{'Today, I will paint fences'}
\end{align*}
\]

the minimum number of fences I plan to paint is two. In other words, the linking element -e- induces a plural interpretation of the incorporated noun.\(^{19}\) So,

\[
\begin{align*}
\text{(71)} & \quad \text{balke: balkesjouwe} \quad \text{(beam-lug)} \\
& \quad \text{bonke: bonkeplúzje} \quad \text{(bone-nibble)} \\
& \quad \text{tûke: tûksesagje} \quad \text{(branch-saw)} \\
& \quad \text{tobbe: tobbeleegje} \quad \text{(tub-empty)}
\end{align*}
\]

\^{18}\text{Visser (1994) argues that this final schwa in itself can be viewed as a suffix. This issue does not bear upon the point which is dealt with here, however.}

\^{19}\text{At least, this seems to be the case with respect to Frisian noun incorporation. Booij (1995, 454) shows that a linking element related to a plural morpheme does not necessarily induce a plural interpretation of a non-head. As an illustration, he mentions for Dutch the suffix -s in nominal compounds like meisjeslijk}
to give a second illustration, above the well-known differences between apples and pears, Frisian has an extra one. *Apel* ('apple') has an *-s*-plural, and has therefore only one form when it is incorporated. Hence, e.g. *apelite* (apple-eat) is neutral as to the number of apples to be eaten. *Par* ('pear'), on the other hand, has a plural with the suffix *-en: parren*. As a consequence, it has two incorporational appearances, *parite* and *parreite*, of which the latter exclusively has a pluralic interpretation. It may be clear that such an interpretation is only obligatory where the *-e*-linking is in formal opposition with a *ø*-linking, that is, in those cases where no linking phoneme can be observed. Therefore, singulars ending in a schwa, like those in (71), lacking such an opposition when incorporated, only show a neutral interpretation according to number.

Apart from *-e*, it is not impossible that another linking element can be recognized. This would be the diminutive suffix. It is far from uncommon that diminutives are incorporated, even to such an extent that Wadman (1986) seems to think that this is the typical (or even only?) way of incorporation in Frisian. However, that is far from true. From two alphabetical stretches I checked in the WFT, the total number of incorporated diminutives was about a quarter of all the incorporation verbs, but nevertheless this is a considerable amount. Of course, a substantial part is occupied by nouns which really denote something small. Examples could be *beantsjetriedzje* (bean-DIM-string, i.e. pull the strings from green beans) or *blomkenaaie* (flower-DIM-sew, i.e. as decoration on a textile). Perhaps an even enhancing factor is the fact that the majority of children's games is designated by way of a complex verb with an incorporated noun in the diminutive form. Examples are *beltsjedrukke* (chime-DIM-push), *fjurkebaarne* (fire-DIM-burn), and many others.

But then, there remain cases with a diminutive suffix which can not be thought of as particularly small in the first place, let alone that they could stem from child language. This yields for instance Wadman's examples *knibbeltsjefrije* (knee-DIM-pet) or *kontsjieneuke* (ass-DIM-fuck). Other examples in this respect, drawn from WFT, could be *aikebriede* (egg-DIM-fry) or *boatsjefarre* (boat-DIM-sail), but in these, and in many other cases, it is sometimes hard to tell whether something really small is meant or not. What is essential here is that this does not necessarily need to be the case. Even then, the use of a diminutive suffix could be justified, since it can carry all sorts of affective connotations (see Van Zonneveld 1983, 160-164 for this use in Dutch). With a little good will I could imagine that the diminutives of *kontsje*,

(girl-PLUR-corpse, 'girl's corpse'), *rijtjeshuis* (row-DIM-PLUR-house, 'row house') and *vrouwtjesolifant* (woman-DIM-PLUR-elephant, 'female elephant'). In these examples, the non-head can only be interpreted as being singular.
aike and boatsje above indeed have this affective load, but this is definitely excluded in the case of knibbeltsje. This diminutive can only be used with respect to children, but sounds very strange indeed when applied to people in the age of petting.

So, cases can certainly be pointed out where it is not possible that an incorporated noun with a diminutive suffix be connected to a formally identical head of an NP is a phrasal construction. In that case, one is probably obliged to interpret the diminutive suffix in the complex verb as a linking element between the nominal and the verbal part. According to J. Hoekstra (1986a), the diminutive suffix can indeed play a role as linker in Frisian compounding. Two incorporational examples he gives are buoltsjeblane (bubble-DIM-blow) and tømkesobje (thumb-DIM-suck). A linking role of the diminutive suffix is not restricted to noun incorporation. Examples of N-A-compounding are mûskjefel (mouse-DIM-faded) and skoalsjesiek (school-DIM-ill, i.e. faking to get out of school). Within the area of nominal compounding Hoekstra mentions as examples roltsjerdens (roller-DIM-skates) and skipkeljü (ship-DIM-people, i.e. people who live in a houseboat). Even more compelling are examples like goudsjebloom (gold-DIM-flower, 'marigold') or bluodsjesûger (blood-DIM-sucker, 'leech'), with diminuation of the mass nouns goud ('gold') and bloed ('blood'), which as such is not possible. Hence, the suffix in these examples must have a function different from the classical diminutive. If the analysis presented here is correct, then, next to a transitional schwa, the diminutive suffix functions as another possible linking element in the formation of Frisian noun incorporation. 20

2.6 Typology

Travelling through the literature, it appears that noun incorporation does not always show the same outlook across the world's languages. Here I will try to give Frisian its place in the spectrum, by way of applying already existing typologies. 21

The most simple classification has been given by Rosen (1989), in that she only discriminates two categories. By and large, her bifurcation has been taken over by Ackema (1995). Crucial in her division is the question of whether or not a separate NP can be observed which should be related semantically to the incorporated noun. If so, the incorporated noun always has a

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20 E. Hoekstra (1995, 500-502) argues that in the neighbouring Low Saxon dialect of the Dutch province of Groningen the diminutive suffix can also act as a linking morpheme.

21 The essence of this section can already be found in Dyk (1993).
more general content than that external NP. That is the reason why Rosen entitles this type of noun incorporation "classifier NI". Crucially with respect to this type is that the argument structure of the original verb does not change: transitive verbs remain transitive. The external NP can manifest itself in different ways: as an ordinary, complete NP, or rudimentarily, with determiners and/or modifiers, but without an overt nominal head. Baker (1988a), who analyzes noun incorporation as an instance of head movement, interprets these cases as a manifestation of doubling or stranding, respectively. Examples are (74) (from Tuscarora) and (75) (Mohawk), Rosen's (16) and (5):

(74) ne-hra-taskw-ahkw-ha? ha? tsi:r
du-M-animal-pick.up-SERIAL EMPH dog
'He picks up domestic animals' (He is a dog catcher)
(75) Kanekwärünüyu wa?-k-akyatawi?tsher-u:ni
3N.dotted.DIST PAST-1sg.3N-dress-make
'I made a polka-dotted dress'

When we turn to Frisian, it readily appears that this language can not be subsumed under the above-named type. Construed examples with doubling (76) and stranding (77)/(78) are ungrammatical:

(76) * Doede woe dy grouwe hazze graach wyldsjitte
Doede wanted that big hare gladly quarry-shoot
(77) * Doede woe dy grouwe --- graach hazzesjitte
Doede wanted that big --- gladly hare-shoot
(78) * Doede woe dy --- graach hazzesjitte
Doede wanted that --- gladly hare-shoot

Consequently, Frisian should fall within Rosen's other type. She considers this type as being a lexical compound of a noun with a verb, hence her term "Compound NI". Here, one of the arguments of the original verb is satisfied within the compound, resulting in an intransitive complex verb. The ungrammaticality of (76) indeed indicates that Frisian can be headed under this type. Its property of intransitivity will play a major role in my analysis of Frisian noun incorporation, to be elaborated in Chapter 4. There, in section 4.5, some additional tests will be presented which point to the intransitivity of the incorporation verbs.22

22 It is not impossible that Rosen's bifurcation is too rigid, in that there might exist languages which occupy an intermediate position between the classifier and the compound type. Hindi could be an example; see Mohanan (1995) for evidence and
A different and also more extensive typology, also including pragmatic factors, can be found in Mithun (1984). She distinguishes four types. Her division is not simply taxonomic, since she assumes there to be an implicational relationship between the various types. This means that if in a particular language, say, there can be found type II, then that language should also possess type I. Since the implication is downward, a language with type IV should also show the other three types. Mithun also gives her implicational ordering a historical dimension, in that she assumes that a type with a higher number has been derived historically from the type with the next lower number. In this way, languages can differ as the development can stop earlier in one language than in the other.

Type I is dubbed "lexical compounding". Compared to an ordinary verb-object construction, the head noun no longer has a syntactic status; it builds, together with the verb, one intransitive morphological complex. In some languages, this can be evidenced by the location of clitics or by the existence of different aspectual affixes. As an example I give Mithun's (7), from Kusaien, where in the (b)-sentence the adverb is no longer able to be placed between the verb and the object:

(79) a. Sah el twem upac mitmit sac
    Sah he sharpen diligently knife the
    'Sah is sharpening the knife diligently'

b. Sah el twetwe mitmit upac
    Sah he sharpen knife diligently
    'Sah is diligently knife-sharpening'

Type II, entitled "the manipulation of case", has effects on the structure of the whole sentence. The original place of the incorporated noun is no longer left empty, but is now occupied by an original oblique argument, commonly an Instrument, Location or Possessor. In this way, such an argument promotes to a direct argument of the newly formed complex verb. In the following example, from Yucatec, Mithun's (49), a locative is involved:

(80) a. k-in-c'ak-0-k
    INCOMP-I-chop-it-IMPF
    'I chop the tree in my cornfield'

b. k-in-c'ak-ce'-t-ik
    INCOMP-I-chop-tree-TR-IMPF
    'I clear my cornfield'

discussion.
Type III has effects which surpass those on sentence grammar; Mithun speaks in this respect of "the manipulation of discourse structure". Noun incorporation in these cases is applied to familiar information. The result is, that the remaining syntactical phrases are brought into prominence. When in (81), Mithun's (69), a text from Koryak, a whale is introduced, this occurs in a free syntactical phrase. But when the animal no longer is in focus, it is incorporated. The translation reveals that in a language like English the same effect is realized by way of pronominalization:

(81) wutc iänänin yūnl qulaívn. mal-yūnl.
this.time.only such whale it.comes good-whale
ga-yuñy-upényllenau
they-whale-attacked
'This is the first time that such a whale has come near us. It is a good one (whale). They attacked it (the whale)'

In the fourth and highest type Mithun distinguishes, the incorporated noun is semantically related to an independent NP outside the verbal complex. This NP takes care of reference. The incorporated noun has a more general content than the external NP, a fact which Mithun inspires to dub type IV "classificatory noun incorporation". And indeed, this type coincides with Rosen's "classifier NI". This enables me to refer to (74) and (75) above for examples.

Now that we have briefly treated Mithun's typology, the question remains of how Frisian fits in her classification. Type I should not be a problem: when a language shows noun incorporation, then according to Mithun's theory that language should automatically have type I, the first stage, at its disposal. Many of the tests Mithun mentions are not applicable to Frisian, but properties like the ban on inserting an adverb between the incorporated noun and the verb (82) and the complex verb functioning as an intransitive predicate (83) do indeed correspond:

(82) * Heit wol jerappel [hjoed]ADV dolle
   Father wants potato today dig

(83) * De perfester autohimmele alle sneonen har Volvo
   The professor car-washed all Saturdays her Volvo

But how does Frisian figure when we start at the other end of the spectrum? Well, Type IV is out of the question, witness the ungrammaticality of (83), and our treatment of Rosen's "classifier NI".

Type III fails, too, as could be expected in the light of Mithun's discovery that this type only exists in polysynthetic languages possessing affixes that refer to subjects and objects. The fact is that Frisian is no such language. A
The only category that remains to be investigated is Mithun's type II, the one in which another constituent takes over the place left open by the incorporated noun. There are indeed indications that Frisian, besides type I, also has type II incorporation at its disposal. Consider the following sentences:

(84) a. Ik sil him it hier knippe
   'I will cut his hair'
   b. Ik sil him hierknippe
      'I will cut hair-cut'

In (84)a it *hier* is functioning as direct object, and *him* as indirect object. In (84)b, with *hier* incorporated, *him* has changed into a direct object. This can be shown with the help of passive varieties of these sentences. In both the element *him* can be fronted. When *him* is indirect object, then it keeps its object form, as (85)a reveals; when it is functioning as a direct object, then *him* changes to nominative *hy*, as in (85)b:

(85) a. Him sil it hier knipt wurde
     'His hair will be cut'
   b. Hy sil hierknipt wurde
     'His hair will be cut'

Similar examples can be built with other verbs and objects in the area of inalienable possession, for instance *neilknippe* (nail-cut) or *hierwaskje* (hair-wash).

For the languages she investigated, Mithun mentions that not only Possessors but also Instruments and Locatives can occupy the open place left by the incorporated noun. However, as far as I can see, in Frisian, Instruments do not have this possibility:

(86) a. Wy melke de skiep mei de han
    'We milk the sheep with the hand'
   b. Wy skiepmelke mei de han
      'We are milking sheep by hand'
c. * Wy skiep melke de hän
   We sheep-milk the hand

Examples (86)b and (86)c show that after incorporation the Instrument remains in a PP, and is not able to change into an NP.

The situation is somewhat different with Locations. Consider the following quotation of the author R. Brolsma from the weekly *It Heitelân* (1923, p. 235):

(87) Mei syn grouwe hûd ferveskjirre hy deis trije fak souder boppe it normale
   With his fat body paint-sanded he daily three section loft above the normal
   'With his fat body he sanded the paint of three sections of the loft above the average every day'

A shortened formulation of this sentence without incorporation could be:

(88) Hy skijirre de ferve op trije fak souder
   He sanded the paint on three section loft

Here the Location is encoded in a PP. In (87), as a result of incorporation, it is promoted to the direct argument position.

Shift of a Location may seem less common as shift of a Possessor as shown in (84)b, and I must admit that the quote from Brolsma is the only place I found in print. Nevertheless I believe this use is not excluded in principle. At least to me examples like the following sound quite acceptable:

(89) It lytse keammerke moat noch behangplakt wurde
   The small room should still wallpaper-sticked be
   'There should be sticked wallepaper in the small room'

(90) Se moasten de grutte seal noch flierfeie
   They should the large hall still floor-sweep
   'They should should still sweep the floor in the large hall'

Here, too, the Locative is promoted to a direct object. This is proven by (89), since the relevant NP changed into a subject after passivization. As a result, it can induce effects on verbal agreement:

(91) De lytse keammerkes moatte noch behangplakt wurde
   The small room-PLUR should-PLUR still wallpaper-sticked be
It looks as if incorporation can also have a less severe effect on Locations. In that case the outer form of a PP remains intact, but the PP seems to undergo a function shift. This can be illustrated after

(92) a. Jelke lege de jiskepanne op 'e rûchskerne
   Jelke emptied the ashtray at the dunghill
b. Jelke jiskepannelege op 'e rûchskerne
   Jelke ashtray-emptied a the dunghill

In (92)a the PP *op 'e rûchskerne* indicates the direction towards which the content of the ashtray is moving, in other words it could be viewed as a Goal. In (92)b, on the other hand, the PP can not be connected to the ashtray, but only to the subject. In this case it gives the position of *Jelke* when he is emptying the ashtray.

This completes my overview of existing typologies of noun incorporation and the position Frisian occupies in them. In Chapter 4, section 8, I will return in depth to the instances of type II incorporation. For the time being, we can conclude that Frisian noun incorporation is of Rosen's compound type, or Mithun's type I and II. That means that superficially the Frisian variety seems relatively simple. The remainder of this book will put some light on the question of how one should interpret "relatively" in this respect.

### 2.7 Semantic matters

When compared to non-incorporated structures, it can be observed that noun incorporation displays some effects on meaning. These concern the incorporated noun itself and the resulting complex verb. In this section, I will try to show that these special properties can be derived from independent structural and semantic principles.

First the incorporated noun. Already Mardirussian (1975, 386) notes that generally it becomes non-referential. Mithun (1984, 849) makes the same point. This property would explain the restrictions noted in section 2.3 that the incorporated noun can not be accompanied by determiners and that proper nouns or personal pronouns can not incorporate. For Hindi, Mohanan (1995, 92) also notes that the incorporated noun "can refer only to the class of entities denoted by the noun, not to the individual members of a class". That is, it can not refer in a deictic sense; the incorporated noun can only be interpreted as generic.

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23 Some basic ideas of this section were already touched upon in Dyk (1992a).
For Frisian, the same state of affairs can be observed. In the sentence

(93) Heit sit te jerappelskilen
   Father sits to potato-peel
   'My father is peeling potatoes'

no reference is made to any particular potato(es), and indeed, not a single de­
terminer (*the/a/that or those) is allowed in this example:

(94) Heit sit te (*de/in/dy) jerappelskilen

Nor is a proper noun allowed. Compare to that end (95) and (96), where the
(b)-sentences display the incorporational structures:

(95) a. De kapper begjint it hier te knippen
      The barber begins the hair to cut
      'The barber begins to cut the hair'
b. De kapper begjint te hierknippen
      The barber begins to hair-cut

(96) a. De kapper begjint Oege te knippen
      The barber begins Oege to cut
      'The barber begins to cut Oege'
b. * De kapper begjint te Oegeknippen
      The barber begins to Oege-cut

The same pattern as in (96) can be observed with respect to personal pro­
nouns:

(97) a. De kapper begjint him te knippen
      The barber begins him to cut
      'The barber begins to cut him'
b. * De kapper begjint te himknippen
      The barber begins to him-cut

This property of non-referentiality follows immediately when we take into ac­
tcount that the incorporated noun is the non-head of a word. Words are
referentially opaque (Spencer 1991, 42), and hence the incorporated noun is
deprived of its referential capacity. It is not impossible that this non­
referentiality of non-heads can be derived from a deeper property. Ackema
(1995, 111-117) offers an interesting opening in this respect. He states that in
languages with a determiner system it is the determiner which enables a noun
2.7  semantic matters

to refer. Since the incorporated noun lacks a determiner, reference is blocked automatically.\footnote{In turn, as Ackema suggests, the lack of a determiner might be derived from a general ban on elements headed by a member of a closed class in the non-head position of a compound (cf. Hoeksema 1988). Assuming a DP-analysis (Abney 1987 and subsequent work), an NP would be headed by a determiner D, which is a member of a closed class, indeed.}

Now about the semantics of the derived complex verb itself. It has not gone unnoticed that its meaning can deviate from structures without incorporation, albeit that the characterizations in the literature are rather impressionistic. Consider the following quotations:

"The actor carries out the activity without interruption from beginning to end of the process (...) The meaning of these expressions, then, is something like 'to do some --ing, to do a bit of --ing, to take part in --ing'." (Tarpent 1982, 33-34, quoted from Mithun 1984, 854-855)
"These constructions (...) may be generic statements; or descriptions of ongoing activities (...) or habitual activities, in which the specific patient may change; or projected activities, in which the specific patient is not yet identifiable." (Mithun 1984, 856)

What stands out in these quotes is occupation in an ongoing activity directed to a patient which can not exactly be specified or identified. The latter feature is recognizable from the discussion earlier in this section, of course.

The quoted observations can also be applied to Frisian. From a sentence like

(98)  Us mem strobakt
    Our mother pancake-bakes

one can not tell how many pancakes she is baking. It could range from one to an infinite number. Nor can it be inferred how long she is engaged in the activity of pancake-baking; after each finished pancake she can start another one. It could even be the case that she does not finish the first one: just being in the activity of baking could make (98) a true statement.

A habitual reading can (but need not) be favourable, especially when this is evoked by an adverbial expression:
(99) Us mem strobakte altyd op sneon
    Our mother pancake-baked always on saterday
    'My mother used to bake pancakes on saturday'

But also without such a guiding addition an habitual interpretation can
emerge, witness the following quote from the 19th century author Tsjibbe
Gearts van der Meulen describing a workshop where shoes are being made
(the italics are mine):

(100) Men skoenmakke mei seis, saun feinten. Gialt snie, de feinten lapen of
    naiden, en den yet hie men in learloayery, en de soan wier mei de
    küpen.25
    'They made shoes (lit.: shoe-made) with six, seven labourers. Gialt cut,
    the labourers cobbled or sewed, and then they even had a tannery, and
    the son was at the vats'

    (from: Folksfrieun, p. 20)

These observed properties of noun incorporation fall into a natural constel­
lation once it is recognized that they can be ascribed to the inherent durative,
or atelic, or imperfective, aspect of the construction. The general feature of
this time constituency is that the activity the sentence is referring at is pre­
sented in such a way that no natural endpoint is implied (cf. Dahl 1981, 80;
Declerck 1989, 275; Krifka 1989, 236 among others). Hence the perception
of Mithun (1984, 856) that incorporation verbs express an "ongoing activity".
One of the ways to accomplish this is by repeating the same activity an in­
finite number of times. Mithun's habituality then simply is a pragmatically
conditioned subcase of such iterativity (Comrie 1976, 27-28; Declerck 1979,
777). The opposite of durativity, an activity which does have an implied
endpoint, is called terminativity (or telicity, or perfectivity).

There exist several tests to detect durativity, the most exhaustive set pre­
sumably to be found in Dowty (1979, 56-58). The most simple and commonly
used test is the one which depends on the selective properties of certain ad­
verbial expressions. In English, the opposition between the prepositions in vs.
for is used, where for instance for an hour indicates durativity, and on the
other hand in an hour betrays terminativity. In Frisian, these expressions
could be translated as oerenlang and yn in oere, respectively. The aspectual
differences can be illustrated by the following examples, where (101) is
terminative, and the incorporational (102) is durative:

25 Significantly, next to an incorporation verb this quote has three verbs in
detransitive use, viz. snie, lapen and naiden. The impact of detransitives for noun
incorporation will be made clear in Chapter 4.
2.7 semantic matters

(101) a. Buorman fervet de doar yn in oere
Neighbour paints the door in an hour
'Our neighbour paints the door in an hour'
b. ? Buorman fervet de doar oerenlang
Neighbour paints the door for hours
'Our neighbour paints the door for hours'

(102) a. * Buorman doarfervet yn in oere
Neighbour door-paints in an hour
b. Buorman doarfervet oerenlang
Neighbour door-paints for hours

Another test concerns entailment distinctions when a sentence is embedded as complement of the verb *ophålde* ('stop'). From durative

(103) Buorman hold op fan doarfervjen
Neighbour stopped from door-paint

we can rightly conclude that he has been door-painting indeed. Such an entailment does not hold in the case of the terminative

(104) Buorman hold op fan de doar te fervjen
Neighbour stopped from the door to paint
'Our neighbour stopped painting the door'

since he can stop before having finished, in which case one can not say that he painted the door.

When we translate the result achieved thus far into the well-known quadripartition of Vendler (1957), we can simply conclude that the incorporation verbs themselves can not be an Accomplishment (a standard example being: *draw a circle*), or an Achievement, with *win the price* as a classical example. These classes describe a definite period of time, and hence show terminative aspect. A difference between the two is that Achievements are momentary and hence do not show an internal process or development, whereas Accomplishments do. Verkuyl (1993) abbreviates this feature as [± ADD ON]. States, exemplified by verbs like *know, like or hate*, are qualified negatively for this feature. This is essentially what differentiates them from incorporation verbs, since it can be said that what they have in common is that both describe an indefinite period of time, and hence are inherently durative. In short, incorporation verbs can be subsumed under a fourth Vendlerian class: Activities. As such, they can be put on a par with a verb like *walk*. Note that we restrict ourselves here to the result of incorporation. The Vendler classes will return in Chapter 4, but then I will use them as a tool to gain a better under-
standing of the question of which verbs can enter noun incorporation itself. That is, the focus will then be on the input of the process.

After having determined to which aspectual class incorporation verbs belong, the next question to be answered of course is what renders a sentence with such a verb durative. Studying the aspectual literature there appears to be a parallel when a verb takes a bare plural or mass noun object. Compare:

(105) a. * Judith ate three apples for an hour
    b. Judith ate apples for an hour
(106) a. * Mary drank a bottle of wine for an hour
    b. Mary drank wine for an hour

where the (a)-sentences are terminative and the (b)-sentences durative. What is decisive in such cases is the role the quantification of the object plays in aspect construal. To the best of my knowledge, Verkuyl (1972) was the first to call attention to this "compositional nature of the aspects". For a recent treatment, see Verkuyl (1993). Essential is that bare plurals (in the case of count nouns) and mass nouns cannot be said to denote a specified quantity. According to Krifka (1989) this is due to their property of cumulative reference (or partivity in L. Carlson's (1981) terms), a concept which can be traced back to Quine (1960). The essence is that, whenever you add to or diminish from what is referred to by the bare plural or mass noun, the same term can still be used as a correct description. So, if you have water and you add water to it, you still have water. And taking apples from apples nevertheless results in apples. This amounts to saying, according to Verkuyl (1993, 101), that bare plurals and mass nouns denote a set which cannot be counted. No cardinality is expressed, no specified quantity is given. Hence Verkuyl's feature [-SQA], "Specified Quantity of A". A typical property of these expressions in this respect is that they are not accompanied by a quantifier (or determiner). All this is in opposition to such expressions as the apple, an apple, my apples, a litre of wine, etc. In these cases one can say that the NP is bounded, where bare plurals and mass nouns pertain to unboundedness.

How can this property of the object NP be related to the durative aspect of the VP? Take as a first example the NP eat an apple. The NP an apple is bounded. When you eat an apple, this activity will at one point have to be stopped, viz. when the apple is totally consumed. Hence, the VP eat an apple has a natural end point, and is therefore terminative. This is different with the VP eat apples. The NP apples has no upper limit in itself, and so the action denoted by the VP eat apples could go on indefinitely. This description eat apples does not imply an end point, and that is why its aspect is durative. The same applies when the NP is a mass noun. Hence, eat applesauce, for instance, is durative, too.
The above covered an important part of aspectual theory in a nutshell. How can this be applied to noun incorporation? Let us start with the most obvious case: mass noun objects. Compare the following sentences, (107) without and (108) with incorporation:

(107) Doete drinkt wyn  
Doete drinks wine  
(108) Doete wyndrinkt  
Doete wine-drinks

In both cases, the form of the object is bare wyn. It goes without saying that, when in the case of a phrasal object as in (107) nothing can be detected about its cardinality, the same situation obtains when the same form shows up in a compound. Hence, both objects receive in Verkuyl's (1993) terminology the feature [-SQA], and durativity follows.

The situation is a little bit more complicated in the case of count noun objects. There we find the phrasal object, when inducing a durative interpretation, in its (bare) plural form:

(109) Froukje plöket apels  
Froukje picks apples

However, when incorporated, the plural suffix -s is gone:

(110) Froukje apelplöket  
Froukje apple-picks

The incorporated noun is now formally identical to the singular, the same as in for instance de apel ('the apple') or in in apel ('an apple'). But is it also semantically singular? If so, then its cardinality could be determined as one, and according to compositional aspectual theory the compound should have been terminative. But this is not correct, sentence (110) is clearly durative:

(111) Froukje apelplöket oerenlang

The interpretation of (110) is indeed such that the action need not be restricted to one apple, although it could be. In the latter case, given our knowledge of the duration of apple-picking, the presentation in (111) would be fairly odd, of course. In fact, from (111) nothing can be concluded about the amount of apples being picked. This makes the indeterminacy of the cardinality even
higher as in the case of a bare plural object, where it can be argued that the minimum is at least two. 26

That the incorporated noun in (110) is only superficially singular can also be concluded from those nouns which have -en as their plural suffix, for instance *biten* from singular *byt* (‘beet’). Here, the incorporated form need not be restricted to the singular, although that occurs, too, for instance in *bytdolle* (beet-dig). However, as we saw in section 2.5 above, more often there appears a single schwa as transitional sound between the two members of the compound: *bitedolle*. The upshot is that, in such a case, the form of the incorporated noun is clearly different from the singular. What is left, then, is an incorporated noun whose quantity cannot be specified, and which therefore causes durative aspect.

Finally, it is good to stress that for one combination of a verb and an object, Frisian now has two ways to express durativity. Not only can this be achieved by way of noun incorporation, but also the “traditional” way of a bare object is left open, witness such examples as (107) and (109). Therefore, one can not conclude that noun incorporation is needed to express durativity. The one exception seems to be some constructions where the nominal infinitive suffix -en is involved, as in

(112) a.  Froukje sil te apelploaitsjen
         Froukje shall to apple-pick
         ‘Froukje will be out picking apples’

b.  *Froukje sil te apels ploaitsjen
    Froukje shall to apples pick

where the alternative of the bare plural phrasal object is not available. But this restriction exists for an independent reason, and has nothing to do with a restriction on durativity or the like. I postpone the discussion of this question until Chapter 5, section 7.

The last question relevant to the present section is whether there is a difference in meaning between the two constructions which both express durativity. In other words, do (107) and (108), or (109) and (110), stand for the very same idea? The difference is subtle, far more subtle than between terminativity and durativity itself, but I think there is a difference, indeed. In (109), for instance, one still grasps the idea of some individuality of the apples. This might be due to the fact, as Oshita (1995, 188) states, that a bare plural NP as such still allows an existential interpretation (cf. G. Carlson

26 But see Krifka (1989, 235) for a relativizing view.
2.7 semantic matters

1977).\(^{27}\) In (110), on the other hand, it seems as if the individuality has disappeared. It focuses, so to say, more on a way of picking, in this case applied to apples, or, with Mithun (1984, 849), it is "describing the type of picking in progress". And further on, p. 856, she continues: "a V stem and a N stem are combined to form an intransitive predicate denoting a unitary concept. The compound is more than a description; it is the name of an institutionalized activity or state". I think the last statement is put too absolutely, at least if applied to Frisian. The case of picking apples seems to me an example.\(^{28}\) But what one could say is that when an activity tends to get institutionalized, then a construction with noun incorporation is the most appropriate way to denote it. For instance, look at the following quote from a newspaper report in the Leeuwarder Courant (1988), where the president of the committee who organizes the event of skûtsjesilen warns against breaking down the traditions of these races with sailing cargo-vessels:

(113) "Mar gelokkich binne der noch minsken as de Zwaga's en de Meeters, dy komme om te skûtsjesilen en net om te silen mei skûtsjes" (emphasis mine, S.D.)

'But fortunately there still are people as the Zwaga's and the Meeters, who come for vessel-sailing and not for sailing with vessels'

Or compare (114)a with (114)b, both durative, but the first with incorporation:

(114) a. Wy kofjedrinke om tsien oere
   We coffee-drink at ten o'clock
   'We drink coffee at ten o'clock'
   
   b. Wy drinke om tsien oere kofje
   We drink at ten o'clock coffee
   'We drink coffee at ten o'clock'

Here, the description in (114)a evokes much more a picture of the whole ceremony of drinking coffee, so including the pouring of the liquid into the cups, the additional eating of cookies, the collegial chat, to mention a few

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\(^{27}\) Oshita (1995, 187-188) makes a comparable distinction with respect to English -er-nominals: "It is, therefore, perfectly natural that one can be called a lifesaver without saving a life while one may not be called a saver of lives without saving at least some lives" (p. 188).

\(^{28}\) Languages appear to differ in this respect. Velázquez-Castillo (1995, 702-704) points out that noun incorporation in Guaraní (Paraguay) is indeed restricted to institutionalized, and sometimes one could even better say ritualized, activities.
highlights. Sentence (114)b, on the other hand, is at first hand more restricted to the drinking proper. This is not to say that a construction with a phrasal bare object as in (114)b is excluded from an institutional or ceremonial flavour beforehand. The Dutch translation of (114)b, for instance, has it:\textsuperscript{29}

\begin{quote}
Wij drinken om tien uur koffie
\end{quote}

What emerges here is that, where a language has two ways to express durativity, the institutionalized (or habitual) reading tends to be reserved for the one with incorporation. In all their informality I can therefore agree with Mithun’s characterizations. No doubt, they follow from the fact that verb and object are tightened together in a compound, that is to say, in one word and concept.

So far some semantic aspects connected to noun incorporation. Further on in this book semantical questions will also be touched upon. The most important are in section 3.3 about referentiality and 4.3 on aspectual issues. In no way does this make the treatment of semantic issues exhaustive. For instance, I feel a lot more could be said about the interpretation of the incorporated noun than has been done here. I leave this for future research, however. For now, the reader has enough equipment to keep up with the chapters to follow.

2.8 Concluding remarks

Of course, a straight conclusion of such a heterogeneous chapter would be asking too much, but an enumeration of the main results could be useful at this point. A prerequisite for this book is of course that noun incorporation in Frisian really exists. In section 2.3 ample evidence is given which indeed, whether it has a phonological, morphological or syntactic character, leads to the conclusion that the combination of the incorporated noun and the verb should be considered as one word. Moreover, the formation of these words is a productive process, as section 2.2 revealed. Section 2.4 taught us that the resulting complex verbs can be inserted in the same syntactic positions as where ordinary verbs can, albeit with some problems in finite contexts and (om) te-infinitives. In section 2.5 we observed that under certain conditions the boundary between the nominal and the verbal part of incorporation verbs

\textsuperscript{29} But even here one has to keep in mind (G. Booij, personal communication) that the example could be ambiguous, in that koffie can serve both as a bare NP and as a part of a separable compound. The institutionalized reading tends to be reserved to the latter construction, in the same spirit as the division in Frisian.
can be filled up by a linking phoneme -e-; also a linking morpheme, i.e. the diminutive suffix, may show up here. As to the kind of incorporation itself, it appeared in section 2.6 that Frisian possesses a relatively simple variety, being of the compounding type, or Mithun's (1984) type I, with occasional instances of type II. The final section concerned semantic properties, which appeared to follow straightly from the incorporated noun's status as part of a word and its inherent lack of quantification.
3 Locus of Derivation

3.1 Introduction

"In some ways, noun incorporation is the most nearly syntactic of all morphological processes", Mithun (1984, 889) remarks. And indeed, superficially an incorporation construction as (1)a seems to have a lot in common with a genuine syntactical way of putting things as in (1)b:

(1) a. ... dat er koslachtet
    ... that he cow-slaughters
b. ... dat er de ko slachtet
    ... that he the cow slaughters

In both cases the cow-slaughtering acts as a verb phrase, and moreover, there seems to be the same semantic relationship between the subject er, the verb *slachtsje* and the thing which is going to be slaughtered. If, as we have argued in section 2.3, *koslachtet* in (1)a is one word, then the best one can say is that noun incorporation is a process where morphology and syntax seem to meet each other. No wonder that some authors, analyzing noun incorporation in various languages, come to the conclusion that the complex verbs should be derived syntactically. The most notable writer to cite in this respect is Baker (1988a), but as we soon will see he is not the only nor the first one.

In this chapter we pose this question with regard to Frisian, i.e. whether Frisian noun incorporation is a morphological or a syntactical process. But before tackling the question, a brief exposition of the problem is in order. In my opinion, stating it as an opposition morphology versus syntax is overly simplistic. The problem should rather be decomposed into several in part independent questions, and an articulated theory of grammar could help in judging the reach of the answers.

The first question then relates to the status of the incorporation construct, i.e. is it a word or a phrase, or formally, is it a product of the X° level, or higher? In the latter case, it is obvious to derive it with the help of syntactic means. At least, in general, I have no knowledge of a proposal to form phrases solely by morphology.

This problem does not need to concern us here, since in the preceding chapter, section 2.3, a great many of arguments led us to the conclusion that the Frisian incorporation constructs are words. So, our first question is already answered, and as we shall see below, that outcome is only to be confirmed further.

The analysis of incorporation constructs as words immediately raises a second question, viz. where these words are to be derived. There is no general
agreement among researchers that all words are to be formed by morphology. We face here the general problem of the relation between morphology and syntax, which has had its different viewpoints throughout the history of generative grammar. I will not deal with that general problem in detail; the reader is referred to overviews such as Spencer (1991). But it will be clear that noun incorporation has been one of the issues in the debate.

For a solution, two possibilities have been advanced. One is that the formation of words, and so of complex verbs, belongs to an autonomous i.e. morphological, component. Proponents of this view all adhere to some version of the Lexicalist Hypothesis, which originates in Chomsky (1970). I quote here an early formulation, to be found in Jackendoff (1972, 12/13):

(2) **Lexicalist Hypothesis**

Transformations do not perform derivational morphology

The other possibility is to leave the building of words to the syntax. In the early days of generative grammar, up to Chomsky (1970), this was the usual procedure, and after the mid-eighties, these kind of proposals can be heard again, for instance from Sproat (1985) and, on the basis of Dutch data, from Bennis (1993). Specifically with respect to noun incorporation, researchers as Baker and Sadock favour a (more or less) syntactic approach. Their accounts will be investigated below. The outcome will be that we can find no reasons to regard Frisian noun incorporation as a syntactic process; the facts can much better be accounted for if the building of the Frisian complex verbs is done in the morphology proper.

Having said that, a third question immediately emerges, because somewhere these complex verbs are to be linked to the syntax. In other words, where is lexical insertion taking place? The standard lexicalist view holds that the morphological component is part of the lexicon, and that the lexical items are mapped onto syntactic D-structure. Borer (1991, 120) calls this the linear model:
This scheme remains of course in the same spirit as Chomsky (1981). I shall use it as a model of reference for the discussion to follow. Recently, some amendments have been proposed in the lower part of the picture within the Minimalist Program (Chomsky 1995), but a basic assumption of my analysis, i.e. that lexical information is projected onto the syntax, has gone unchallenged. Borer herself (1988; 1991), while retaining an autonomous word formation component, suggests that lexical insertion is sometimes urged to take place in later stages of syntactic derivation. She dubs her model "parallel
morbidity”. I take over the picture from page 46 of her 1988 publication to indicate the difference with the linear model.¹

As we will come to see, there is no reason to assume that the insertion of Frisian incorporation verbs has to take place in the course of syntactic derivation. As far as Frisian noun incorporation is concerned, the model could be kept straightforward and simple. That is of course not to say that in language there might not be morphological phenomena that urge later insertion, or even derivation in syntax. But such phenomena must be studied in their own right. In this book, we restrict ourselves to just one phenomenon, noun incorporation, in just one language, Frisian. Hopefully, the achievement of that modest aim can eventually contribute to a better understanding of the interplay between syntax and morphology.

Having dealt with these three questions, we of course cannot disregard a fourth one: how is the formation of Frisian noun incorporation constructs actually taking place? Assuming that it is located in the lexicon, and that these NV combinations are instances of compounds, how should we conceive the compounding process? Is it comparable to what is going on with nominal compounds? Or should we leave it to some operation regarding the verb's argument structure?

This fourth question, about the how of the derivation, will be addressed in the next chapter. Here we will investigate the question of where to perform Frisian noun incorporation.

In order to provide a solution to that problem, we will first follow some arguments that have been given in previous literature concerning the position of noun incorporation in other languages. Although the process shows up in many different ways, one might hope that some arguments are transferable to

¹ See also Shibatani & Kageyama (1988) for comparable ideas.
an analysis of the Frisian facts. This inquiry at the same time functions as a very global survey of the field, albeit that the main interest of this thesis remains Frisian. By no means is the exposition claimed to be a complete or representative historical overview; the intention is merely to give the reader some idea of possible ways of thinking. The guiding idea remains that we have to look for arguments that should in some way be valid for the Frisian case. Hence, less or no attention is paid to arguments based on rich morphological case systems, or to a language such as Greenlandic, where the incorporating verb is a suffix (Rischel 1971; 1972). For incorporation, Frisian makes use of the same verbs as in comparable syntactical expressions, and the language has a comparable poor morphological case system such as for instance Dutch or the mainland Scandinavian languages.

Our account will commence with some global considerations, put forward in the literature, that concern the syntactic, morphological and/or lexical nature of some properties. It will appear that these will not easily lead to a straightforward solution. However, placing the discussion within a more well-defined and restricted theory of grammar proves to be helpful, as I hope to demonstrate in 3.3 and 3.4, which explore the possibilities of deriving Frisian noun incorporation with the help of syntactic movement and reanalysis, respectively. It will appear that these ways of derivation can not be very successful, and that Frisian noun incorporation would be better dealt with in the lexicon. Section 3.5 then addresses the question of where to link the complex NV-verbs with the syntax.

3.2 General considerations

In this section, we will pay attention to earlier ideas concerning the position of noun incorporation in the grammar. Three authors will be highlighted: Sapir, as he was a forerunner, Mithun, as a representative of the lexicalist standpoint, and Sadock as an advocate of a syntactic approach. Therefore, not every publication about noun incorporation is included. For instance, Anderson (1985), DiSciullo & Williams (1987), Anderson (1992), Mohanan (1995) and Spencer (1995) also touch on issues being discussed here.

Sapir

As early as the beginning of this century the issue was debated as to whether noun incorporation should be viewed as a morphological or a syntactic process. In a paper from 1911 in the American Anthropologist Edward Sapir criticizes A.L. Kroeber's definition of noun incorporation:
"Noun Incorporation is the combination into one word of the noun object and the verb functioning as the predicate of a sentence." (Kroeber 1909:569)

What, according to Sapir, is wrong with that definition, is that it is a mixing of morphological ("one word") and syntactic ("object") requirements:

"Noun incorporation is primarily either a morphologic or syntactic process; the attempt to put it under two rubrics at the same time necessarily leads to a certain amount of artificiality of treatment." (Sapir 1911:255)

Sapir considers the fact that the noun functions as an object as a mere accident. According to him noun incorporation is a purely morphological process, in which stems are combined to new words, and in which the relation between the stems is entirely free, just as in nominal compounding. So, the noun is not bound to act as an object; instrumental or locative relations should in principle also be possible, as he mentions in his glosses "to steam-run" or "to concert-sing". Sapir claims that in the Iroquois and Pawnee languages he even found nouns in "subjective use", not as a genuine subject, but in a predicative relation as in "he spy-travels" (= he travels as spy).

For me, this line of reasoning is questionable. If the derivation of complex verbs were entirely comparable to the derivation of complex nominals, one would expect that true subjects were also incorporable, because it is a well-known property of NN compounds that their formation is fairly free and in principle not restricted to certain syntactic categories (e.g. Scalise 1986). But it is reported for a wide range of languages that a striking property of noun incorporation is that subjects hardly ever incorporate. This also holds for Frisian:

(5)  a. De frou kuieret
     The woman walks

     b. * Froukuieret
        Woman-walks

At first sight this conjecture seems to be undermined by nominalizations like

(6)  it frouljuskeatsen       (the women-s-keats\textsuperscript{2}-en)
     it jongesriden           (the boy-s-skate-en).

\textsuperscript{2} \textit{Keatse} is a national Frisian sport, a kind of tennis without a net and a racket, played in a team of three persons.
But it can be argued that these forms are not nominalizations of incorporation verbs (graphically presented in (7)a), but root compounds of a noun and a nominalized simple verb, as in (7)b:

(7)a.

Firstly, these forms only occur in nominalizations, and not in real verbal positions as in *te*-infinitives or finite sentences. That fact makes them highly suspicious:

(8)  
  a. * Gurbe en Piter sille te jongesriden.  
      Gurbe and Piter shall to boys-skate  
  b. * Gurbe en Piter jongesride  
      Gurbe and Piter boys-skate

Secondly, an intermediate *s* shows up in these forms. As we have seen in section 2.5, this linking phoneme shows up in nominal compounding, but never in noun incorporation. So, it is a reasonable conclusion that in the case of (6) we simply have examples of NN composition, and that no noun incorporation is involved here.

This means that a language like Frisian supports likewise the claim made
for other languages (cf. Baker 1988a, 82) that no subjects can be incorpo­
rated, and hence that incorporation is not a totally free process. In Frisian, NPs functioning as a subject are not the only NPs which refuse to incor­
porate. For instance those nouns that refer to a certain period of time do not generally incorporate. One notable exception is jünprate (literally 'evening-
talk', i.e. to pay a visit in the evening, mostly to another couple), but other parts of the day, or other verbs, are out:

(9) a. We sille nei Gurbe en Loltje te jünpraten
    We shall to Gurbe and Loltje to evening-talk
b. * We sille nei Gurbe en Loltje te middeipraten
    We shall to Gurbe and Loltje to afternoon-talk
c. * We sille nei Gurbe en Loltje te jüniten
    We shall to Gurbe and Loltje to evening-eat

So, all in all, noun incorporation, at least in Frisian, is not as free as Sapir suggested that in general it should be, and surely it is not as free as nominal compounding. On the other hand, does this lead to the conclusion that noun incorporation is not lexical? Surely not, for not every lexical process is as free as nominal compounding. Lack of analogy with nominal compounding does not allow us to draw any conclusions at all about the lexical character of the compounding of other categories.

Sapir (1911, 259) mentions, although rather implicitly, another point where noun incorporation equals nominal compounding. It struck him that in some American languages the incorporated noun is always interpreted generically, or, as he terms it, the complex verb has a "general application". So, "I meat-eat" must be understood as "I eat meat, I am a meat-eater". This property of generic interpretation holds for Frisian as well, as we have seen in section 2.7. Sapir considers it as "in striking and significant analogy with the prevailingly general character of compound nouns".

Does this analogy hold water? In my view, it does not, in that we do not have a bilateral relationship here. On the one hand, one could maintain that genericity is a property of parts of morphological constructs, as for instance DiSciullo & Williams (1987, 50) do. But contrary to what Sapir suggests, it is not true that the only way to express genericity is by morphological means. Sapir's gloss "I eat meat" already constitutes a counterexample, since the NP meat may have a generic interpretation here. So, the genericity of the incorporated noun is not a conclusive argument in favour of a morphological ana­
lysis of noun incorporation.

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3 This statement is possibly too strong (see the next section and 4.9 for discussion), but as a general tendency it is certainly true.
3.2 general considerations

Mithun

For seventy years or so the phenomenon of noun incorporation seems to have been out of sight for the international linguistic community. That situation radically changes in the eighties. Sadock (1980) can be credited to be the first one to call attention to the interest of noun incorporation for linguistic theory. But for ease of exposition, we neglect chronology and skip to Mithun (1984). That can be done without any difficulty, since Mithun seems to have overlooked Saddock's publication, which, by the way, raised a polemical after-effect in Sadock (1986) and Mithun (1986).

The reason for highlighting Mithun's ideas is that she, like Sapir, stresses the lexical character of noun incorporation. She gives a couple of arguments, mostly boiling down to the statement that incorporation verbs have the properties of words. So she mentions the fact that sometimes idiosyncratic meanings arise (p. 852; 889), that they are subject to word-internal phonological processes (p. 875), and that the incorporated noun does not refer and hence that incorporation verbs are used to describe "institutionalized activities" (p. 850).

These facts can indeed be noticed for Frisian too; evidence has been presented in Chapter 2. So, let us assume that Mithun is right in claiming that incorporated verbs are always words. Does that necessarily lead to the conclusion that noun incorporation is lexical? The answer is positive if one has the standpoint that all word formation is lexical. Mithun does not explicitly mention this premise, but it seems that it is underpinning her line of argument. But if one puts the locus of word formation itself into question, as Baker (1988a) and others do, then the whole argument of wordhood has no point, as we argued in section 3.1.

That Mithun has a rather narrow vision of the lexicon can also be distilled from her other arguments. One of them is that there are differences in productivity according to which nouns or verbs are involved in incorporation, "governed both by lexical accident and by pragmatical considerations" (Mithun 1984, 863). It seems as if she again appeals here to the alleged function of the lexicon as a storing place for the irregularities of language. But the examples she gives have a much more general character than for them to be idiosyncratic. One is that "animate N's are not often incorporated at all", another that "N's reflecting individual patients of V's such as 'to be sick' or 'to die' are rarely if ever incorporated" (p.863). In this last case, Mithun seems to refer to unaccusative verbs, and indeed, also in Frisian such verbs never incorporate. But that may not be due to an idiosyncratic property of those single verbs, but rather to the constraint that every sentence needs a subject (Chomsky's 1982 Extended Projection Principle), and the only NP remaining a candidate for that function is Mithun's "patient". The other example has
likely to be related to a pragmatic factor, viz. that patients are mostly inanimate NP's (Hopper & Thompson 1980), in contradistinction to agents. Mithun's alleged irregularity is simply a consequence of the fact that patients easily incorporate and agents never incorporate. In Frisian, if the right conditions are there, animate patients have no problem to be incorporated. Complex verbs as *bargefuørje* 'pig-feed' or *bermnarje* 'child-tease' are conceivable without any problem.

The most remarkable aspect of Mithun's view of the lexicon is her report about the speakers conscious knowledge of individual lexical items:

"In Mohawk, where NI of all types is highly productive, speakers frequently report their pleasure at visiting someone from another Mohawk community and hearing new NI's for the first time. They have no trouble understanding the new words, but they recognize that they are not part of their own (vast) lexicon. When they themselves form new combinations, they are conscious of creating 'new words', and much discussion often surrounds such events." (Mithun 1984, 889)

Although I am the first to admit that there are huge cultural differences between Mohawk communities and the average Frisian ones, this description strikes me as highly implausible. In Fryslân, for instance at birthday parties, discussions about questions of language are not uncommon, but these normally have a social or dialectal language background, and never concern words that have been formed by productive grammatical processes, at least as far as I have come across. And this is of course what can be expected. According to Mithun, speakers of Mohawk must have enormous vocabularies as a consequence of productive rules, instead, as Sadock (1991, 84) points out, of the effect of saving storage space that these rules should have.

All in all, one gets the impression that for some reason Mithun very much wanted noun incorporation to be a lexical process, and in the perspective of that desire she has been looking for facts that in the widest sense could be evidence for such a position. For someone who as a first step takes a neutral position, her arguments are not convincing, and I have not found much use in them for the Frisian case.
3.2 general considerations

Sadock

The first one who seriously claimed that noun incorporation is a syntactic phenomenon was Jerrold M. Sadock. In a series of publications (1980, 1985, 1986, 1991) he gives various arguments in favour of that position, mainly based on noun incorporation in West Greenlandic. One of the problems of comparing that language to Frisian is the fact that the verbal parts of the complex verbs in West Greenlandic do not exist independently as words and are thus to be considered as suffixes.

Most of the phenomena which Sadock counts as evidence for the syntactic character of West Greenlandic noun incorporation simply do not occur in Frisian. Some of them are connected with stranding, but Sadock (1985) also mentions definiteness of the incorporated noun, and its feasibility of triggering agreement outside the complex verb.

However, Sadock discusses two features that at first glance seem to have parallels in Frisian, and that hence deserve our attention. These are productivity and referentiality. Sadock (1985) mentions productivity as one of the characteristics that points to the syntactic character of West Greenlandic noun incorporation. As it looks as if Frisian has no idiosyncratic restrictions in the forming of complex NV verbs, here we seem to encounter a relevant point. Recall that the item already figured in Mithun's treatment of noun incorporation. There she took the opposite stand; according to her, a lack of productivity would hint at noun incorporation as a lexical process. But what about the converse? Does the productiveness of a process automatically lead to the conclusion that it is syntactic? Sadock (1991, 84) derives such a position, I believe not correctly, from Chomsky (1970). Indeed, if one creates a maxim that all productive processes belong to the syntax, then the issue would be readily resolved, and one could simply conclude that noun incorporation in Frisian should be regarded as syntactic.

The question is whether the connection lexical-unproductive on the one hand and syntactic-productive on the other has to be made beforehand. Why could not the lexicon be conceived of as a component which also stores productive processes? In fact, those linguists who assume that all word formation should be located in the lexicon take that position. If productive morphological processes such as nominal compounding or deadjectival nominalization by *-ness* in English are taken to be in the lexicon, why could not a productive process of NV compounding be located there? As soon as one acknowledges that productive processes are not only possible in syntax but also in the lexicon, then the whole item ceases to be a criterion in the demarcation of both components.

The other issue mentioned by Sadock as having impact on the syntactic character of noun incorporation is the referential capacity of the incorporated
noun. He states that it is not to be expected that parts of words have independent referential or discourse properties. With respect to the latter, they would follow the maxim of Postal (1969) that words are anaphoric islands. So, if it were the case that a coreference relation could be established between the incorporated noun and another element in the discourse, then it could be concluded that it functions as an independent nominal, comparable to syntactic phrases. Sadock claims that such coreference relations can be observed in a language like West-Greenlandic. As to Frisian, however, this is not so easy:

(10) ? It keamerfamke fan it hotel is oan it bèd,opmeitsjen. Wat sil ik der, jùn lekker op sliepe!

'The chambermaid of the hotel is bed-making. How fine shall I sleep on it tonight!'

But this restriction is not a very absolute one. When we change the circumstances, coreference can be more acceptable:

(11) It wiif is oan it bèd,opmeitsjen. Wat sil ik der, jùn wer lekker op sliepe!

'My wife is bed-making. How fine shall I sleep on it tonight, again!'

Since human nature seems to be such that man and wife like to sleep in one and the same bed, it is easy to detect which bed the speaker in (11) has in mind. However, this does not mean that the incorporated noun in (11) should necessarily refer. The most one can say is that the pragmatic circumstances are suitable enough to establish a relationship. This is perfectly in line with the results of Ward, Sproat & McKoon (1991). They found out that Postal's maxim is far too absolute, and that given the right pragmatic conditions a felicitous relationship can be established successfully. This is all the more easier when a unique concept is evoked which is referred to (cf. Booij & Van Santen 1995, 145). In that case, even an example as the following (quoted by Sadock 1986, 26 from Hankamer & Sag 1976), where there is even no overt noun as a possible antecedent, may become acceptable:

(12) I dined at the Homard Rouge. It was much too salty.

In other words, coreference is not a good test to detect the syntactic character of an incorporated noun.

If it were the case that incorporated nouns could refer, one would expect that proper names could also act as such. We have seen in sections 2.3 and 2.7 that in Frisian this use is indeed prohibited. However, Schuurman (1987, 186) uses the existence of proper names as an indication for the syntactic activity of the incorporating noun in the neighbouring Groningen dialect in the
3.2 general considerations

North of the Netherlands. She gives as evidence:

(13) Nou mot je ophollen te Piter Moatje pesten
    Now should you stop to Pieter Moatje tease
    'Now you should stop teasing Piter Moatje'

This is not the place to discuss all the ins and outs of Groningen noun incorporation (see section 5.5 for more details), but it must be admitted that a comparable example in Frisian is conceivable at the least:

(14) No moatte jim ophalde te Fritsnarjen
    Now should you stop to Frits tease
    'Now you should stop teasing Frits'

However, the situation in which such a sentence can exist is very special: it can only be uttered with a lot of emphasis, and the speaker betrays his highly emotional state of mind. With a more "neutral" context, incorporation of a proper name, in any case when used deictically, is out:

(15) * De skoaljonges begunen te Fritsnarjen
    The schoolboys started to Frits-tease
    'The schoolboys started teasing Frits'

In an emphatic situation, there seems in general more to be possible in this construction than otherwise, for instance the insertion of adverbials:4

(16) Hâld op te hyltyd mar wer narjen!
    Stop to every once and again tease!

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4 Compare in the same vein the exclamative sentences presented by J. Hoekstra (1989, 35-36), which I quote here literally, glosses included:

(i) Wat dochst dochs hyltyd [cp te PRO yn- en útrinnen]
    What do-you ever always to in- and out-walk

(ii) Wat moat dat dër [cp te PRO rare kluchten útheljen]
    What must that there to funny tricks play

(iii) Dy doar hyltyd [cp te PRO iepenwaaien]
    That doar always to open-blow

The deviation of such sentences with respect to noun incorporation can be observed from (ii), with a maximal projection in the te-infinitive, which is illicit in a neutral style:

(iv) * Hja begun te rare kluchten útheljen
    She began to funny tricks play
    'She began playing funny tricks'
Summarizing, Sadock's plea for considering noun incorporation in some languages a syntactic process has not given us conclusive arguments that Frisian belongs to that stock. On the other hand, we have seen that also Sapir's and Mithun's arguments favouring a morphological or lexical approach could be questioned seriously. Apparently, it is hard to find convincing evidence for the one or the other position. However, Sadock is not the only one in the syntactic camp. So, let's turn to Baker and see whether he can give us a clue as to the locus of Frisian noun incorporation within the grammar.

3.3 Syntactic movement

A great advantage in dealing with Mark C. Baker's ideas about noun incorporation above Sadock's is that he is working within the boundaries of a well-known and well-defined framework, i.e. Government and Binding Theory (Chomsky 1981 and subsequent work; see also the model depicted in (3)). That makes testing his hypothesis for Frisian a lot easier. Within Government and Binding Theory, Baker can be considered a representative of a movement that tries to bring morphology, or at least a part of it, back to the syntax, thus challenging the Lexicalist Hypothesis. In my account I shall mainly use Baker (1988a), a revised version of his 1985 MIT doctoral dissertation. As to noun incorporation, the heart of Baker's (ECP) account has also been taken over by Miller (1993). Quite recently, Baker updated his theory in Baker (1996), especially in chapter seven, pp. 279-337. Several amendments are proposed in order to keep up with the developments in generative-syntactic theory. The essentials, viz. that the main properties can be explained by movement of the head noun of a complement, have remained, however. Therefore, for my account, I decided to stick to the 1988 version of his analysis of noun incorporation.

The cornerstone of Baker's theory is a specific interpretation of Chomsky's adagium that D-structure must be characterized as a pure representation of

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5 Noun incorporation is not unique in this respect. Spencer (1991, 473), after having noticed that in their discussion of English synthetic compounds Fabb (1984) and Sproat (1985) use the same fact to arrive at a totally different conclusion, also signals in general "the difficulties in finding uncontroversial criteria for placing processes in the syntax, the lexicon or elsewhere".
3.3 syntactic movement

thematically relevant grammatical functions (Chomsky 1981, 43). For that purpose, Baker (1988a, 46) formulates his UTAH:

(18) The Uniformity of Theta Assignment Hypothesis (UTAH)

Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure.

As a consequence of the UTAH, all operations affecting a verb and its arguments must be performed in the syntax, because at D-structure there is just a uniform representation. As for noun incorporation, assuming that in example (1)a the element ko has an identical thematic relationship to the verb slachtsje as has ko in (1)b – both can be regarded as Theme or Patient – the UTAH requires that both be projected at the same D-structure location:

(19)

\[
\begin{array}{c}
S \\
| \Downarrow \ \\
NP & VP \\
| \Downarrow \ \\
er & NP \\
| \Downarrow \ \\
Det & N & V \\
| \Downarrow \ \\
de & ko & slachtsje
\end{array}
\]

How, then, can Baker arrive at a complex verb, which should have a structure like (20) by itself?

(20)

\[
\begin{array}{c}
V \\
| \Downarrow \ \\
N & V
\end{array}
\]

The solution is a variant of Move α, to be precise an instance of Head Movement. The head N of the object NP is taken to adjoin to the verb, leaving

\[6\] I depict a tree in the same style as Baker’s, so without using functional projections, which, by the way, would only complicate the picture without having any sense for our purposes. The verb is projected at the right, to reflect the SOV character of Frisian.
a trace and creating a typical adjunction structure, one that mirrors (20):

(21)

\[
\begin{array}{c}
S \\
\text{NP} \\
\text{VP} \\
\text{NP} \\
\text{Det} \quad t_i \quad N_i \quad V
\end{array}
\]

Baker's analysis is mainly based on American Indian languages as Mohawk, but does it hold for Frisian, too? In other words, are the Frisian facts compatible with Baker's Move \(a\) analysis? In order to investigate that question, we shall apply the four arguments he provides to Frisian.

The first two arguments concern productivity and referentiality. They remind us of Sadock's, so I will not comment on them anew. I only want to mention that Baker offers an explanation for the putative referential capacity of the incorporated noun: reference would be established via the trace that is left behind, and could thus be evidence for movement here.

Far more interesting are the other two arguments, for they relate directly to consequences of the rule Move \(a\). First, look at (19). The object NP is split up in a determiner and a noun. Now, when the noun is moved, it is to be expected that the determiner will strand, i.e. remain at its original location. Baker claims he found examples where this phenomenon shows up, as in this one from Mohawk (Baker's (47a)):

(22) Ka-nuhs-rakv thikv
    3N-house-white that
    'That house is white'

Such a stranding might indeed point to a movement having operated here, although there are authors who claim that these facts can be interpreted in another way (Di Sciullo & Williams 1987; Michelson 1991; Rosen 1989).

Be that as it may, how does Frisian act in this respect? It appears that stranding of determiners is forbidden there. This can most clearly be shown when we put a sentence like (1)b in main clause order:

(23) a. Hy slachtet de ko
    He slaughters the cow
b. * Hy ko,slachtet de t

This example seems to be very straightforward. However, I argued in section 2.7 that semantically an incorporated noun is closest to a bare NP complement, and that is an NP without a determiner by definition. So, the ungrammaticality of (23)b does not urge that the determiner is not allowed to strand, because it might have been derived from a sentence with a bare NP, in which case there would not have been a determiner at all.

For a conclusive argument, one could therefore better look to examples including a modifier. Addition of a modifier to a bare noun does not affect its aspectual or generic interpretation:

(24) a. Loltsje yt oerenlang apels
    Loltsje eats for hours apples
    'Loltsje eats apples for hours'
b. Loltsje yt oerenlang reade apels
    Loltsje eats for hours red apples
    'Loltsje eats red apples for hours'

And here, we indeed see that stranding is disallowed:

(25) * Loltsje apel,yt oerenlang reade t

The same occurs with postnominal modifiers:

(26) a. Buorman drinkt altiten bearenburch7 mei sûker
    Neighbour drinks always berenburg with sugar
    'Our neighbour always drinks berenburg with sugar'
b. * Buorman bearenburch,drinkt altiten t, mei sûker
    Neighbour berenburg-drinks always with sugar

The conclusion is evident: a movement analysis would predict that Frisian should show stranding effects. This prediction is not borne out, so, until now, this kind of analysis has not gained much support.

But perhaps chances could change in a new round. The claim that noun incorporation is an instance of Move α implies that noun incorporation is subject to the restrictions of that rule scheme. So, as a fourth argument, Baker holds that in the languages he investigated, incorporation displays ECP effects. This would imply that movement of the head noun is only allowed

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7 Bearenburch is a tasty Frisian gin bitters.
when it is governed by the antecedent, which happens to reside here as adjoined to the verb. So, from the possibility of being governed, one could conclude to the possibility of being incorporated.

The ECP predictions can be split up in those where incorporation is prohibited, and those where it is allowed. Noun incorporation, then, should be forbidden when the source NP is an adjunct, when it functions as a subject of a transitive or unergative verb, or when it is governed by a preposition. There should exist only two NP positions from which movement of the head noun is licensed, viz. when the source NP functions as the subject of an unaccusative verb, or when it functions as a direct object. What we now have to examine is whether these predictions are borne out by the Frisian facts.

Let us begin with adjuncts, and without debating the exact borderline between adjuncts and arguments, let us assume that time adverbials form a true instance of the former. In order to avoid interference with potential other factors, one should choose a time adverbial that does not have the shape of a PP. This one might be a proper example:

(27) Hja sille in middei te riden
    They shall an afternoon to skate
    'They shall go skating one afternoon'

Here, it is impossible to incorporate the time-indicating noun middei:

(28) * Hja sille te middeiriden
    They shall to afternoon-skate

This appears to be the normal pattern, as already signaled in (9), with the notable exception of jünprate in (9)a, which is repeated here for convenience:

(29) We sille nei Gurbe en Loltsje te jünpraten
    We shall to Gurbe and Loltsje to evening-talk
    'We shall pay a visit to Gurbe and Loltsje in the evening'

But this seems to be an idiosyncratic exception, not only in the choice of the combination of items, but even grammatically: it occurs only in te-infinitives. For instance, as a finite verb, as a participle, and in the oan it-construction, this complex verb is out:

(30) a. * Wy jünprate by Gurbe en Loltsje
    b. * Wy hawwe by Gurbe en Loltsje jünpraten
    c. * Wy sille by Gurbe en Loltsje oan it jünpraten.
What applies to nouns in time adverbials, holds equally well for nouns in locatives:

(31) a. De bern binne yn 'e bosk oan it boartsjen
    The children are in the wood ON IT play
    'The children are playing in the wood'

b. * De bern binne oan it boskboartsjen
    The children are ON IT wood-play

There are some notable exceptions in the field of locatives however, which we will deal with in section 4.7. Moreover, locatives form a less proper test for adjuncts, as they are always packed in a PP, which might be a factor for not incorporating as well. Nonetheless, one could state that Baker's first ECP claim is by and large confirmed.

Another prediction of an ECP account of noun incorporation concerns divergent behaviour of subjects of intransitive verbs. According to the Unaccusative Hypothesis (Burzio 1981), intransitive verbs can be divided into unergative and unaccusative ones, where the subject of the former is an external argument and that of the latter is an internal argument, at D-structure being projected at the object position. Therefore, the latter is governed by the verb, and the former is not. Given that difference in being governed, the subject of an unergative verb is predicted not to incorporate, whereas the subject of an unaccusative verb should possess that possibility. Having the same government properties, subjects of transitive verbs should behave along the same lines as those of unergatives.

Unfortunately for a syntactic approach, however, subjects of unaccusative verbs do not incorporate in Frisian. By and large, unaccusatives in the language can be recognized with the help of the same tests as provided for Dutch, e.g. as described in Hoekstra & Mulder (1990) and T. Hoekstra (1992). To mention two of them, unergative participles are accompanied by the auxiliary *havwe (Dutch hebben, English have), and the unaccusative ones by *weze (Dutch zijn, English 'be'):

(32) a. Hy hat/*is kuiere
    'He has walked'

b. Hy *hat/is fallen
    'He has fallen'

8 Time adverbials do occur in nominalizations as it middeisriden, but these must be conceived as NN compounds, as I also argued with respect to examples with subjects as in (6).
Furthermore, unaccusatives allow a prenominal use of their participle, where the modified noun corresponds to the single argument, but unergatives fail to undergo such usage:

(33) a. * De kuiere man
    The walked man
b. De fallene man
    The fallen man

Another test, typical for Frisian, might be that unergative verbs can compound with the particle om in its prototypical meaning 'here and there' (Dyk 1991), while unaccusative verbs can not:

(34) a. De man hat dêr omkuiere
    The man has there aroundwalked
    'The man has walked around there'
b. * De man is dêr omfallen
    The man has there aroundfallen
    'The man has fallen around there'

Besides falle, typical unaccusative verbs in Frisian are komme ('come'), gean ('go') and stjerre ('die'). The subjects of these verbs, i.e. their D-structure objects, never incorporate in Frisian, nor do other unaccusative subjects:

(35) a. De man falt
    The man falls
b. * Manfalt
(36) a. De man komt
    The man comes
b. * Mankomt
(37) a. De man giet
    The man goes
b. * Mangiet
(38) a. De man stjert
    The man dies
b. * Manstjert

Let us now turn to the subjects of transitive and unergative verbs. As to the former, I have not been able to find any example where a subject could be incorporated:
3.3 syntactic movement

(39) a. De boer wjuddet de biten
    The farmer weeds the beets
b. * Boerwjuddet de biten
    Farmer-weeds the beets

Hence, these facts are in accordance with the predictions of an ECP analysis.

By and large, the same applies to the subjects of unergative verbs:

(40) a. De man kuieret
    The man walks
b. * Man-kuieret

At first sight, a verb like *kuozzemuozje ('make a mess'), might seem to be a counter-example, as this word could be analyzed as consisting of the verb *muozje, which itself means 'make a mess', and the noun *kuos, nickname for 'pig'. However, the isolated status of the example makes it attractive to look for another source. Actually, there is one available. It is the noun *kuozzemuos, which the WFT translates into Dutch as 'ratjetoe', so in English: 'mess'. In fact, *kuozzemuos can be seen as a nominal compound, the second member *muos already having the meaning 'mess' by itself, where the compound could be interpreted as 'mess as being made by a pig'. The verb *kuozzemuozje can be seen as a case of conversion of the noun *kuozzemuos. I refer to Chapter 1 for some discussion of this type. The internal structure of *kuozzemuozje would thus be [kuozze]N[muoz]s]N]N]je]V, and not the incorporational [kuozze]N[muozje]v. This analysis is supported by the fact that the verb itself can have a subject:

(41) It bern kuozzemuozzet
    'The child makes a mess'

If the subject argument really had been incorporated, there would not have been left room for a "double" subject. Therefore, the contention that subjects of unergative verbs do not incorporate can be maintained.

However, some other counter-examples should be taken more seriously. These involve the verbs *sniewiskje and *sniejeie, both having a comparable meaning, as in:

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9 The last one has also been noticed by Knop (1954, 256) for the – slightly deviating from mainland Frisian – Frisian dialect of the island of Skylge (Dutch: Terschelling).
(42) a. It begjint te sniewiskjen
   It begins to snow-fly
   'The snow begins to fly'

b. It begin te niejeien

As such, these seem to be rather isolated cases. Comparable "complex weather verbs", even with unaccusatives, are out:

(43) * It begjint te reinfallen
    It begins to rain-fall

Notwithstanding their isolated position, these verbs – sánstowe (sand-blow) could be another case – contradict Baker's ECP analysis. I will return to them in section 4.9.

Summarizing, of the intransitive verbs, the subjects of the unergative ones, with a few notable exceptions, never incorporate in Frisian, which would be correct along the lines of the ECP if a syntactic movement analysis of noun incorporation was assumed. Such an analysis also predicts that the subject of unaccusative verbs could in principle incorporate. Baker claims to have actually found examples where such an incorporation has taken place. Nevertheless, in Frisian there are no signs that this possibility really exists. So, here we have a serious indication that a syntactic movement analysis of noun incorporation does not work for Frisian.

At the heart of Baker's ECP account lies the condition that the trace left by the moved head noun must be governed by its antecedent adjoined to the verb. This excluded adjuncts and subjects of unergative and transitive verbs from incorporating, which happened to be in accordance with the Frisian facts. Along with these categories, there is theoretically a third position excluded, viz. when the source NP is embedded in a prepositional phrase. Since the preposition is a closer selecting head, the PP node acts as a barrier, thus preventing government from the verb. So, according to the ECP account, a head noun should not be allowed to incorporate from a position embedded in a PP.

Again, Baker claims that this is the situation in the languages he encountered. But what about Frisian? At first sight, the view is confusing. On the one hand, there are a lot of NP heads that must be assumed to be embedded in a PP that refuse to incorporate. Here are a few examples:

(44) a. * paadrinne
     (Cf. Rinne oer in paad, 'walk over a path')

b. * doarprinne
     (Cf. Rinne nei in doarp, 'walk to a village')
3.3 syntactic movement

3.3 syntactic movement

c. * glêsdrinke
   (Cf. Drinke út in glês, 'drink from a glass')

But in contrast to such examples, there are others that exhibit incorporation, and where the incorporated argument syntactically can be projected only by means of a PP:

(45) a. rûrtsjetikje
    (Cf. tikje tsjin in rût, 'tap at a window')

b. snoekfiskje
    (Cf. fiskje op snoek, 'fish for pike')

c. angelfiskje
    (Cf. fiskje mei in angel, 'fish with a rod')

d. flaaksride
    (Cf. ride mei flaaks, 'ride with flax', i.e. 'transport flax')

I chose these examples to show that a variety of semantic roles can be involved in the process, such as Location, Goal, Instrument, and something which comes rather close to a Patient. So, the phenomenon shows up on a broad front, and furthermore, a lot of examples could be added to the ones above. It might thus be clear that here something not idiosyncratic is at stake. Of course, these verbs are in need of an explanation. However, at this point it is sufficient to conclude that the ECP cannot handle these cases. Apparently, the borderline between incorporation and nonincorporation is not equal to the separation between governed and ungoverned NP's. So here we have another point where a syntactic approach to Frisian noun incorporation breaks down.

The same even happens to be true in the core case of noun incorporation: the incorporation of direct objects. The point is that these, occupying a governed position, should be expected to incorporate. And indeed, with many verbs there are no difficulties in this respect. But there also happen to be unexpected exceptions. Consider for instance verbs with two internal arguments:

(46) a. De direkteur jout de besikers plakplaatsjes
    The manager gives the visitors stickers

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10 A syntactic movement account would meet another difficulty, since, in contrast to expectation, the preposition does not strand:

(i) a. Oebele fisket mei angels
    Oebele fishes with rods

b. * Oebele angeljfisket mei t
In (46), we face the familiar double object construction in a Frisian shape, (47) shows a direct object with an obligatory directional phrase, and in (48) I give one example from the class of *spray/load* verbs (cf. Rappaport & Levin 1988). The (b)-examples show that incorporation is prohibited if there exists a second internal argument. The background of this behaviour we shall have to deal with later. At any rate, the ungrammaticality of the (b)-examples cannot be attributed to the existence of a trace in the complement of the verb, as the (c)-examples show us.

But we are not even in need of constructions with two internal arguments to show that an ECP account of incorporation is too general with respect to direct objects. Consider for instance the following sentences:

(49)  a. Richt bernimt boumansjes yn 'e tun
     Richt notices wagtails in the garden
   b. * Richt boumansjes bernimt yn 'e tun
      Richt wagtail-notices in the garden

(50)  a. De kealkop hatet negers
      The skinhead hates negroes
   b. * De kealkop negerhatet
      The skinhead negro-hates
3.3 syntactic movement

(51) a. Oege kriget de hiele dei al kadootsjes
    Oege receives the whole day presents
    'Oege receives presents all day long'
b. * Oege kadootsjekriget de hiele dei al
    Oege present-receives the whole day

Again, such examples deserve an explanation. One of these verbs being stative, it looks as if some semantic constraint is going on here, but this is not the time to work out this idea. Let it be sufficient to show that a movement approach will not do the job for these cases.

Note, furthermore, that with the same government relation with respect to the direct object there can be different possibilities for incorporation, apparently depending on the choice of the subject (52) or the occurrence of a prefix (53):

(52) a. Gurbe faasbrekt
    Gurbe fase-breaks
    'Gurbe is breaking fases'
b. * De bal faasbrekt
    The ball fase-breaks
(53) a. Piter gedichteskriuwt
    Piter poem-writes
    'Piter writes poetry'
b. ? Piter gedichtebeskriuwt
    Piter poem-describes
    'Piter describes poems'

I will not comment on these examples here; they will return prominently in the next chapter.

At this point, let us summarize the results of our applying Baker's arguments in favour of a syntactic movement approach to noun incorporation in Frisian. With respect to productivity, we argued that that can not be a decisive property for regarding a process as syntactic or lexical. With respect to referentiality, it appeared that the Frisian incorporated noun had not the ability to refer, which did not point directly to its syntactic character. This was supported by the stranding facts, which Frisian did not appear to exhibit. And last, but surely not least, Frisian did not obey the predictions made by the Empty Category Principle. In my view, these points, and especially the last two, lead to the conclusion that a syntactic movement approach is not the right one to derive Frisian noun incorporation.

I will now give one other type of argument, one that Baker does not mention, but one that provides even stronger ammunition to blow up a syntactic
movement approach for Frisian. The line of reasoning is the following. If it is the case that Move α is involved in the derivation of Frisian noun incorporation, then the trace left by the head noun should also play an active role in dependencies like binding and control.\textsuperscript{11} It appears, however, that this is not the case. The following examples show that there is a contrast between the (b)-sentences, which contain a trace by standard assumptions, and the (c)-sentences with alleged traces within a Bakerian analysis:

\begin{tabular}{ll}
(54) & a. Sake beskermet fügel\textsubscript{s} tsjin harsels\textsubscript{s} \\
 & Sake protects birds against theirselves \\
 & b. Fügel/ws, beskermet Sake tsjin harsels\textsubscript{s} \\
 & Birds/what protects Sake against theirselves \\
 & c. * Sake fügel, beskermet tsjin harsels\textsubscript{s} \\
 & Sake bird-protects against theirselves \\
(55) & a. Oege tekenet fügel\textsubscript{s} sturtleas\textsubscript{s} \\
 & Oege draws birds tailless \\
 & 'Oege draws birds without a tail' \\
 & b. Fügel/ws, tekenet Oege sturtleas\textsubscript{s} \\
 & Birds/what draws Oege tailless \\
 & c. * Oege fügel, tekenet sturtleas\textsubscript{s} \\
 & Oege bird-draws tailless \\
(56) & a. Sjerp bout boaten \textsubscript{[om mei e, te silen]} \\
 & Sjerp builds boats [COMP with to sail] \\
 & 'Sjerp builds boats to sail with' \\
 & b. Boaten/ws, bout Sjerp \textsubscript{[om mei e, te silen]} \\
 & Boats/what builds Sjerp [COMP with to sail] \\
 & c. * Sjerp boatebou t \textsubscript{[om mei e, te silen]} \\
 & Sjerp boat-builds [COMP with to sail] \\
\end{tabular}

The (b)-sentences show clearly that a syntactic movement, due to the trace left behind, is no obstacle in maintaining a relation between the moved constituent and the element in the complement. In contrast, in the (c)-sentences, with incorporated objects, such a relation breaks down.

The contrast between the (b)- and (c)-sentences leads to the natural conclusion, that the latter contain no trace at all. And this would mean that, in the case of incorporation, there has been no movement at all. This is in accord-

\textsuperscript{11} A comparable argumentation is used by Rizzi (1986) to claim the existence of pro in an Italian sentence like

(i) Questo conduce alla seguente conclusiva

and the absence of an empty category in its English cognate

(ii) This leads to the following conclusion
ance with the picture that emerged from our account of the arguments Baker put forward in favour of a syntactic analysis of noun incorporation. So, our initial impression that in Frisian noun incorporation no syntactic movement is involved is further confirmed.

Before closing this section, we still have to remain a moment with Baker. For, as an attentive reader might notice, why was it necessary to dwell so extensively upon Baker's syntactic analysis, when he himself points out that it is only valid for incorporation languages of Mithun's (1984) type III and IV? Have not we (section 2.6) established that Frisian does not reach further than the types I and II? 12

Yet, I believe our investigation has not been without purpose. First, Baker does not treat the languages of the lower types at length, as he is concerned with demonstrating that some languages exhibit syntactic properties in their noun incorporation, rather than showing that some languages fail to meet such syntactic requirements. The mere existence of these kinds of incorporation in such languages is mainly banned to the footnotes (Baker 1988a: nr. 2, nr.

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12 Baker is very unclear about the status of type II. It seems as if he wants to include a part of that type as being syntactic (1988a, 451; 1988b, 32). Although I argued in section 2.6 that Frisian has type II noun incorporation, it appears that that type is mainly restricted to inalienable possession constructions. Only referentiality and stranding might be appropriate items to detect whether syntactic noun incorporation is at stake in these cases. Both tests fail, however:

(i) a. Ik kjimde har it hier, It, wie noch wiet
   I combed her the hair. It was still wet
   'I combed her hair. It was still wet'
   b. * Ik hier,kjimde har. It, wie noch wiet
      I hair-combed her. It was still wet

(ii) a. Ik kjimde har it ljochte hier
     I combed her the blond hair
     'I combed her blond hair'
    b. * Ik hierkjimde har it ljochte
        I hair-combed her the blond

Also the test involving activeness of traces is failing:

(iii) a. Ik wosk har de fuotten, nei inoar,
      I washed her the feet after each other
      'I washed her feet successively'
    b. * Ik fuotjwosk har nei inoar,
        I feet-washed her after each other

(iv) a. Ik wosk har earst de kOl1t j skjin j
      I washed her first the ass clean
      'First, I washed her ass'
    b. * Ik kontjwosk har earst skjin;
        I ass-washed her first clean
Second, Baker's argumentation for type I being lexical is not always that strong. For instance, he does not inquire, as we did, whether type I languages fail to undergo ECP effects. His remark that (most) NV combinations are deverbal (Baker 1988a, 78; Baker 1988b, 22) and in fact are nouns or adjectives\(^\text{14}\) misses the point, since it can not be denied that in some languages – and so in Frisian – verbal combinations also exist. Reference to semantic drift (Baker 1988b, 22) can not count: Frisian noun incorporation for example is in most cases purely compositional, and on the other hand, idiomatization can also occur in syntactic expressions. So, we are left with the lack of stranding (Baker 1988a, 454) and referentiality (Baker 1988a, 78) as his most serious arguments for lexicality. We have dealt with these arguments above, and in my view they must be taken seriously. But even then, about the way these types of noun incorporation should be derived, one does not get any further as "it is possible that N+V formation is purely lexical in these languages, unlike Iroquan and Southern Tiwa" (Baker 1988a, 454).\(^\text{15}\)

There is also another difficulty with Baker's splitting up of the noun incorporation phenomena into a syntactical and a lexical version. The problem, although not mentioned by Baker at all, is how the latter fits in with the UTAH (18), repeated here for convenience:

\[
\text{(18) The Uniformity of Theta Assignment Hypothesis (UTAH)}
\]

Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure. (Baker 1988a, 46)

\(^\text{13}\) It is not impossible that this is the reason why some people seem to have overlooked them, which may in turn have led them to think that all noun incorporation necessarily has to be dealt with in a syntactic manner. I refer here to Bennis & Hoekstra (1989, 313) and Haegeman (1990, 86), who suggest that Dutch complex verbs such as pianospelen ('play piano'), stofzuigen (dust-suck, 'hoover') or landmeten (land-measure, 'survey') are derived syntactically by means of head movement. The mere unproductivity of this type of word formation in Dutch (Booij 1990a) would render such a proposal highly suspect.

\(^\text{14}\) Baker (1988a, 78) gives the following examples (his (6)):

\begin{enumerate}
    \item Pat is a hopeless \textit{money-loser}
    \item \textit{Tobacco-buying} is illegal in civilized cultures
    \item \textit{Basket-givers} should get breaks in their income taxes
    \item Martha went \textit{man-watching}
\end{enumerate}

\(^\text{15}\) In Baker (1996), he is still rather vague about a syntactical or lexical account for type I incorporation, although the latter analysis seems to be preferred now. What has remained is that Baker only touches on the issue in the footnotes, especially the numbers 2 and 4 (pp. 330-331). And in footnote 24 (p. 334) can be read: "Baker 1988a is ambivalent on this point, and I will not discuss the matter here".
The crucial term, of course, is "thematic relationship". If there is such a relationship between the verb and the incorporated noun, then, according to the UTAH, that noun should have been projected as a direct object NP at D-structure, and hence the complex verb could only be derived syntactically. Baker does not mention this potential problem, but in his (1988b) paper he seems to hint at it in stating that the incorporated noun of lexical incorporation cannot be considered as a syntactic argument (p. 22), and the verb not as a thematic role assigner (p. 32: note 1). However, he does not give independent evidence for this statement, so it looks as if the noun is not a syntactic argument because it is lexical. It might be clear that this would not bring us any further. But, for now, I will not dwell any longer upon this topic, and only tentatively conclude that within Baker's system some issues concerning the relationship between lexical noun incorporation and the existence of the UTAH still have to be clarified.

3.4 Reanalysis

Besides head movement, another syntactic way of deriving noun incorporation is conceivable, one which J. Hoekstra (1989) seems to hint at, and in which direction he was indeed thinking at that time (personal communication). Hoekstra (p. 28) states that a noun can only be incorporated if it is adjacent to the verb at S-structure. In that way, one could imagine the verb and its object could amalgamate by way of some kind of reanalysis, presumably to be taken at PF. As we have seen in section 3.1, such a move could, at least in spirit, fit in with proposals made by Borer (1988; 1991) or Shibatani & Kageyama (1988) (see the model depicted in (4)).

That such a solution for Frisian noun incorporation could emerge is not as strange as it may seem at first glance. As already stated, Frisian is, together with its West Germanic relatives Dutch and German, an SOV language, so the natural position of the object is in front of the verb, which fits nicely with its position in compounds. Moreover, the language displays no movement of the bare verb by a rule of V-raising, by which the adjacency of verb and object would be broken, as actually occurs in a language like Dutch (see for instance Reuland (1990) and De Haan (1992)). To illustrate the point, compare the following examples from Frisian (57) and Dutch (58), respectively:

For other criticism of the UTAH, see for instance Jackendoff (1990), Borer (1991), Van Valin (1992) and Neeleman (1994).
Now if – as a result of Verb Second – the only case where the order object-verb is disturbed is in main clauses with a finite verb, and if in addition it is observed that incorporation is prohibited exactly in that type of sentence, then the idea that noun incorporation is merely a rearrangement of surface structure could easily be formed.

Nevertheless, such a view would run into great difficulties. Apart from the problem of how such a reanalysis should be conceived of technically, it simply is not true that finite declarative main clauses are the only ones where at the surface syntactic OV order does not show up. Also in interrogative and imperative sentences, where the verb is in first position, the object necessarily follows the verb:

\[(59)\] Slachtet er de ko?
Slaughters he the cow?
'Does he slaughter the cow?'

\[(60)\] Slachtsje de ko!
Slaughter the cow!

Moreover, the observation that noun incorporation in finite declarative main clauses is disallowed, is factually not correct. There simply exists no contrast in acceptability between Hoekstra's examples

\[(61)\]...
... dat er briefskriuwt
... that he letter-writes
'... that he writes a letter/letters'

and his wrongly starred

\[17\] At least, Hoekstra does not inform us about this side of his proposal. Perhaps Marantz' concept of Merger, also conditioned by adjacency, could be a candidate (cf. Marantz 1984; 1988a; 1988b), although Marantz himself does not mention noun incorporation.
3.5 Ordering with lexical insertion

Although not as common as for instance in contexts such as te-infinitives or the oan it-construction, sentences where an incorporated verb has undergone Verb Second are by no means ungrammatical in Frisian, as my personal database with excerpts from WFT and written Frisian texts clearly corroborates. Apart from the fact that Verb Second is able to move a complex verb, a solution by some form of reanalysis of surface structure would meet other serious problems. At least to me, while referring to my account of Baker’s proposals in the previous section, it is far from clear how such a reanalysis could ever differentiate between those direct objects that are allowed to incorporate, and those that are not. The same holds for the differences in incorporation from PP’s as well.

This leaves but one conclusion: reanalysis must be rejected as a possible way of deriving Frisian noun incorporation.

3.5 Ordering with lexical insertion

Now that we have established that syntax cannot deliver the proper means to derive Frisian noun incorporation, we are left the option that derivation in a separate morphological component might give better results. This will indeed be the line of research to be pursued in the next chapter.

But first we will have to answer the third question of the introductory section of this chapter. That is, assuming a derivation within a separate morphological component, where does the linking of the morphological output with the syntax take place? In other words: where do the complex NV-verbs enter the syntax? After Borer’s (1988; 1991) proposals for a parallel morphology, as a refinement of the lexical hypothesis, this is a question that calls for an answer.

As is evidenced by the inability to participate in binding and control

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(62) Hy briefskriuwt
   He letter-writes
   'He writes a letter/letters’

18 For some citations, see section 2.4. As a matter of fact, I even found far more examples of finite incorporated verbs in root clauses than in embedded ones. However, embedded clauses will be statistically less frequent, and of course, chance may also have played its role here.

19 Bok-Bennema & Groos (1988), in their analysis of West-Greenlandic noun incorporation, also take recourse to some reanalysis operation, under the requirement of adjacency. One great difference is that, in their proposal, the (affixal) verb is already subcategorized to take a noun head at the left.
(section 3.3), Frisian noun incorporation structures do not seem sensitive to syntactical information. Syntactic opacity is mentioned by Borer (1991) as one of the properties of those morphological processes that result in D-structure insertion.

There is another reason to reject the hypothesis that Frisian incorporation structures be inserted in a later stage of syntactic derivation, at least if we want to maintain the Projection Principle of Chomsky (1981), which I quote here in the slightly reformulated version of Borer (1988, 61):

(63) Projection Principle

Given a syntactic derivation D consisting of R₁...Rₙ, where R is a level of representation, for each pair <Rᵢ,Rᵢ₊₁>, Rᵢ and Rᵢ₊₁ may not have different lexical specifications.

From this, Borer infers that morphological rules that bring about, as she calls it, changes in the linking of Θ-positions, or in grammatical functions, should not interfere with syntactic derivation. Now, as noun incorporation in Frisian has the effect of rendering the verb intransitive, it will be clear that we have here a rule in the above-mentioned sense. If we want to maintain the projection principle, we are forced to locate the rule in a stage prior to D-structure.

The upshot of these considerations is that noun incorporation in Frisian must be performed in a separate morphological component, and that the resulting complex verbs are mapped onto syntactic D-structure. We will assume, according to standard assumptions, that that component is part of the lexicon. What we ought to elaborate now is a lexical analysis of Frisian noun incorporation which is able to tackle the intricate data we have come across. This will be pursued in the next chapter.

3.6 Concluding remarks

Perhaps the most recurring question with respect to the phenomenon of noun incorporation is where to do it. In the literature, one can find two ways of thinking, one proposing to perform the derivation of the complex verbs in the syntax, the other to leave it to a separate morphological component, which is situated in the lexicon. In this chapter, I have tried to solve the problem for Frisian. It appeared, however, that many arguments given in the literature for the one or the other position are not always very conclusive. But a more constrained and articulated theory like the (syntactic) one of Baker (1988a) is very useful to get more insight into the properties of the Frisian case. Its application reveals that there are no good reasons to locate Frisian noun incorporation in a later stage of syntactic derivation.
incorporation in the syntax. The most persuasive indications are that Frisian refuses to obey the predictions made by ECP effects and that the alleged trace of the moved noun is not active syntactically. This leads to the conclusion that Frisian noun incorporation can not be accomplished by means of syntactic movement. I further showed that a reanalysis operation at S-structure is not a good solution either, nor that it is necessary that the lexical items formed by incorporation should be inserted in a later stage of syntactic derivation. With respect to Frisian noun incorporation we end up, then, with the classical situation of the output of morphology being projected into the syntax. How the necessary lexical operations should be performed and how they can handle the data we have come across will be the subject of the next chapter.
4 A Lexical Analysis

"The degree to which an action affects a patient is often a factor in incorporability".  
(Mithun 1984, 863)

"There is a very interesting parallel here between Rosen's analysis and 'null object' constructions in English and Italian".  
(Spencer 1991, 471, note 11)

4.1 Introduction

The previous chapter revealed that existing analyses could not be applied directly to the Frisian variety of noun incorporation. So, the time has come to try to give a solution of our own. As we have claimed that Frisian noun incorporation should be considered a lexical process, naturally, a solution should be pursued by means that fit in that component. The main thrust will be towards covering the intricate facts we encountered when we discussed Baker's proposals (section 3.3). To repeat the most important ones: on the one hand the non-incorporation of subjects in general, as well as of double internal arguments and some direct objects, and on the other hand the unexpected incorporation of some oblique arguments.

It is my aim to keep the analysis as simple as possible, and to construe a system where the possibilities and impossibilities naturally result from the interaction of independent principles, thereby adhering to a modular structure of the human language capacity. Ideally, as many facts as possible should be explained by the system, and as many – perhaps at first glance unrelated – phenomena as possible should be integrated.

After a first exploration of what could be the most promising direction of inquiry, the main division of the chapter will be along the lines of superficial argument types. Transitive verbs, being the most frequent source of incorporation, will be tackled first. Although, on the face of it, it might seem that such a choice supports a syntactical analysis, it should be stressed that this distinction is made purely for practical reasons. The principles discovered with transitive verbs can easily be applied thereafter to the other argument types, in an endeavour to establish a unified basis for all noun incorporation in Frisian. In the meantime, it will be seen whether the analysis can shed some new light on old problems.

More concretely, this strategy results in the following organization of this chapter. The next section explores what kind of compounds we are in fact
dealing with. The restrictions on noun incorporation from transitive verbs are the topic of section 4.3. In section 4.4, it appears that the same verbs can be involved in a process of detransitivization. In section 4.5, an effort is made to explain what the exact factors are that condition these processes, and why they may do this. In section 4.6 an attempt is made to give the results obtained thus far a sound grammatical basis. Thereafter, these results are applied to the more complicated cases: oblique arguments (4.7), multiple internal arguments (4.8) and subjects (4.9), respectively.

I call the analysis that will be presented lexical because the derivation of noun incorporation is situated in the lexicon. In this respect, I would like to point out that in my opinion the lexicon is more than a storing place for all kinds of irregularities and peculiarities and other things a language user simply has to memorize. Following Fagan (1992, 17), one could refer to this part of the lexicon as the Static Lexicon. If this were all the lexicon could offer, then, for reasons of the restricted storage capacity of the human brain, one could argue that a productive process could better be handled transformationally, as for instance Mardirussian (1975, 388) proposes with respect to noun incorporation in Turkish. However, a broader view on the concept of the lexicon is likewise possible. Fagan, to mention one representative, also distinguishes a Dynamic Lexicon, which could be conceived of as the generative component of the lexicon, where general rules can apply. Among them are productive rules of word formation, one of them forming complex verbs in Frisian, as I hope to show in the following sections.

It is hard to be fully original, and even if one sometimes has that illusion, it appears in reading and re-reading that just in passing someone else already launched an idea which lies at the heart of one's own proposals. To give the full credit to whom it is deserved, I gave two quotations at the very beginning of this chapter. Both Mithun and Spencer do not or only hardly work out their statements, maybe because they have not been aware of the potential impact of these observations. This chapter will show that their remarks are important indeed, and it attempts to provide a framework that will make clear why this is so.

4.2 First explorations

One of the advantages of assuming that the derivation of noun incorporation takes place in the (dynamic) lexicon is that it naturally fits in with other word

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1 This idea is not new, of course, see for instance Booij (1977) or Kiparsky (1982).
formation processes, where it can be taken to be the input for.\(^2\) We have shown in section 2.3 that Frisian noun incorporation functions that way. For clarity of exposition I only give examples with prefixes here.\(^3\) Ge- and fer-, for instance, can combine with the products of noun incorporation:

\[
\begin{align*}
(1) & \quad \text{geboatsjefar} & \text{(PREF-boat-sail, 'boat-sailing')} \\
& \quad \text{gekloklied} & \text{(PREF-bell-ring, 'bell-ringing')} \\
& \quad \text{gepüdsjeplak} & \text{(PREF-bag-stick, 'bag-sticking')} \\
(2) & \quad \text{ferhânbûte} & \text{(PREF-hand-beat, 'hurt oneself by hand-beating')} \\
& \quad \text{fersûpedrinke} & \text{(PREF-buttermilk-drink, 'damage oneself by drinking too much buttermilk')} \\
& \quad \text{ferkarkartspylje} & \text{(PREF-card-play, 'waste by playing cards')} \\
\end{align*}
\]

I will not go into the details of these instances of word formation, but merely note that the prefixes at hand only take verbs as their inputs. Therefore, the structure of these formations must be $[\text{PREF} \ [\text{N V}]]$ rather than $[[\text{PREF N}] \ V]$. And therefore, the noun and the verb must have been combined before prefixation could do its work.

But now for the derivation of noun incorporation itself. If we assume that noun incorporation forms complex verbs of the format $[\text{N V}]$, in the lexicon, this suggests that such formations must be the result of some compounding process. But compounding is not a monolithic phenomenon. Spencer (1991) distinguishes (in his chapter 8) root compounding from verbal or synthetic compounding. A well-known example of the former type is nominal (NN) compounding. In Frisian, this is a very productive process, by which a noun can be concatenated to another one, thus forming a complex noun. A striking feature is that in principle this concatenation can proceed ad infinitum; in practice, it is only stoppable when human fantasy reaches its limits. To confine ourselves to just one example, given the nouns $\text{auto}$ ('car') and $\text{plaatjes}$ ('picture'), one can form the word $\text{autoplaatsje}$, which could be published in a $\text{boek}$ ('book') that could be called an $\text{autoplaatsjeboek}$, for which a $\text{rim}$ ('shelf') could be reserved, resulting in an $\text{autoplaatsjeboekerim}$, etc., etc.

We already encountered this kind of compounding in the preceding chapter (section 3.2), when we discussed Sapir's claim that noun incorporation should be considered as a free process. There we objected that this claim meets a

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\(^2\) See Neeleman & Weerman (1993, 439-441) for a similar argument with respect to a lexical treatment of Dutch particle verbs.

\(^3\) Taking also suffixes into consideration could lead us into the tricky area of synthetic compounds. Prefixes are sufficient to illustrate the point at hand.
serious challenge if only because of the impossibility of incorporating subjects. The other restrictions we discovered in discussing Baker's proposals (section 3.3), notably the impossibility of incorporating adjuncts, can only strengthen our objection.

There are other features of noun incorporation that render an analysis as root compounds highly questionable. At the structural level, it appears that the complex verbs are not recursive; they can not be extended in the sense of *autoplaatsjeboekerim. For instance, it is absolutely impossible to have a sentence such as (3)a and apply incorporation to it, with (3)b as result:

(3) a. Hy keapet fan buorman in stoel foar in gûne
   He buys of neighbour a chair for a guilder
   'He buys from his neighbour a chair for a guilder'

   b. * Hy gûnebuormanstoelkeapet
      He guilder-neighbour-chair-buys

I found just one possible example of "double incorporation". It is the verb *bothoekfiskje, which the WFT defines as 'vissen met hoekwant op bot' ('fish with a longline at flounder'). This definition suggests the structure:

(4) Although the source in the dictionary is a little bit obscure in this particular case, it is well defensible that incorporation has been applied here only once. To that end, the left part of the word must be analyzed as a nominal compound bothoek.\(^4\) In that case, the structure would be:

\(^4\) Van Ginneken (1954, 415-416) gives indications that a word bothoek ('flounder hook', i.e. a hook for fishing for flounders) indeed existed, at least in the Dutch dialects he describes. The constituting parts bot ('flounder') and hoek ('hook') happen to be identical in Dutch and Frisian.
This view is supported by the unacceptability of similar examples. For instance, in Friesland, one can both *angelfiskje* ('fish with a rod') and *snoekfiskje* ('fish for pike'), but *snoekangelfiskje* or even *angelsnoekfiskje* are strange, to say the least, in the same way as the nominal compounds *snoekangel* and *angelsnoek* are strange (although they are conceivable, of course). So it appears to be the case that noun incorporation can be applied only once, which would constitute a notable contrast with the potentials of nominal compounding. In section 4.8 I will try to give an explanation for this state of affairs.

Another argument might be that noun incorporation does not display the variability in meaning so characteristic for root compounds (Downing 1977). For instance *piipreek* ('pipe smoke') can mean 'smoke in a pipe', 'smoke around a pipe', 'smoke produced by a pipe', and so on. The incorporation verb *piipsmoke* ('pipe-smoke') on the other hand, only means something like 'smoke a pipe', and not 'smoke in a manner one smokes when smoking a pipe', or 'smoke a cigar while holding a pipe in one's hand'. Also, the incorporated noun should have such a quality that it could be selected by the verb. Therefore, a verb like *klompelaskje* (wooden shoe-weld) does not exist, simply because *laskje* is applied to iron objects, and not to wooden ones. So it looks as if the incorporated noun simply represents one of the thematic roles of the verb. It therefore seems expedient to forget the whole comparison with root compounds, and instead explore the properties of the verb's argument structure.

In fact, this is what has been done in the proposals that have been made to analyze our type of noun incorporation lexically. DiSciullo & Williams (1987, 64) assume that one argument of the simple verb is satisfied within the complex verb. Anderson (1992, 269) talks about a process in which "the relevant argument position is simply absorbed". Rosen (1989, 296), in essence followed by Spencer (1995), also has a similar idea. As a result of the operation, the number of the arguments of the original verb is reduced by one. Rosen claims correctly that this can explain the intransitivity of the complex verb, and the lack of stranding or doubling in what she calls "Compound NI".
the type of noun incorporation that is also encountered in Frisian, as we have seen in section 2.6.

Rosen herself (1989, 315) notes a difficulty with this approach, which boils down to its not being fine-grained enough. The asymmetry between subject and object could be captured by Williams' distinction between internal and external arguments, where the latter are connected to subjects of transitive and unergative verbs, but already here one runs into difficulties, since subjects of unaccusative verbs, being internal arguments, cannot be incorporated in Frisian. Moreover, not all of the residual internal arguments do, as we have seen, even not all of the direct internal arguments (canonically corresponding to the direct object), as Spencer (1995, 470) suggests noun incorporation be restricted to, and it is not easily imaginable that on the sole basis of the internal vs. external argument distinction the behaviour of verbs with two internal arguments can be covered successfully. 5

What seems to be called for, then, is a more elaborated lexical structure than is provided in the analyses just mentioned, and maybe an insight into additional principles that cooperate to create the Frisian situation. But first and foremost, it might be appropriate to look with more scrutiny to the facts.

4.3 Transitive verbs: conditions on incorporation

In order to achieve a better insight into Frisian noun incorporation, it might be wise to restrict ourselves first to what appears to be the heart of the process: incorporation in simple transitive sentences. On the basis of the results of that analysis we can try to capture the more complex cases of oblique arguments and double internal arguments.

As stated earlier, incorporation of a direct object appears to be the core case of the phenomenon, as it is in other languages, as is reported time and again. A glance into a volume of the WFT would quickly reveal this fact with respect to Frisian. Yet, as we already encountered in the previous chapter, that does not imply that incorporation is allowed in all the sentences of the skeleton subject – verb – object. I repeat here from the previous chapter those examples where incorporation failed:

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5 The problem of overgeneration would even become particularly compelling if we applied Ackema's (1995) "syntax below zero" theory to Frisian. Not only that in principle he allows all direct objects to incorporate, but also subjects (p. 146) and adjuncts (p. 99) have that possibility, at least for languages of Rosen's compound type.
As these sentences are examples of the Vendlerian categories Achievement ((6) and (8)) and State (7) respectively (see Vendler 1957), this suggests that noun incorporation is conditioned semantically in some way. In order to gain a more systematic insight into the possibilities, let us first turn to the useful overview in Jackendoff (1990, 259-260), who explores which semantic roles are available for the subject and object in simple transitive sentences.

A general feature of Jackendoff's theory is the possibility for NP's to carry more than one semantic role at the same time. To that end, Jackendoff, in his lexical representations, makes use of different tiers, a notion borrowed from non-linear phonology. In Jackendoff (1990) two tiers are distinguished. One is a thematic tier, having to do (sometimes in a very abstract way) with motion and location. Typical concepts in this area are Theme, Source, or Goal.

The other one is the action tier, related to the event as an action, where concepts such as Actor and Patient play their role. The Actor, loosely defined as "doer of the action", can be picked out by the following test frame (Jackendoff 1990, 126):

\[
\text{(9) } \text{What NP did was ...}
\]

The term Patient is reserved for "affected entity", and has as its test frame (p. 125):

\[
\text{(10) } \begin{cases} \text{What happened} \\ \text{What Y did} \end{cases} \text{ to NP was ...}
\]

Note that in other accounts, presumably going back to Anderson (1977), the term Theme is often used for the same notion. Because of his division in dif-
ferent tiers, Jackendoff exclusively connects the term Theme to the thematic tier, where he defines it as "thing in motion or being located" (Jackendoff 1990, 125). For the action tier he prefers the term Patient. The same story could more or less be told about Actor (action tier) in relation to the more commonly used term Agent (thematic tier). As an informal illustration of the system, I present three examples (= (7b)-(7d) in Jackendoff 1990, 126-7):

(11) Pete threw the ball
    Theme | Goal       (thematic tier)
    Actor | Patient    (action tier)

(12) Bill entered the room
    Theme | Goal       (thematic tier)
    Actor |            (action tier)

(13) Bill received a letter
    Goal  | Theme      (thematic tier)
    Actor |            (action tier)

It is not fully necessary that all positions on the tiers be occupied: in (12), for instance, no NP can be regarded as an "affected entity", hence there is no Patient on the action tier (but there is an Actor). And in (13), no appropriate NPs being available, the action tier even remains completely empty.

With these prerequisites in mind, let us now turn to Jackendoff's overview of simple transitive sentences, to be found on his pages 259-260. When one tries to translate his examples into Frisian, and thereby at the same time incorporates the objects, it is readily revealed that only in the first three cases does this succeed more or less happily (Jackendoff's 33a-c):

(14) Emily threw the ball
(15) Pete hit the ball (with a bat)
(16) Emma emptied the sink

The Frisian results are these:

(17) Emily balsmiet
    Emily ball-threw

(18) Pete balsloech (mei in stôk)
    Pete ball-hit (with a stick)

(19) Emma goatstienlege
    Emma sink-emptied

What these examples have in common is a subject that has an Actor role, and an object which functions as a Patient. At the thematic tier, the objects all
4.3 transitive verbs: conditions on incorporation

have a different role, Theme, Goal and Source, respectively. It thus appears that noun incorporation is only sensitive to the action tier. Noun incorporation only requires the object being a Patient. Whether the presence of an Actor functions as a second condition can not be concluded, as, according to Jackendoff's overview, every Patient-object is always accompanied by an Actor.

As only Jackendoff's (33a-c), cf. (14)-(16) above, show incorporation, by implication his (d)-(p) do not. It is not my purpose to discuss all these cases extensively, but rather to give a few illustrations. Moreover, some examples are not well comparable, as their verbs can only be translated into Frisian with the help of particles or prefixes, which normally appear to have a blocking effect on noun incorporation, as we will see soon. To start with a striking example, Jackendoff's (33d) has an Actor-subject and a Beneficiary-object:

(20) a. The girls helped the boys
    b. * De famkes jongesholpen
       The girls boy-helped

Jackendoff's (33k) reminds us of the impossibility of incorporation in (8), here repeated as (21)b:

(21) a. Laurie received a present
    b. * Oege kadootsjekrige (de hiele dei)
       Oege present-received (the whole day)

To give a third example, Jackendoff's (33m) is construed out of a Theme-object and a subject which is at the same time a Patient and a Source:

(22) a. Amy lost the money
    b. * Amy jildferlear
       'Amy money-lost'

Although we now have established that noun incorporation is sensitive to the action tier, and that it requires a Patient and an Actor, one further restriction should be made. It appears that not every Actor is appropriate to let incorporation take place. Compare the following examples:

(23) It bern kleuret it plaatsje
    The child colours the picture
(24) De undergeande sinne kleuret it hûs
    The setting sun colours the house

These sentences appear to behave differently under incorporation:
(25) It bern plaatsjekleuret
The child picture-colours

(26) * De ûndergeande sinne hûskleuret
The setting sun house-colours

Apparently, what is needed here is an animate Actor. Yet, that is not the whole story. To understand the point at hand, compare the following sentences:

(27) Gurbe faasbrekt
Gurbe vase-breaks
'Gurbe breaks vases'

(28) * De bal faasbrekt
The ball vase-breaks

These examples seem to be in accordance with the animacy constraint. Yet, imagine the situation where Gurbe, as a lover of Bearenburch, drank too much of his favourite gin bitters, and, tight as a drum, stumbles, and thus ruins a part of his collection of 18th century Chinese vases. In this case, Gurbe is fully comparable with the ball that got out of the control of soccer-playing boys and that thus ruined the other part of his collection. In neither case could the situation be described by incorporation. The reason must be that, in these cases, neither the ball, nor tipsy Gurbe, have the action under control. Both are not behaving intentionally. Sentence (27) can only be uttered felicitously when Gurbe has planned in full consciousness his act of vase-breaking, for instance because he thinks this is the best way to prevent his heirs from quarrelling. Jackendoff (1990, 129) would assign the feature [+ volitional] here.

Volitionality is dependent on the lexical semantics of the verb. Some verbs require a [+ volitional] subject, e.g. keapje ('buy'), some a [- volitional] one (stjerre, 'die'), and many others are ambiguous, as we have seen with break. Moreover, this state of affairs could change if one imagines another world as ours. It is therefore well conceivable that in a fairy tale a sentence like (28) could occur without difficulties. To recognize volitionality, one can add an adverbial phrase such as mei opsetsin ('deliberately', 'intentionally') (Roberts 1987, 82). Consequently, this phrase should be additionable to all incorporation verbs, which indeed happens to be the case, as a few examples might suggest:

(29) Jan sit mei opsetsin te doarfervjen
Jan sits deliberately to door-paint
'Jan is deliberately painting a doar'
4.3 transitive verbs: conditions on incorporation

(30) Beart is mei opsetsin oan it kritykskriuwen
    Beart is deliberately ON IT review-write
    'Beart is deliberately writing a review'

(31) Minne jiskepúdeleget mei opsetsin
    Minne garbagebag-empties deliberately
    'Minne deliberately empties the garbage bag'

To conclude the point for the present, I would like to give an illustration from the letter B of the WFT. Compare *bean* ('bean') with *berch* ('mountain'). In the dictionary, *bean*, or its variants *beanne-* and *beantsje-* is incorporated 19 times. Incorporation of *berch* on the other hand is never attested. An easy solution to this difference might be to ascribe it to the Frisian landscape, which is indeed as flat as a pancake. Frisian texts, on which the dictionary is eventually based, will not mention mountains, the reasoning might go, simply because they do not play a prominent role in Frisian society. That such a way of thinking is too simple is immediately demonstrated by the dictionary itself. Not only does it give a Frisian word for 'mountain', also over 50 nominal compounds with *berch-* as first part are provided. They range alphabetically from *berchbeek* ('mountain brook') to *berchwjittering* (same meaning). As to nominal compounds with *bean-* the amount is approximately the same.

The real answer to the question of why *berch* is not incorporated is to be found in the character of the denotation, I would argue. Human beings can perform all kinds of action on beans. To grasp some examples from the 19 incorporation verbs from the WFT, one can *bine* beans ('bind'), *briede* ('bread'), *lèze* ('read', e.g. pick out good or bad ones), *pûlje* ('uncover the shell'), *sette* ('put into the ground'), *terskje* ('thresh') or *puntsje* ('withdraw the sharp ends'). So, beans can undergo various actions, where they behave as a Patient. But what could a mountain undergo? I can imagine just one action, namely that it is climbed. This would constitute the Frisian incorporation verb *berchbeklimme*, which is not even attested, presumably for an independent reason, to which we will return below. What I, considering the striking differences in incorporation possibilities between *berch* and *bean*, merely want to illustrate here is the necessity of a Patientlike object, and, indirectly, of a volitional Actor as subject.6 And that, by the way, is additional evidence that noun

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6 This has, for instance, repercussions as well if one wants to gather examples of incorporation verbs from a dictionary. It is my experience that these can most easily be found with a noun of which one can readily imagine that one could do something with (compare Jackendoff's test frame quoted in (10)). At the same time, this must be the reason why nouns referring to things are a lot more often found to be incorporated than nouns referring to persons, a fact noted for other languages as well (cf. Mithun 1984, 863; Kiefer 1990-'91, 164).
incorporation in Frisian is not a syntactic process, as, according to Anderson (1977, 365) and (1992, 36), syntactic rules can not refer to the content of thematic roles, while lexical rules can.

But what about the verb? One of its features is easily deducible from the foregoing discussion: the verb should assign a Patient role to its object. From this it follows that stative verbs are never involved in noun incorporation, as statives do not have an object which undergoes the action. That is why (7)b is out, and likewise a sentence with the most cited example of a stative, the English verb *know*, in Frisian *witte*:

\[(32)\]

\[
\begin{align*}
\text{a.} & \quad \text{Loltsje kin it andert net witte} \\
& \qquad \text{Loltsje can the answer not know} \\
& \qquad \text{`Loltsje can not know the answer'} \\
\text{b.} & \quad * \quad \text{Loltsje kin net andertwitte} \\
& \qquad \text{Loltsje cannot answer-know}
\end{align*}
\]

As it may not be stative, the incorporating verb must denote an event. A further restriction is a consequence of our requirement of [+ volitional] Actors. Some perception verbs fall into the [- volitional] category. They do not show incorporation,\(^7\) for instance the verb *hearre* (‘hear’):

\[(33)\]

\[
\begin{align*}
\text{a.} & \quad \text{Froukje heart in trein} \\
& \qquad \text{Froukje hears a train} \\
\text{b.} & \quad * \quad \text{Froukje treinheart} \\
& \qquad \text{Froukje train-hears}
\end{align*}
\]

Significantly, these verbs do all have a [+ volitional] cognate with the thing perceived normally projected in a PP. Then incorporation causes no problems:

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\(^7\) The same restriction occurs with respect to noun incorporation in Hindi, witness an example of Mohanan (1995, 93). She states that “seeing grass” can not stand at the basis of an incorporation, while for instance “cutting grass” or “selling grass” can. Mohanan tries to accommodate for these and a few other examples with the help of a (pragmatic) criterion of "nameworthyness": “In most societies, cutting grass is a salient activity in the conceptual system, while seeing grass is not”. Unfortunately, she does not work out nor apply this fuzzy concept any further, and honestly, I can not see that it could be of any use to give an insightful explanation of the restrictions on Frisian noun incorporation. To mention one thing, it seems totally incapable to predict the behaviour of prefixed verbs, an issue which will be dealt with below.
4.3 transitive verbs: conditions on incorporation

(34) a. Boukje harket nei de radio
   Boukje listens to the radio
b. Boukje radioharket
   Boukje radio-listens

Of the Vendlerian classes, introduced in section 2.7, the requirement of a volitional Actor also excludes Achievements in a natural way, since subjects of such verbs are not Actors, but rather Experiencers (Roberts 1987, 212):

(35) a. Loltsje fynt in güne tusken de fallene bëden
   Loltsje finds a guilder between the fallen leaves
b. * Loltsje güneyfynt tusken de fallene bëden
   Loltsje guilder-finds between the fallen leaves

The examples (6)b and (8)b are out for the same reason.

Despite the fact that I just used the terms "Statives" and "Achievements" to indicate verb classes, I do not believe that aspect itself is a decisive factor in conditioning which verbs are involved in noun incorporation. That depends in the first place on the availability of an appropriate Actor and Patient. However, once these conditions are fulfilled, aspect can play a blocking role. This is due to the fact that incorporation verbs are inherently durative, as we saw in section 2.7. The action involved should therefore be compatible with durativity, it should be able to get a durative interpretation in principle, otherwise incorporation is impossible. Of the Vendlerian classes, States, being inherently durative, should thus cause no difficulties, but these fail for not having a Patient. Activities are also inherently durative, and as far as these are accompanied by an affected object, incorporation goes smoothly (again, the adverb oerenlang 'for hours' betrays durativity):

(36) a. Gurbe treau de karre oerenlang
   Gurbe pushed the cart for hours
b. Gurbe karretreau oerenlang
   Gurbe cart-pushed for hours

Ordinary Accomplishments also pose no problem insofar as these can get a durative interpretation. So, in all the cases where a bare plural or mass noun object can be selected, and where thus an Accomplishment turns into an Activity, incorporation is fine:

(37) a. Gurbe iet oerenlang jerappels
   Gurbe ate for hours potatoes
b. Gurbe jerappeliet oerenlang
   Gurbe potato-ate for hours

(38) a. De poppe dronk oerenlang molke
    The baby drank for hours milk
b. De poppe molkedronk oerenlang
   The baby milk-drank for hours

Accomplishments are a little bit more complicated where the event is momentaneous, and thus an internal time scale is lacking, as in verbs like *stekke* ('stab') or *deadzje* ('kill'). This would conflict with the feature of durativity. Nevertheless, there is a way out when the event is performed repeatedly, and indeed we see that incorporations with these kind of verbs necessarily get an iterative interpretation:

(39) a. * Bonne deadet oerenlang in knyn
    Bonne kills for hours a rabbit
b. Bonne deadet oerenlang kninen
   Bonne kills for hours rabbits
   c. Bonne knyndeadet oerenlang
      Bonne rabbit-kills for hours

That an iterative interpretation is the only way out with such verbs, can be seen when we choose a noun that has a unique denotation. *Paus* ('pope'), of course, for reasons discussed in section 2.7 not to be taken as a proper name, could be a good candidate. Replacing *knyn* ('rabbit') by *paus* ('pope') in (39)c gives a bad result:

(40) * Bonne pausdeadet oerenlang
    Bonne pope-kills for hours

For non-momentaneous events, the iterative reading is not obligatory, although not forbidden either, of course. So, it is perfectly acceptable to say

(41) Mem sit te krantlézen
    Mother sits to paper-read
   'Mother is reading the paper'

in a family where only one paper is read. For the record, I point out that the escape route by way of iterativity is only available when the proper conditions for noun incorporation are met. Some Achievements for instance can be given a durative reading when interpreted iteratively, as in
4.3 \textit{transitive verbs: conditions on incorporation}

(42) Loltsje fynt oerenlang struibledsjes  
Loltsje finds for hours leaflets  
'Loltsje finds leaflets for hours'

But since Achievements do not possess a volitional Actor, the object nevertheless can not be incorporated:

(43) * Loltsje struibledsjefynt oerenlang  
Loltsje leaflet-finds for hours

Again, we see that durativity does not play an instigating role in the process of noun incorporation; the most one could say is that it can act as a negative condition in that its absence can block incorporations which otherwise follow the general rules.

Up to now, the restrictions on the verb thus come naturally from the conditions on the subject and the object. This, however, is less clear with the following exception, counter-intuitive at first sight, which we already hinted at. In the course of my work on this thesis, it began to attract my attention that verbs concatenated with a prefix or a particle often refuse to incorporate their object. Frisian has four prefixes that can create new verbs: \textit{be-}, \textit{fer-}, \textit{unt-} and \textit{te-}.\footnote{The first three also show up in Dutch, as \textit{be-}, \textit{ver-}, and \textit{ont-} respectively. See Lieber \& Baayen (1993) for a recent treatment. The far less productive \textit{te-} is reminiscent of German \textit{zer-}, also in its ruinizing meaning (cf. Tamminga 1972/73).} In addition, verbs can compound with a number of prepositions and adverbs mostly referred to as "particles", most of them separable from the verb under Verb Second. For ease of exposition I shall henceforth use the term "preverb" and its derivative "preverbal" to cover both categories.

My feeling that a preverb is a hindrance to noun incorporation appears to be confirmed by a look in the inversed dictionary of Frisian: Dykstra, Reitsma \& Visser (1992), which is very useful for this purpose. As an illustration, let us take four verbs from their \textit{Omkearwardboek}: \textit{ite} (\textit{eat}), \textit{skriuwe} (\textit{write}), \textit{himmelje} (\textit{clean}) and \textit{snije} (\textit{cut}). But first one remark should be made about the use of this dictionary, and of dictionaries in general, which in itself should be self-evident, but nevertheless might be useful to stress here. Dictionaries, at least with respect to productive classes, never give the whole range of possibilities. They always display a certain amount of accidentalness, and thus one should be careful to draw plain conclusions out of the data they provide. On the other hand, when the differences in their data are striking, that may be an indication that something structural lies behind them.
Take as a first example the verb *ite*. The *Omkearwardboek* gives twelve incorporations with this verb. Among them are *bôleite* ('bread-eat'), *pankoekite* ('pancake-eat') and *aatite* ('egg-eat'), but fruit, e.g. *apelite* ('apple-eat') or *banaanite* ('banana-eat'), is missing from the spectrum, while these are conceivable without any problem. The same occurs for fish. Only one kind of fish can be found (*bearsite*, 'perch-eat'), but I can not see why other kinds should be excluded from incorporation.

Apart from noun incorporation, the dictionary even provides 14 cases where *ite* is preceded by a preverb. Seven of them form intransitive verbs, which naturally drop out for our purpose. But the other seven display not one single incorporation. So, when the dictionary has *bôleite*, one looks idly for something like *boleopite*, where *opite* really has no less opportunities to take an object as the base verb *ite* has.

The other three verbs I mentioned display the same picture, at least more or less. *Skriuwe* is exceptional in so far as it shows only three incorporations with the base verb, where it has over twenty preverbs. Slightly less has *snîje*, and *himmelje* is prefixed or "particelized" nine times, all cases resulting in a transitive verb. A difference with *skriuwe* is that *snîje* and *himmelje* have far more incorporations, 28 and 29 respectively. Moreover, with *skriuwe*, *snîje* and *himmelje* a few incorporations can be found before a preverb. These are *boelbeskriuwe* ('draw up an inventory'), *pinfersnîje* ('cut a new point on a goose-quill'), *riiidutsnîje* ('cut out a trench'), *halsutsnîje* ('cut out a throat') and *kleibehimmelje* ('pedicure hoofs'). But it is clear that this is only a fraction of the actualized incorporations with the base verb, let alone the potential possibilities of the totality of transitive verbs derived with a preverb. Even when it is admitted that in general with every word formational operation the meaning of the derived word is getting more specific and that, let us say, at the level of performance it is then becoming less likely to be further compounded, which in turn will have its effects in a dictionary, even then the differences in the number of incorporational entries with and without a preverb are so striking, that a cause must lay behind them.

That a frequency factor does not even need to be at issue is shown by a verb like *opite*. Especially when a specific portion is eaten, it is very common in Frisian, if not obligatory, to use *opite* instead of bare *ite*, as noted in J. Hoekstra (1986b):

\begin{align}
\text{(44) a. } & \text{? Boukje iet in reade apel} \\
& \text{Boukje ate a red apple} \\
\text{b. } & \text{Boukje iet in reade apel op} \\
& \text{Boukje ate a red apple up}
\end{align}

Apparently, the language calls for an excessive explicitness in this matter, as
the notion completeness, which is expressed by the particle *op, is also implied by a specific object as in (44)a. But despite its commonness, *opite in my intuition always refuses to incorporate, in accordance with the pattern sketched above: *apelopite, *bearsopite, *pankoekopite.

What is at stake here? It can not be a different thematic role for the object, for in *reade apel in (44)b seems no less a Patient than in (44)a. Nor does aspectuality play a role, as could be suggested on the basis of the semantic content of the element *op, which refers to a completion of the action, and thus could evoke a terminative aspect. If that were the case, a clash with the inherent durativity of incorporation constructions could explain its unacceptable. But a terminative aspect is not unavoidable; a durative aspect is also possible, if the appropriate kind of object is available, witness (45), where the well-known marker *oerenlang again betrays durativity:

(45) Boukje iet oerenlang reade apels op
Boukje ate for hours red apples up
'Boukje ate red apples for hours'

Therefore, something different must underlie the unwillingness of preverbal verbs to incorporate. But before the reader is offered a solution, he should first turn to the next section, where a parallel phenomenon will be explored.

### 4.4 Detransitives

Whereas simple transitives, as the core case of noun incorporation, can provide some basic insights into the conditions on the process, another main syntactic construction type can give us a further clue to a satisfying solution as regards a lexical derivation. To that end, recall that sentential and prepositional *te-infinitives were one of the favourite contexts for noun incorporation to apply. In fact, incorporation seems to be obligatory here:

(46) a. Buorman sil te geitmelken
Neighbour shall to goat-milk
'Our neighbour will go off to milk goat(s)'

---

9 Hoekstra claims that there is a difference with Dutch here, where both variants with and without *op are acceptable.

10 Therefore, I do not agree with T. Hoekstra (1992, 166), who claims that all prefixed verbs denote Accomplishments. Given an appropriate, nonspecific object, the normal switch to Activities generally applies.
b. * Buorman sil de geit te melken  
Neighbour shall the goat to milk

c. * Buorman sil de geit melken  
Neighbour shall to the goat milk

A bare plural object does not behave differently in this respect, which already precludes aspect as a causing factor, since the content of the object can not clash with the inherent durativity of the te-infinitive construction:

(47) a. * Buorman sil geiten te melken  
Neighbour shall goats to milk

b. * Buorman sil te geiten melken  
Neighbour shall to goats milk

In accordance with a lexical analysis, one could instead suppose that te-infinitives only select a special kind of verb to be inserted in the position after te.\(^\text{11}\) Revealing in this respect are the other possibilities in this construction. Here are examples of the relevant categories:

(48) Buorman sil te kuierjen  
Neighbour shall to walk  
'Our neighbour will go out walking'

(49) Buorman sil te melken  
Neighbour shall to milk  
'Our neighbour will go out milking'

In (48) we find an ordinary intransitive (unergative) verb. It could be replaced be many others of its kind, like fytse ('cycle'), fleane ('fly'), arbeidzje ('work'), etc.

Far more interesting for our purposes is the verb in example (49). It has in common with (48) that it is used intransitively: there is obviously no direct object to be found in (49). But in fact that is remarkable; in its normal use melke is accompanied by an object, typically the animal that is going to be

\(^{11}\) Why te-infinitives have this property lies outside the subject of noun incorporation per se, so I will not go into the details of this topic. J. Hoekstra (1989, 45-46) mentions a parallel with bare en-nominalizations, and thus seeks the cause in features of the en-suffix. Another tack worth investigating could be the lexical properties of the element te. Note that te as a preposition has in its locative use the peculiar property of taking an NP complement without a determiner, e.g. te plak (to place) vs. *te it plak (to the place). So it might well be the case that te always requires bare complements, as a lexical property.
4.4 detransitives

milked. That follows naturally from its prototypical meaning: when one is milking, one's action is always directed to an animal from which the milk is extracted. That is the reason why melke is a transitive verb in its normal use. Note that there is a clear difference with a true intransitive verb such as kuierje, which is never directed to an entity outside the action, but which is solely the action itself.

That a verb can occur without its object is not restricted to melke, nor to a language such as Frisian. The standard example in the literature is English eat:

\[(50)\]
\[
a. \text{John is eating an apple} \\
\text{b. John is eating}
\]

The action of eating is also directed to something else, namely the food that you put in your mouth and that you chew and swallow afterwards. There are several terms in circulation for the phenomenon by which a transitive verb occurs without its object. Bresnan (1980, 116) simply dubs it "intransitivization", further specified by Van Voorst (1988, 126) as "unergative intransitivization". Marantz (1984, 192) talks about "unspecified object deletion", but it is questionable whether that is a good reflection of what is going on here. To my taste, Dowty's (1989, 90) "detransitivization" fits best, the more so as this gives the opportunity to use the term "detransitive" to refer unambiguously to the resulting verb.

Detransitivization comes up in two ways. In the one we just introduced with the examples of milking and eating, the missing object as such is not well recoverable from the linguistic context. According to Allerton (1975; 1982), the most appropriate way to indicate it would be by using a pro-form as something or someone. Therefore, this form of the phenomenon is dubbed "indefinite object deletion". It results in a sentence that in itself is a self-sufficient statement. This is clearly different from the other form, which in Frisian is exemplified by verbs such as folgje (follow) or kieze (choose), as in

\[(51)\] In reade en in griene knikkert leine yn it laad. It famke koe net kieze.

'A red and a green marble were in the drawer. The girl could not choose'.

\[\text{12}\]

Although understandable for expository purposes, this representation of the object by these pro-forms, or by it as in Katz & Postal (1964, 81), or by an existential quantifier as in Bresnan (1978, 16) is not fully appropriate, as Mittwoch (1982) has pointed out correctly. The difference is aspectual, in that the verb without the object is always durative, where the pro-form or quantifier causes a terminative reading.
In this case, the content of the missing object should be recoverable from the situational or linguistic context, and therefore Allerton calls this kind of detransitivization "contextual object deletion". Now the choice of the pro-form would rather boil down to *him, it* and the like. Fillmore (1986), when talking about the missing object, uses the term "definite null complements" here. For our purposes, this second kind of detransitivization is not relevant. In what follows, the term shall therefore always refer to the indefinite variant.

Now, it is my contention that these detransitives and incorporation verbs, descending from the same (transitive) ancestor, are very much the same in character. Their common distribution in *te*-infinitives is one indication for this idea. To strengthen the idea, the conditions on noun incorporation as we have discovered them in the previous section should also be applicable to detransitives. Therefore, let's have a round-up.

We started the discussion with the examples (6)-(8), which refused noun incorporation. Detransitivization is indeed out with the same verbs:

(52)  *  Richt fernimt yn 'e tún  
      Richt notices in the garden
(53)  *  De kealkop hatet  
      The skinhead hates
(54)  *  Oege kriget  
      Oege receives

The examples (14)-(16) represented positive evidence that a Patient was involved. Under detransitivization, they remain grammatical:

(55)  Emily smiet  
      Emily threw
(56)  Pete sloech  
      Pete hit
(57)  Emma lege  
      Emma emptied

Negative evidence in favour of a Patient-object was provided by (20)-(22). Here are the results with detransitivization:

(58)  De famkes holpen  
      The girls helped
(59)  *  Oege krije  
      Oege received
(60)  Amy ferlear  
      Amy lost
Here it looks as if the parallelism gets lost. However, I would claim that this is only seemingly so. The examples (58) and (60) are grammatical, but only if they are interpreted as a case of contextual object deletion, as clarified above. They can only be uttered felicitously when the situation is familiar to the listener, for instance by way of an earlier description, or restricted to specific contexts. Sentence (60), for instance, could be uttered in the abstract case of loosing a match, but never in the concrete case of lossing some coins. For (55)-(57) such conditions are not necessary; they can be uttered in a neutral context.

We continue our comparison with the subject, for which (23)-(28) revealed that for noun incorporation it should be animate, and more specifically volitional. This happens to be true for detransitive verbs as well:

(61) It bern kleuret
    The child colours
(62) * De ûndergeande sinne kleuret
    The setting sun colours
(63) Gurbe brekt
    Gurbe breaks
(64) * De bal brekt
    The ball breaks

The feature of volitionality is supported by the ability to insert an adverbial phrase such as *mei opsetsin* ('deliberately, intentionally'), parallel to (29)-(31):

(65) Jan sit mei opsetsin te fervjen
    Jan sits deliberately to paint
    'Jan is painting deliberately'
(66) Beart is mei opsetsin oan it skriuwen
    Beart is deliberately ON IT write
    'Beart is writing deliberately'
(67) Minne leget mei opsetsin
    Minne empties deliberately
    'Minne is emptying deliberately'

The conditions on the verbs, coming from those on the subject and object, can also be upheld. A State as in (32) or an Achievement as in (35) are not possible when the object is gone (which already appeared from (52)-(54), too):
Moreover, when a perception verb is used detransitively, as in

(70)  Boukje harket
   Boukje listens

the subject is interpreted as behaving intentionally, as was also the case in (34). Furthermore, the iterativity effect with momentaneous verbs can also be observed in detransitives. From an example such as

(71)  Bonne deade
   Bonne killed

one must conclude that Bonne did the act of killing several times.

The last issue in the previous section concerned verbs that were combined with a preverb. It appeared that in general such verbs do not easily undergo incorporation. As to detransitivization, these verbs behave in the same way.\textsuperscript{13} Positively, bare \textit{ite} ('eat') cannot occur only with an incorporated noun, but also without an object, the last property not being different from English \textit{eat} in (50):

(72)  a.  Do moatst in apel ite
       'You should an apple eat'
       'You should eat an apple'
   b.  Do moatst apelite
       You should apple-eat
   c.  Do moatst ite
       You should eat

On the other hand, combined with a particle, \textit{ite} behaves differently. Verbs such as \textit{opite}, \textit{üüte} or \textit{leechite}, all three denoting a completion of the eating, but with respect to different objects, do not show incorporation or detransitivization:

\textsuperscript{13} Welke (1988, 32) observes for German the same tendency of obligatory expression of complements of prefixed verbs. For Dutch, see Booij & Van Haaften (1988) and Booij (1992b).
(73) a. Do moatst de brij opite
    You should the porridge up-eat
    'You should eat the porridge up'
b. * Do moatst brijopite
    You should porridge-up-eat
c. * Do moatst opite
    You should up-eat

(74) a. Do moatst de panne útite
    You should the pan out-eat
    'You should eat the pan empty'
b. * Do moatst panneútite
    You should pan-out-eat
c. * Do moatst útite
    You should out-eat

(75) a. Do moatst it board leechite
    You should the plate empty-eat
    'You should empty your plate'
b. * Do moatst boardleechite
    You should plate-empty-eat
c. * Do moatst leechite
    You should empty-eat

To my feeling, the ban on detransitivity is even stronger with these verbs than
the one on noun incorporation. In the previous section, based on the verbs
skriwe, snije en himmelje, we encountered a few exceptions where both an
incorporated noun and a preverb showed up. To my ears, those complex verbs
indeed sound more acceptable than when used in a purely detransitivized man­
ner. So, there is a difference between (76) and (77), for example:

(76) ? De slachter hat saniis halsútsnien
    The butcher has just throat-outcut
    'The butcher has just cut out a throat'
(77) * De slachter hat saniis útsnien
    The butcher has just outcut

A possible explanation for this difference will be found in the sections below.

The upshot so far is that the parallels between noun incorporation and de­
transitivization are striking. Later on in this chapter, ample evidence will be
provided that only strengthens the just established correlation. In this section,
I will now give one more example of a parallelism between detransitivization
and noun incorporation. We already became acquainted with it in Chapter 2,
section 4, where it appeared that finite incorporation verbs cannot be used quite happily (although they are not principally excluded either, as we have shown):

(78) ? Loltsje apelyt
    Loltsje apple-eats
    'Loltsje is eating an apple'

Rather, this way of saying things tends to be replaced by another, for instance by way of the *aan it*-construction (79) or a *te*-infinitive (80):

(79) Loltsje is oan it apeliten
    Loltsje is ON IT apple-eat
    'Loltsje is eating an apple'

(80) Loltsje sit te apeliten
    Loltsje sits to apple-eat
    'Loltsje is eating an apple'

This may seem a little strange, but when we take detransitive verbs into consideration, we see that it is not an isolated phenomenon. At least to me, (81) is just as deviating as (78):

(81) ? Loltsje yt
    Loltsje eats
    'Loltsje is eating'

and tends to be replaced in the same way by (82) or (83):

(82) Loltsje is oan it iten
    Loltsje is ON IT eat
    'Loltsje is eating'

(83) Loltsje sit te iten
    Loltsje sits to eat
    'Loltsje is eating'

I think this state of affairs is not typical for Frisian. Take English, where (85) is a much more natural way of saying things than (84):\(^{14}\)

\(^{14}\) At least, when the sentence is denoting an event. In a habitual reading, things are becoming different: then, constructions as exemplified in (84) are not uncommon at all. As Peter Ackema (p.c.) pointed out to me, this specific example of *Tom eats* nevertheless remains strange; this must be due to the fact that everybody has the
4.4 detransitives

(84) ? Tom eats
(85) Tom is eating

In section 2.4 we made it clear that the question mark in the Frisian examples above should not be interpreted as a tendency to ungrammaticality. Rather, it indicates that this is not the most common way of expressing what one wants to say here. The reason for this unhappiness could be found in the inherent durativity of both noun incorporation and detransitivization. Boogaart (1993; 1994) points out that in Dutch the simple past is ambiguous between a perfective and an imperfective reading. Since periphrastic constructions exist, for instance the Dutch *aan het*-construction, which exclusively express imperfection, there is a tendency to reserve a perfective reading to the simple past, although, again, an imperfective reading is not excluded. Now, if we assume that the simple present behaves in a similar way, and furthermore that Frisian does not deviate from Dutch in this respect (and I have no indications that this is the case), then we have a clue as to why one could feel a bit uncomfortable about sentences like (78) or (81): there are simply better ways, exemplified in (79)-(80) and (82)-(83), to deal with their durative or imperfective aspect.

That this view holds some water can be distilled from instances of Mithun's (1984) type II incorporation (cf. section 2.6). A finite sentence like

(86) Hja hierkjimde har dochter
    She hair-combed her daughter
    'She combed her daughter's hair'

is in its finiteness not unusual at all. This is conceivable since a sentence with type II incorporation does have a phrasal object, and hence its aspect is not exclusively durative, but regularly depending on the form of its object, as discussed in section 2.7. So, the aspect of example (86) is not durative, as the possibility of the adverbial *yn tvaa menuten* ('in two minutes') indicates:

(87) Hja hierkjimde har dochter *yn tvaa menuten*

Hence, in a case like (86), there is no clash between the aspectual reading of the sentence and a non-optimal expression of it.

In sum, many similarities can be observed between noun incorporation, at least of Mithun's type I, and detransitivity. It is obvious that this parallel calls for an explanation.

habit of eating at recurring times. The same holds for drinking, but not for drinking alcohol. That must be the reason that *Tom drinks* gets its typical alcoholic interpretation.
4.5 Towards an explanation

The parallel just established between noun incorporation and detransitivization makes it reasonable to suppose that the two phenomena have something in common. To detect what's up here, let us return to the distributional possibilities within sentences with te-infinitives, as shown in (46)-(49). Besides detransitives and incorporation verbs, true (unergative) intransitive verbs were also permitted in that context. In my view, this last category puts us on the track with the feature that these three classes unifies: they are all intransitive, at least syntactically.

That detransitives are intransitive verbs is established by definition. But how about incorporation verbs? Indeed, in Frisian these are always intransitive,\(^\text{15}\) too, as was alluded to earlier in this study. One indication can be detected from (88), where adding an object gives an ungrammatical result:

(88) a. De perfester autohimmelet
    The professor car-cleans
    'The professor cleans a car'

b. * De perfester autohimmelet har Golf
    The professor car-cleans her Golf

Furthermore, incorporation verbs can occur in impersonal passives, as can detransitives, and unergative intransitive verbs in general:

(89) Der wurdt kuiere
    There is walked

(90) Der wurdt iten
    There is eaten

(91) Der wurdt apeliten
    There is apple-eaten

Significant in this respect is the form of the passive auxiliary. A similar construction can occur with transitive verbs, but then the auxiliary agrees with the number of the subject of the passivized sentence:

(92) a. Der wurde/*wurdt apels iten
    There are/is apples eaten

b. Der *wurde/wurdt in apel iten
    There are/is an apple eaten

\(^\text{15}\) Again: at least those of type I.
Therefore, we must conclude that incorporation verbs lack a phrasal object that in a passive sentence could enter into an agreement relation with the verb.

A third test which indicates that incorporation verbs are intransitive is provided by the possibility for them to occur in the expression hiel wat of (+ verb), which more or less means 'a lot':

(93)  Hy hat hiel wat of kuiere
     He has a lot walked
     'He has walked a lot'
(94)  Hy hat hiel wat of molken
     He has a lot milked
     'He has milked a lot'
(95)  Hy hat hiel wat of geitmolken
     He has a lot goat-milked
     'He did a lot of milking goats'

This quantification is out when the verb has an object:

(96)  * Hy hat hiel wat of geiten molken
     He has a lot goats milked

We thus may conclude that noun incorporation results in intransitive verbs. Syntactically, they no longer have an object. Now it is becoming clear what they have in common with detransitives: these can not have a syntactic object either. Although in the case of noun incorporation there might seem to be an object available, viz. in the shape of the incorporated noun, we have shown in the previous chapter (section 3.4) that this is not syntactically active in binding and control, and hence that it plays no role in syntactic structure. Now, the same tests can be applied to detransitives. One could suppose that detransitives are only superficially intransitive, but that covertly they are syntactically transitive and have a pro as object. In that case this pro could enter in relations of binding and control. It appears, however, that detransitives do not behave in this way:

(97)  a. Oege tekenet fügel\textsubscript{i} sturt\textsubscript{les\textsubscript{i}}
     Oege draws birds tailless
     'Oege draws birds without a tail'

   b. * Oege fügeltekenet sturt\textsubscript{les\textsubscript{i}}
     Oege bird-draws tailless

   c. * Oege tekenet sturt\textsubscript{les\textsubscript{i}}
     Oege draws tailless
(98) a. Sjerp bout boaten, [om mei e, te silen]
Sjerp builds boats [COMP with to sail]
'Sjerp builds boats to sail with'
b. * Sjerp boatebout [om mei te silen]
Sjerp boat-builds [COMP with to sail]
c. * Sjerp bout [om mei te silen]
Sjerp builds [COMP with to sail]

So it appears that neither incorporating nor detransitive verbs are accompanied by whatever kind of object in syntax.¹⁶

That, however, is true for syntax. In a different interpretation we know of course that the verbs we are talking about always have an "object" in the sense that the activity they are describing is necessarily directed towards something. For instance, when you eat, you always put something consumable into your mouth etc., or when you bake, there is always something heated in a particular way. This is knowledge at a conceptual-semantic level: when you know the above-mentioned concepts, you also know what things the concept is directed to. In the case of bare, detransitive use the latter are extremely general and vague, of course. In the case of incorporational use of the verb the class of things the activity is directed to is far more specific, that is, it is restricted by the denotation of the incorporated noun. So, Frisian iite (eat) can in principle be directed to everything edible, where apelite can only be applied to apples. If one maintained, however, that the element apel somehow functions here as an object, then this would only be valid for a conceptual level, but not for syntax. Its formal analysis will be dealt with in the next section.

Evidently one wants to establish a connection between the conceptual-semantic properties of a verb and its manifestations in syntax. This could be done by way of projection. In section 3.1 we have seen that we can understand this in such a way that the verb is projected from the lexicon into the syntax. Now, if an "object" is present at the conceptual level, and cannot be detected in the syntax, then one must conclude it has not been projected syntactically. So far, very informally, this is what I think is happening with incorporational and detransitive verbs. In section 4.6 I will give a more solid framework to put these ideas into. For the moment, I hope I have provided the reader enough to follow the ensuing discussion.

¹⁶ Manzini (1992, 279-280) also states that in John ate the internal role of the verb is not projected and not visible. Jacobs (1994) takes a comparable stand. See also Safir (1991), who generalizes, on the basis of different data, that "there is (...) no evidence that internal implicit arguments must be represented in syntax at all" (Safir 1991, 123).
We now ask the question of why such a deletion in the lexicon is permitted, or to put it differently, what makes an empty place in lexical structure possible? Up until now, to the best of my knowledge, no proposal has been put forward in the literature as to how this phenomenon could be explained, as is more or less confirmed by Rizzi's (1986, 540) and Van Voorst's (1989, 129, note 1) appeals. So let's have a try, although I must admit that my attempt necessarily has a rather speculative character.

I propose to pursue the matter in a manner reminiscent of the way of thinking with respect to empty categories that is by now fairly generally accepted in the world of syntax. There the intuitive idea is that an empty position cannot be created at random, but must be licensed in a certain controlled position and its content must be recovered in some way.

Recall that noun incorporation (and detransitivization, for that matter) were constrained by the obligatory presence of a Patient-object and a subject that acted as a volitional Actor. Therefore, to gain a deeper insight into the reason of deletability, it seems natural to have a closer look at the properties of both subject and object. Let's start with the latter. Why is one object incorporeal, and the other not?

The answer we provided thus far was that the one object is a Patient, and the other is not. So, what in fact is a Patient? In the literature, we can find descriptions like these:

"Affected entity". (Jackendoff 1990, 126)
"The Patient Θ-role (...) is actually a composite of two Θ-features, +Affected and +Theme". (Lebeaux 1988, 253)
"A Patient will be defined as a participant which the verb characterizes as having something to happen to it, and as being affected by what happens to it". (Andrews 1985, 68)
"The Patient is the thing that is said to be affected or acted upon". (Parsons 1995, 638)

The common factor in these "definitions" is affectedness, where an affected argument is mostly described as an argument that undergoes a change of state by the action expressed by the verb (cf. Hale & Keyser 1992, 126; Rizzi 1986, 538; Tenny 1987, 62). The latter author admits that "its semantic definition has been somewhat amorphous" (p. 75), but for the time being we shall have to cope with it.

What is important to us is that there is a special relationship between the verb and the object: the change of state is caused by the action expressed by the verb. This relationship could be connected to the time dimension, as it might be clear that the changes in the object increase if the action lasts longer. "The Theme argument of V is temporally dependent on V", as Roberts (1987, 213) puts it. Even more important could be consequences concerning the content of the object, which Jaeggli (1986, 608) alludes to:
"When an object of a predicate is affected by the action expressed by that predicate, its thematic interpretation is well defined (...). But in sentences involving unaffected objects, this is not the case."

This statement might be important in terms of recoverability, although it is hard to get a clear and concrete idea of what is exactly at stake here. I will try to shed some more light on the issue by an informal discussion of the verbs know and chop. Thinking of the action of chopping, it immediately comes to mind that something should exist that can be chopped. The class of candidates is necessarily restricted to the class of things that are choppable, so let us say trees or branches. This is typically different with a verb as know, as there seems to be no ending to the things that can be known. So from the context of know nothing can be inferred about the content of its object. Moreover, that object is independent of being known or not: it remains in the state as it is. This is clearly different for the object of chop, as from the meaning of that verb one can conclude that the thing to which chop is directed will loose its contact with the piece of wood it was first connected to. So, all in all, an object of know seems to exist much more independently from its verb than an object of an affectedness verb such as chop.

Semantically, the affectedness of an object is not always as clear as in the case of chop. Andrews (1985, 68) mentions kill, eat and smash as clear cases, and hear and love as verbs which obviously do not take a Patient. "The objects of hit and kick are intermediate in status, because although something obviously happens to them, they are less clearly affected by it". Be that as it may, in Frisian these verbs are able to incorporate, as (18) has shown for the former. Zubizarreta (1987, 44) also discusses an "extended sense" of affectedness, which could cover verbs of creation and recreation. In such a view verbs such as skriuwe ('write') and leze ('read') could fall within the concept of affectedness. Both are able to incorporate in Frisian.

What is essential is a special relationship between the verb and the object. There have been a few proposals to reflect this relation in lexical representation. Roberts (1987, 214), for instance, co-indexes the verb and the object for this purpose. Zubizarreta (1987, 10 and 58) gives a representation where the verb and the affected internal argument form one complex

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17 See also Dowty (1991, 569). Dowty (p. 574-5) also calls attention to the circumstance that distinctions in semantics are not always as clearly discrete as in syntax and phonology, as they are ultimately related to the outside world, and thus can be of a scalar character.

18 Formally, this relation could possibly be characterized as a homomorphism. See Dowty (1991) and, for the formal side, Partee, Ter Meulen & Wall (1990) for discussion.
predicate, set apart by means of angled brackets, as for instance in the verb *destroy* (p. 10, Zubizarreta’s (1.4)):

(99)  \(<\text{destroy}^\text{y}>, x> \)

For my purposes, it seems sufficient to simply mark the object with the feature [+ affected], in the same spirit as Lebeaux’s (1988) proposals. The object can get this feature on behalf of the semantics of the verb. Interestingly, the feature [+ affected] has already been claimed to be the conditioning factor for other grammatical phenomena, such as the existence of object *pro* in Italian (Rizzi 1986) and NP preposing in derived nominals and the middle construction in English (e.g. Hale & Keyser 1992; Zubizarreta 1987). Another phenomenon could now be added to this stock: detransitivization and noun incorporation in Frisian.

But as we have seen in previous sections, an affected object is not the only condition for noun incorporation or detransitivization to take place. There is also a volitional Actor required. So a further question is: what attributes such an Actor to the possibility of an empty place in argument structure?

The answer lies, I think, in the property that a volitional Actor has a certain control over the action, and thus over the Patient. It is the volitional Actor, to put it in the words of Van Oosten (1977, 459), "through whose intentional agency the action of the predicate takes place, and who thus has the responsibility for the action of the verb, bringing about some change in the object". The control of the Actor can manifest itself in the way the action is performed, in the decision when to start or when to stop, and perhaps in still other respects. It is clear that for instance the subject of an achievement verb like *krire* (‘receive’) does not possess these abilities. Hence its non-incorporability follows.

To resume, it seems to be the case that the non-expression of an argument is only licit if the event is maximally under control. In this constellation both the verb and the Actor play a role. The verb, while it assigns a [+ affected] feature to the object in that the object is dependent for its changes on the action as expressed by the verb. And the Actor in controlling the action itself. It is this property of controlling the event that licenses the "empty category" in lexical structure.

Now that we have established that both noun incorporation and detransitivization have to do with the non-projection of a semantic argument into the syntax, it immediately becomes clear why preverbal verbs resist these processes, as we showed extensively in the two previous sections. Adding a pre-verb mostly amounts to a transitivization operation: the derived verb is
accompanied by an obligatory object. As to Frisian, this fact is discussed in some detail with respect to the prefix *be-* by Veenstra (1988). For Dutch, Sassen (1987, 98) also mentions the prefix *be-* and Hoekstra, Lansu & Westerduin (1987, 72) add Dutch *ont-* to the list, where Neeleman & Schipper (1993) extensively discuss Dutch *ver-* in this respect. The same effect has also been noted for many Dutch particles by De Haas & Trommelen (1993). All these authors note the obligatory transitivity of the complex verbs derived by adding a prefix or a particle. What, however, they do not make very clear is why they have this property.

At first glance, it may seem somewhat strange that these derived transitive verbs may hardly drop their object, while ordinary simplex verbs can. After all, there seems to exist no difference in the affectedness of the respective objects. The one of *opite*, for instance, is certainly no less affected than the object of simple *ite*. Accordingly, our condition on deletability cannot discriminate between both kind of verbs. Is the affectedness feature not the appropriate factor, after all?

I would like to maintain my position, but at the same time claim that the condition can be put out of order by an intervening factor, i.e. the effects of the word formation rule which makes use of the prefix (or the particle). Booij & Van Haaften (1988) argue that the prefixation itself (they discuss Dutch *ver*) entails the creation of an argument, as a result of the semantic effects of the rule. One could thus say that the new object of the derived verb is dependent on the existence of that prefix. This is seen most clearly with intransitive simplex verbs which have turned into transitive ones. Take Frisian *rinne* ('run'). If you want to refer to a kind of action where you run at least as fast as someone else, you can use the derived verb *berinne*, exemplified in Veenstra (1988, 156):

(100) At er goed syn bèst docht berint Gurbe Ben Johnson noch
     'If he does his utmost best, Gurbe will run at least as fast as Ben Johnson'

In this example the act of running is deliberately related, in this special case compared, to another person, mediated by the grammatical marker *be*-. This person, projected as the direct object, is thus essential to the word formation operation. Therefore, the direct object is immediately dependent on the prefix *be*-, and neither of the two can be deleted:

(101) a. * Gurbe berint [= Veenstra's (42b)]
     Gurbe [PREFIX-runs]

    b. * Gurbe rint Ben Johnson
     Gurbe runs Ben Johnson
Something similar, although perhaps at first sight less evident, can be said about those derived verbs that can be considered transitive in their original simplex state. Take for instance *skriuwe* ('write'), which can take an object that refers to the entity that is created by the action of writing, e.g. a letter. From *skriuwe* can be derived *beskriuwe* ('describe'), also transitive, as could be expected. However, the object of *beskriuwe* is of a totally different nature than the object of *skriuwe*, as it is not the object coming into being by the action of writing, but rather an entity that already has an existence, independent of the action of writing, which is merely intended of being given a description of. So, again, we could state that there is a dependency relation between the object of the prefixed verb and the prefix itself. And again, neither of the two can be deleted:

(102) a. Kees beskriuwt in skilderij
   Kees describes a picture
b. * Kees beskriuwt
   Kees describes
c. * Kees skriuwt in skilderij
   Kees writes a picture

The situation becomes more vague where the derived verb's object is of the same nature as the simplex verb's. We have already come across one such example in *opite* (literally: up-eat). Although we have the same kind of object with *ite* and *opite* (e.g. a pancake), it can be upheld that also in this case there is a special relationship between the object and the particle, in that it is explicitly stated by *op-* that the object has been consumed fully. So, adding this particle to the simplex verb makes no sense without mentioning the object, one could imagine.

So far, the discussion points but in one direction, namely that in as far as a preverbal verb is transitive, it cannot occur without its object. However, there are examples where it looks as if it can. Take the ritual of making and drinking tea. One part of the action consists of pouring the boiling water on the tea-leaves or tea bag. This could be described by the incorporation verb *wetter-opjitte* (water-up-pour), which could also be used detransitively:

(103) Mem sil opjitte
   'Mother shall up-pour'
   'Mother will pour'

A few minutes later, then, you are able to pour the extracted liquid into a cup. This is *teeynjitte* (tea-in-pour), again to be used detransitively:
(104) Mem sil ynjitte
   Mother will in-pour
   'Mother will pour out'

Probably, the deletion is possible in these examples because it can be assumed that the particle and the object are only loosely related. The act of pouring is not altered, and the particles only have the function to indicate a location of the object, so it seems as if their role can be compared with adjuncts. Therefore, it is questionable whether we really have a case of argument creation in such examples.

This terminates my discussion of the syntactical non-projection of the object of preverbal verbs. By no means can it be claimed to be conclusive: the set of prefixes and particles can perform far more semantic operations than have been touched on here, to mention one thing. What I have merely tried to do is give an idea of the behaviour of this kind of verb. The most important outcome for our purposes is that these verbs, instead of disconfirming, on the contrary strengthen our hypothesis that noun incorporation in Frisian is dependent on the deletability of the verb's semantic argument.

It is well imaginable that language users feel the structural restrictions on prefixes and particles as a hindrance in expressing what they have in mind. There appear to be two strategies to overcome the difficulty. The first is a direct support for my hypothesis. It boils down to not expressing the prefix or particle, simply by choosing the simplex form of the verb. So, the presence of a preverb no longer can be felt as an obstacle in the incorporation process. It is certainly not the case that this strategy is generally applied. Nevertheless, in the WFT I found incorporation verbs where in a normal syntactic expression with a phrasal object these verbs would have shown a prefix or a particle. Here are some examples; to each incorporation a syntactic expression is added for comparison:

(105) a. broekbine (trousers-bind)
   de broek *(fest)bine (the trousers tight bind)
   b. golleploaitsje (haystack-pick, i.e. to egalize)
   de golle *(be)ploaitsje (the haystack PREFIX-pick)
   c. draakplakke (kite-stick)
   in draak *(be)plakke (a kite PREFIX-stick)
   d. feangrave (peat-ditch)
   fean *(Ôf)grave (peat off-ditch)
   e. flaaksbouwe (flax-grow) (also with other crops)
   flaaks *(fer)bouwe (flax PREFIX-grow)
   f. glêsskilderje (glass-paint)
   glês *(be)skilderje (glass PREFIX-paint)
A prerequisite for such a solution must be that the right meaning of the incorporation verb is easily computable from the simplex verb and the role of the incorporated noun. This condition is fulfilled in the examples above, it seems to me.

The other possible strategy to avoid difficulties of incorporation with preverbal verbs seems to consist of simply relaxing the restrictions. In section 4.3 we noted that sometimes instances of incorporation with preverbal verbs can indeed be found. One would not expect this directly, since we just stated that adding a prefix or a particle mostly entails the creation of a syntactic argument position, which renders preverbal verbs syntactically transitive. Nevertheless, the existence of these examples makes clear that this rule is not obeyed too strictly, at least not with respect to the application of noun incorporation. This is further evidenced by the impression that it is generally the case that noun incorporation with these verbs gives a better result than de-transitivization. Consider as an example the following pattern, where we take (106) as a starting point:

(106) De boer wol de eker ploegje
    The farmer wants the field plough
    'The farmer wants to plough the field'

With a volitional subject and an affected object, detransitivization and noun incorporation should cause no problem, which indeed happens to be the case:

(107) a. De boer wol ploegje
    The farmer wants to plough

b. De boer wol ekerploegje
    The farmer wants to field-plough

The verb of (106) can be prefixed with be-, which produces (108):

(108) De boer wol de eker beploegje
    The farmer wants to the field PREFIX-plough
    'The farmer wants to plough the field'
Because of prefixation the prediction would be that both detransitivization and noun incorporation yield an ungrammatical result. However, the facts are less straightforward:

(109) a. * De boer wol beploegje
   The farmer wants to PREFIX-plough
b. ? De boer wol ekerbeploegje
   The farmer wants to field-PREFIX-plough

To my ears, the sentence with noun incorporation sounds better than the de-transitivized one. Why should this be so? Note that (109)b possesses an overt element that could fill in the prefixed verb's need for an object, i.e. the incorporated noun, which in its normal, non-incorporated use fulfils the same role. Although not being a real syntactic object, this stand-in can make the sentence more acceptable than a sentence which lacks any overt element that points in the direction of an object, as is the case in (109)a. In sum, I take it that with respect to preverbal verbs in principle noun incorporation is just as bad as is detransitivization, but that the availability of an element, i.e. the incorporated noun, which can fill the need for an object, can render incorporation with these verbs more acceptable. And this even to a high degree, as we have seen examples of.

Outside the area of preverbalization, there is another case where detransitivization and noun incorporation diverge. The first is (nearly) impossible with verbs with a vague semantic content. Examples are keare (turn), meitsje (make) or sette (set):

(110) a. ?? Ik kear
   I turn
b. * Ik meitsje
   I make
c. ?? Ik set
   I set

Noun incorporation, on the other hand, can be applied to such verbs without difficulties:

(111) a. Ik tsiiskear
   I cheese-turn
   'I turn cheeses'
b. Ik fytsmeitsje
   I bicycle-repair (or: bicycle-construct)
   'I repair/construct bicycles'
4.6 Implementation into the grammar

The reason for the behaviour of (110) must be, I suppose, that the verbs of these sentences contain too little information to form a felicitous utterance. As such they could be compared with pure intransitive verbs such as komme (come) and gean (go), which normally require a directional phrase, and which can only stand alone when embedded in a clear situational context. This is in contrast to those verbs which not only denote a movement, but also the way in which the movement is performed. Therefore, an utterance like ik rûn (I walked) sounds more acceptable than ik gong (I went). All these examples could possibly be viewed as inherent infringements on H.P. Grice's Maxim of Quantity, which says "make your contribution as informative as is required" (Grice 1975, 45).

In the meantime, the sentences of (111) do not seem to cause any trouble. Obviously, the incorporated noun gives enough specification of what the action is about. So, here we have another example where incorporated nouns have more possibilities than their detransitive cognates.

4.6 Implementation into the grammar

So far, we have described Frisian noun incorporation and its conditions in rather informal terms. Now the time has come to put our previous results in a more formalized framework and to give noun incorporation its place in the grammar. In establishing this, we could perhaps pick up some good ideas in the field of detransitivization, the more so as obviously we have to express the tight relationship between the two processes in our grammatical account.

In the early days of generative grammar (Katz & Postal 1964, 81; Chomsky 1964, 47), detransitivization was performed by means of a deletion transformation, but as we argued, a transformational account will no longer be available, neither for detransitivization nor for noun incorporation.

A typical lexical solution could be to assume different lexical entries to underlie the different structures. For optionally transitive verbs like ite (eat) one would get a trio such as the following, (112)b representing detransitivization and (112)c noun incorporation:

(112) a. ite: V, [NP _]
b. ite: V, [___]c. ite: V, [N° ___]
With respect to detransitivization, a proposal in this spirit has been made by Bresnan (1978, 17), Marantz (1984, 193), Manzini (1992, 287) and Jacobs (1994). For noun incorporation, something such as (112)c can be found in Bok-Bennema & Groos (1988, 35), Rizzi & Roberts (1989, 19) and Roberts (1991, 213).

Although it must be admitted that subcategorization could produce the right results, it nevertheless has some serious disadvantages. First, if I am right in claiming that there is a semantic regularity underlying both noun incorporation and detransitivization, then one would expect that such a trigger would get a place in the derivation. In (112) it is suggested that the two processes are an idiosyncratic property of an individual verb (as the above-named authors indeed think it is). Assuming that volitionality and affectedness are true conditioning factors, a generalization seems to be missed. A consequence would be that the permanent lexicon of the language user increases considerably, in that he has to learn and store two extra uses of a large number of verbs. Second, (112) does not reveal that there is a systematic relationship between noun incorporation and detransitivization. That in a language such as Frisian a verb which displays the one also shows up the other remains a mere accident in a representation like (112). Third, an extra specification is needed to ensure that the nominal in (112)c obeys the same selectional restrictions as the NP in (112)a. And finally, (112)c needs an extra indication that the complex verb itself is intransitive.

The problems with subcategorization even increase should we take Zubizarreta's (1987) system as point of departure. As noted in section 4.5, she assumes that affected arguments build a complex predicate with the verb. The argument can then come up in two shapes, as a variable and as a constant. The variable projects into the syntax, resulting in a transitive construction. The constant may not project, hence a detransitive verb at the surface.

The idea of creating a constant in the subcategorization frame is semantically motivated. Zubizarreta assumes, following Gruber (1976, 35), that detransitives are more restricted in meaning than their transitive counterparts. According to them, a sentence like The baby ate can only entail that the baby ate food, and not that it consumed a cigarette, for instance. Hence, Zubizarreta enters the constant FOOD in her, as she calls it, S-R representation, like this (her p. 10 and 58):

(113) <eat^FOOD>, x

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19 Note that in the last two publications the incorporation itself is performed transformationally, in the style of Baker (1988a).

20 See Jackendoff (1993, 301-304) for a similar criticism applied to other cases, and Van Voorst (1988, 128) with respect to detransitivization.
A variable in a representation is then used to indicate that the object is projected and at the same time can cause a metaphorical interpretation as in the case of eating a cigarette. The representation would be (Zubizarreta (1987, 10), compare also (99) above):

(114) \( \text{<eat}^\wedge y\), x

It is hard to imagine how noun incorporation could be integrated in her system. Zubizarreta now has a dichotomy constant vs. variable, which can cover detransitive vs. transitive use, and at the same time the absence or presence of metaphorical use. But how would a third construction fit into this picture? It does not project a syntactic argument, which would force one to assume a constant in the S-R representation. On the other hand, the choice of the thing to be eaten is fairly free, and can even extend to metaphorical use:

(115) De poppe begûn te sigretiten
   The baby began to cigarette-eat
   'The baby began to eat a cigarette'

This would opt for representation by means of a variable. From these conflicting demands one may conclude that Zubizarreta's theory cannot offer us a good solution to cope with noun incorporation within a lexical analysis.

I think a better way to express the respective relationships is by the application of a lexical rule. Jackendoff (1990, 155-159) mentions two other ways to express relationships, namely by way of an abbreviatory notation in the lexical entry and with the help of correspondence or linking rules between lexical and syntactic representation. The latter seems more fruitful for those arguments that can occupy different positions in syntactic structure. The former could work nicely for detransitivization, and indeed Manzini (1992, 284) uses brackets to indicate the optionality of the internal argument. But the abbreviation method is in this case no more than a notational variant of an optional deletion rule, and, as far as I can imagine, it cannot handle an operation like noun incorporation.

In our case, a lexical rule should in the first place be a rule of non-projection, as we claimed in section 4.5 that both detransitivization and noun incorporation exhibit an empty place in the argument structure. A case of non-projection naturally requires two levels of representation, one where the non-projected element is still there, and one where it is not. This could nicely be connected to more recent ideas about the structure of the lexicon. In contrast to the unstructured list of thematic roles in the early GB framework, these theories postulate (at least) two levels of representation within the lexicon, one which represents the pure semantic properties of the predicate,
and one which encodes the number of arguments a predicate has syntactically, plus some basic information about their syntactic character, viz. whether they are external or internal, or direct or indirect (cf. Carrier & Randall 1993, 122). In short, one could speak here of a lexical semantic representation and a lexical syntactic representation. I will follow the most common usage and term them Lexical Conceptual Structure (LCS) and Predicate Argument Structure (PAS), respectively. It is assumed that the latter is a projection of the former.\(^{21}\)

As we argued above, the verbs that we are concerned with all have some entity which the activity the verb is denoting is directed at. The verb *ite* ('eat'), as a well-known example, entails the fact that there is something that is going to be put in the mouth, etcetera. This is an inherent property of the concept of eating (cf. Carlson 1984, 263). Therefore, in *ite*'s representation at Lexical Conceptual Structure this argument should be present in one way or the other. On the other hand, as for detransitive and incorporation verbs where this argument is missing in syntax, it can be argued it is absent at Predicate Argument Structure, too. Hence, the non-projection must have performed in the mapping of LCS to PAS.

In fact, Hellan (1988, 27) offers such a solution for detransitives, called by him "Object Deletion", where "the role is left dangling in CS".\(^{22}\) It is presented as a rule, conditioned under government, which does not seem to me to be correct. The role of the conditioning factors rather leads me to a deviating presentation. Recall from section 4.5 that noun incorporation and detransitivization are similar in that they have an empty argument position, and that we argued that that empty position could occur because of the availability of the conditioning factors. One could thus say that volitionality and affectedness together license an empty argument place. As such, it need not to be stated that the non-projection is optional. Given the empty position, the original

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\(^{21}\) For an insightful overview, see, among others, Rappaport & Levin (1988), Rappaport, Levin & Laughren (1988) or Kornfilt & Correa (1993). Some authors employ a different terminology. Zubizarreta (1987, 3), for instance, has *S-R*, "a lexico-semantic level (…) which encodes the selectional properties of a lexical item" and *L-R*, "a lexico-syntactic level (…) which consists of frames that mediate the mapping onto syntax of arguments selected by main predicates at S-R". Hellan (1988, 14) speaks of *Conceptual Structure* ("it provides a concept together with its associated theta-roles") and *Lexical Structure* ("it relates the concept to its lexical realization"). As far as they have been worked out, there are many details in these and other proposals which differ, but it is unsuitable to discuss them here. What is important to us is the idea of two different levels and their main characteristics. Carrier & Randall (1993, 123) use a comparable terminology, as in general they describe a situation in which some CS arguments do not link to AS (LCS and PAS, respectively).

\(^{22}\) Carrier & Randall (1993, 123) use a comparable terminology, as in general they describe a situation in which some CS arguments do not link to AS (LCS and PAS, respectively).
argument has two possibilities: either it vanishes altogether (detransitivization), or it rescues its life as a compounding partner of the verb (noun incorporation). I think, in comparison with an account which makes use of a deletion rule, this view fits better into the recent shift in linguistic theory towards a modular structure of grammar on the basis of principles. To summarize, my incorporation theory reads as follows:

(116) In Predicate Argument Structure, an empty argument position is licensed, iff

(i) the corresponding argument is affected, and
(ii) the event is controlled by a volitional Actor.

In the mapping of Lexical Conceptual Structure to Predicate Argument Structure, the corresponding argument can either

(a) not project at all, or
(b) project as left-hand member of a verbal compound.

The conditioning properties are lexical-semantic ones and hence should be available at LCS, and thus fit into the picture. Moreover, the drawbacks of a solution with the help of subcategorization have now been overcome. The generalization governing the process is expressed in the conditioning factors. The correspondence between detransitivization and noun incorporation is expressed as having both an empty argument place, which automatically generates their syntactic intransitivity. Furthermore, the common LCS-source guarantees that the incorporated noun obeys the same selectional restrictions as the argument of the verb.

The derivation can be visualized in the following schematic picture (where Arg. is shorthand for "argument"): 
The (volitional) external argument can be identified since it is placed outside the square brackets. Apart from that I take it that at LCS the order of the arguments with respect to the verb is irrelevant. By the left-hand arrow we see the derivation of an ordinary transitive verb. Intransitivity is represented by the right-hand arrow. There we see a branching, resulting in detransitivity or noun incorporation. Note that in the mapping of LCS onto PAS it is the argument position that is crucial. When it remains, then the argument itself is projected into the syntax. When the position vanishes, then either the argument is not projected at all, or it can be projected into the morphology.

These are the main features of my analysis of noun incorporation in Frisian. Although at first sight the picture looks rather simple, there nevertheless are a few points which need some more clarification. One is that the theory presupposes a specific relationship between lexical and syntactical structure. That a different view on the balance between lexicon and syntax can lead to different conclusions is proven by a paper by Hoekstra & Roberts (1993).
have to go into their ideas because they comment on detransitivization, albeit that this is embedded in an analysis of the middle construction, which makes their proposal a little bit harder to evaluate. They claim that middles must be derived syntactically, and one of their arguments is that detransitivization is performed in the syntax, where the implicit argument should be represented by pro.

Their point of departure is a specific interpretation of the Projection Principle, which I first present here in Chomsky's (1981, 29) original formulation:

\[(117) \text{Projection Principle}\]

"Representations at each syntactic level (i.e. LF, and D- and S-structure) are projections from the lexicon, in that they observe the subcategorization properties of lexical items"

Hoekstra & Roberts (1993, 185) then modify this to the following (their (5):

\[(118) \text{"Thematic properties of lexical items must be structurally instantiated at all syntactic levels of representation (DS, SS, LF)"}\]

Subsequently, they state that an argument of a verb which is syntactically absent but semantically present must be structurally instantiated somehow at LF, and therefore, given the Projection Principle, also structurally instantiated at S-structure and at D-structure. For detransitive verbs, this would mean that these should thus be conceived as transitive at all syntactic levels.

A first comment could be that when an argument is really syntactically absent, it should not be represented in syntax, and thus not in LF, which is a syntactic level after all. As the implicit argument of detransitives is not syntactically active, one should not want it to be represented in the syntax. Therefore, I agree with Manzini (1992), who places syntactically invisible arguments outside the scope of the Projection Principle. Note further that Hoekstra & Roberts' interpretation employs a kind of backward direction in that a property is here basically located in LF, after which it is stipulated that the same property must be available at the higher levels. In his original proposal, Chomsky, on the other hand, starts with a property in the lexicon which should be kept on syntactic, levels. Thirdly, it now looks as if in Hoekstra & Roberts' proposal all semantic information is located in LF. If so, this ignores the more traditional division of encoding semantic information both in LF and in the lexicon. Where LF provides a compositional semantic interpretation

\[23\] For criticism on this aspect of the paper, see Ackema & Schoorlemmer (1995).
from the syntactic structure, the lexicon stores the meaning of individual words (cf. Ritter & Rosen 1993), which includes information about their arguments. Therefore, it is surely not necessary to locate this information solely in LF. In Hoekstra & Roberts’ system, the balance of power appears to lie rather one-sidedly in the syntactic camp.24

Apart from their specific interpretation of the Projection Principle, Hoekstra & Roberts need to invoke a few ad hoc solutions to have their analysis work. First, they can not make use of the existing licensing conditions for pro as formulated in Rizzi (1986), so for this special purpose they have to construct a new one, called arb licensing (p. 190). This is performed on the basis of Θ-assignment, which, by the way, in itself could be an indication that a lexical property plays a role here. As Hoekstra & Roberts recognize that this implicit argument is not syntactically active, they stipulate that arb-licensed pro’s need not be syntactically active (p. 192), which is a second ad hoc measure. This is the more disappointing as in Rizzi’s (1986) analysis, which we took over, syntactic activeness was a natural result of the location in the respective components. As it is furthermore far from clear how Hoekstra & Roberts would handle several of the restrictions mentioned in section 4.4, it seems wise to conclude that a lexical analysis such as the one we just proposed is better to be maintained.25

Another point that might be in need of some further clarification is the effect of affectedness itself. We stated that it is one of the conditions which makes noun incorporation and detransitivization possible, eventually resulting in an intransitive verb with durative aspect. Now, a problem could arise at those places in the literature where it is claimed that affectedness is related to Accomplishment verbs, and thus to a delimited event, and thus to terminative aspect. This is one of the tenets of Tenny (1987), for instance. In this way, affectedness could cause two conflicting types of aspect, which inevitably would lead to the conclusion that somewhere there must have been a mistake.

The impression above is indeed too superficial. First, as Mulder (1992, 57-59) correctly points out, it is not true that there is a one-to-one correspondence between affectedness and terminative aspect. He mentions as examples verbs like beat or push, which show durative aspect even if their object is affected and has potential delimiting properties. Significantly, in Frisian such verbs can be involved in noun incorporation, as expected:

24 See Jackendoff (1990, 155-159) for an insightful overview of the various strategies to tackle the correspondence between semantic and syntactic structure.

25 The foregoing discussion recalls and resembles of course the problems with Baker’s UTAH, as dealt with in Chapter 3.
But apart from some dissident verbs, at a more general level the correlation
between affectedness and Accomplishments only holds when the object itself
is bounded. When it is unbounded, viz. when it consists of a mass noun or a
bare plural, the well-known transition to an Activity, and thus to durativity,
takes place, as, as a matter of fact, Tenny herself states on p. 112 ff. As the
incorporated noun is non-specific, it causes the same effect, as we already
pointed out in section 2.7. As for detransitive verbs, the same procedure ap­
plies, since in this case, too, there is not a specific object available. Detransit­
ives are therefore without exception durative, as this simple example may in­
dicate (see also Mittwoch 1982, 114; Tenny 1994, 44):

(121) a. Gurbe lêst oerenlang
     Gurbe reads for hours
b. * Gurbe lêst yn in oere
     Gurbe reads in an hour

When, following Verkuyl (1993) or Pustejovsky (1991), we consider this type
of aspect assignment as a compositional device, then the right aspectual inter­
pretation follows automatically.

In this vein, there might be one technical problem with respect to Verkuyl
(1993), as his aspect construal seems to work on a syntactic structure. If I am
right in claiming that for incorporation or detransitivity there is no argument
place in syntactic structure for the object, then there would be no constituent
which could be assigned a minus feature, [-SQA] in Verkuyl's theory. And
this would mean that according to his Plus-principle these constructions
would be assigned terminative aspect, which is obviously not correct. How­
ever, the "objects" of these constructions clearly resemble those consisting of
a mass noun or bare plural (cf. section 2.7) and can thus be considered
[-SQA]. Therefore, at least in the spirit of Verkuyl (and others) it can be
maintained that a compositional theory of aspect can produce the right, that
is, durative, result.

We thus see that, in our account, aspect remains a simple, interpretational
device, dependent on the quantificational properties of the complement. This
is important to establish, since in Jacobs (1994) one can find a proposal
where aspect has a fundamentally different role. In his view, the relationship
between durative aspect\(^{26}\) and detransitivity should be expressed in such a way that aspect functions as a trigger of the detransitivization. Detransitivity would thus be dependent on durative aspect where, in my opinion, durativity is only a side effect of detransitivity, not even so much caused by detransitivity itself but rather by the concomitant non-availability of a quantified argument. So, roughly speaking, Jacobs thinks that aspect is a factor at the beginning of the process, while in my view it is at the end.

The principal question emerging from Jacobs' solution is, as he himself also notes, what could there be in the property of durativity that enables detransitivity? Jacobs' answer is that he assumes that by durativity the relative weight of the content of the verb increases, and subsequently that the content of the complement lowers. Hence, the information of the complement would become relatively irrelevant, with the effect that its content need not to be specified overtly. But Jacobs does not make clear how we should evaluate this assumed relationship between the internal time constellation of an event and the relative informational content of the thing the action is directed to. And what should we understand by "relative" in this respect? One can not but conclude that it can vary a good deal, since durativity itself does not preclude that the complement is expressed overtly, either as a bare NP or as an incorporated noun. On the other hand, durativity alone also cannot give the right output results since, for instance, statives, which are inherently durative, never allow detransitivization. However, in my opinion the most serious drawback of Jacobs's analysis is that it would force us to leave the elegant and well-established aspectual theory as it has been worked out by Verkuyl and others, which fits in so nicely with the properties of both detransitivization and noun incorporation. I therefore conclude that durativity is not a good conditioning factor for detransitivity nor for noun incorporation. On the other hand, affectedness, which is there as an intrinsic lexical-semantic property anyway, can do the job quite satisfactorily.

A comparable case of what seems to me to be a reversal of cause and effect can be found in Ackema (1995, 317-318). Here it is not durative aspect but rather the arbitrariness of the semantic argument of a detransitive verb which is held responsible for non-projection of the argument.\(^{27}\) One problem with such an approach is that there are transitive verbs which always have to

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\(^{26}\) Jacobs himself uses the term "generisch/habituel" (p. 315), but I assume this can be headed under the more general umbrella of durativity.

\(^{27}\) For the same idea to work for noun incorporation a comparable but different criterion would have to be invoked, for instance the non-specificity of the argument that eventually shows up as the incorporated noun. This would break up a unitary analysis for noun incorporation and detransitivization. Note however, that Ackema himself does not connect these processes anyway.
be accompanied by a surface object. Ackema mentions Dutch *weten* ('know'), *zien* ('see'), *vrezen* ('fear') and *begrijpen* ('understand') as examples, and indeed their counterparts in Frisian do not detransitivize, either (nor incorporate, for that matter). Ackema accounts for this restriction by simply stating that these verbs can not have semantic arguments with an arbitrary interpretation. He generalizes this in the following statement (his (65), p. 317): "Only an argument represented at the action tier can be Arb". Note, however, that it is hard in principle to see why the above-mentioned verbs could not have objects with an arbitrary meaning. Ackema's generalization therefore seems to be fairly ad hoc. Furthermore, he does not make very clear why his generalization has the content it has. His contention that the argument is more recoverable when it is represented twice at LCS, one time on the thematic tier and one time on the action tier (cf. Jackendoff 1990), does not sound too convincing, and runs counter to his earlier statement (p. 315) that an arbitrary argument does not need to be recoverable just because of its arbitrary meaning!

Note that in the meantime the effect of Ackema's criterion for detransitivization comes fairly close to the proposals put forward in this work. This is so because it is the action tier where relations of affectedness are defined. The fundamental difference, however, is that in my analysis affectedness itself, an inherent feature of the verb's meaning, is the primary condition for detransitivization (and noun incorporation) to take place, and not arbitrariness, which in my view is an arbitrary circumstance itself. In my analysis, an arbitrary interpretation in the case of detransitivization is a direct consequence of the non-projection of the semantic argument itself. Since one knows from its primary (LCS) meaning that the verb has an argument, but that argument is not visible, one can not get an idea of its content. Hence, an arbitrary interpretation follows automatically.

Before ending this section, one remark is still in order. As the triggers of the processes are of a semantic nature, one should expect that (116) could be applied universally. With respect to detransitivization, this may well be the case, although I must admit that I have not checked this hypothesized state of affairs. As to noun incorporation, one can certainly say that it is not applied generally among the world's languages. A possible reason will be discussed in the next chapter.

### 4.7 Oblique arguments

As (116) stands, it is too general for the evidence provided thus far. It refers to the general notion of "argument", whereas up to this point we only dealt
with direct objects in monotransitive sentences. But as we saw in Chapter 3, that is not the only sentence type which allows incorporation: some oblique arguments, which syntactically show up as a PP, are also able to incorporate. In this section we will try to account for these cases. Unfortunately, we are entering a trickier area here, but recall from the treatment of Baker's syntactic head movement that his analysis could not handle such cases at all, so every step forward in this respect can be considered as progress.

The relevant distinction – incorporation from an argument correlating with a syntactic NP versus one correlating with a PP – has no principled basis, but has been made purely for practical reasons. The strategy we will pursue is to apply the analysis we have developed so far to such oblique arguments as well. Crucial in this respect is the notion of affectedness. There have been indications in the literature that affectedness is exclusively related to the direct argument, and hence, that it can only be located syntactically in an NP directly governed by the verb. Tenny (1987), for instance, seems to take such a stand. This view would imply that affectedness is indeed restricted to direct objects of transitive verbs, and that with respect to noun incorporation of oblique verbs we would have to look for another source or condition.

However, there are other places in the literature which claim that affectedness can be a feature of oblique arguments as well. We already made acquaintance with the system of Lebeaux (1988, 254) with its three domains of θ-role features, where in principle the feature [+ affected] can compose with features from the other domains. Or take Wilkins (1988, 210) in the same volume, who explicitly leaves open the possibility for prepositional objects to be affected. And in still another framework, Van Valin (1990) assumes a "macrorole" UNDERGOER, which not only can cover a Patient, but also a role like Locative. Hence, let us assume that it is not to be excluded beforehand that an oblique argument can be affected.

Now, the next task to be performed is, for those cases where noun incorporation is connected with an oblique argument, to demonstrate that this argument may have an affectedness relation with the verb. When gathering material from the WFT, it strikes us that noun incorporation related to obliques can prima facie be divided into three classes: instrumentals, goal/locatives, and something which could be characterized as verbs of transport, and which I will dub the sutelje-class for convenience. I will now discuss these classes respectively.

The anchor verb sutelje itself means 'hawk, peddle'. To give an idea of its possibilities, the following list can be distilled from the material of the WFT,
which of course does not reflect the verb's full potency:

(122) apelsutelje  (apple-hawk)
    boekesutelje  (book-hawk)
    breasutelje  (bread-hawk)
    fisksutelje  (fisk-hawk)
    ierappelsutelje  (potato-hawk)
    molksutelje  (milk-hawk)

When you don't incorporate, the argument of the verb has to appear in a PP with the preposition *mei* (with); it may not show up as a direct argument:

(123) a. [mei apels]_{NP} sutelje
     with apples hawk
b. * [apels]_{NP} sutelje
     apples hawk

Incorporation examples with other verbs than *sutelje*, but with the same behaviour, are the following:

(124) fiskrinne  (fish-walk, 'hawk fish')
    dongkroadzje  (dung-wheel, 'transport dung in a wheelbarrow')
    frachtride  (freight-ride, 'transport freight with a wagon')
    grintfarre  (shingle-sail, 'transport shingle by ship')
    koekeslingerje  (cake-swing, 'swing a cake' (in a popular game))

How can the arguments of this kind of verb be considered to be affected? Note that all verbs denote some kind of movement. As such, it can be claimed that the arguments undergo a change of state insofar as they undergo a change of location.

Are there, besides this pure semantic characterization, also formal indications that the arguments bear an affectedness relation to the verb? Indeed, I think, there are. A remarkable property of all these examples is, that the oblique argument is headed by the preposition *mei* ('with'). Note that the same preposition plays a role in the famous locative alternation, which I illustrate here with the well-known English examples:

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29 In fact, the opposite occurs with the derived particle verb *útsutelje* (out-hawk), more or less with the same meaning, where the argument has to be direct, and a *mei*-PP is out:

(i) a. * [mei apels]_{NP} útsutelje
    b. [apels]_{NP} útsutelje
(125) a. Henry loaded hay on the wagon  
  b. Henry loaded the wagon with hay

In (125)b, the direct argument position is occupied by the locative. According to Rappaport & Levin (1988, 28), "the preposition with is used to case mark any Theme of a change of location that is not assigned structural case by virtue of qualifying as the direct argument of the verb". This quote could well be applied to the verbs at hand. For some reason, their argument cannot be projected as a direct one, and hence it is projected in a PP for reasons of case. The semantically empty preposition merely functions as a case marker and is not present at LCS or PAS. The choice of the preposition reveals that the argument should be considered as a Patient.

There is even more evidence that points in the same direction. With the exception of rinne, all the verbs of (124) can take their mei-phrase as a direct argument, when a directional phrase is added:

(126) a. Hy kroadet de dong nei de skerne  
  'He wheels the dung to the dunghill'
 b. Hy rydt de fracht nei Grins ta  
  'Hy rides the freight to Groningen'
 c. Hy fart it grint nei de nije dyk  
  'He sails the shingle to the new road'
 d. Hy slingeret de koeke oer it sket  
  'Hy swings the cake over the fence'

When we take, with Tenny (1987), the direct argument position as the canonical place for affected arguments, then the fact that our arguments are able to occupy that position supports our claim that these arguments can be affected indeed.

Although in a somewhat different sense, a few verbs can be augmented to this stock. They all have the core meaning 'conduct trade, deal'. Here are a few examples:

(127) papierhannelje  
  (paper-deal, i.e. with shares)
 lynstekwânselje  
  (horse-deal)
 bargetyskje  
  (pig-deal)

Again, when paraphrased with a PP, the preposition mei emerges:
4.7 oblique arguments

Furthermore, the semantics of these verbs is comparable, maybe not in the strict sense of a change of location, but surely in an elaborated sense of a change of possession.

Another category of incorporated nouns is the one where the PP cognate can be identified as bearing an instrumental role. Here are a few examples:

(129) angelfiskje (rod-fish, 'fish with a rod')
mesinemelke (machine-milk, 'milk with a machine')
fingerfervje (finger-paint, 'paint with your fingers')
hânwjudde (hand-weed, 'weed by hand')

When not incorporated, these nouns would show up in an instrumental PP headed by the preposition mei ('with'):

(130) fiskje [mei in angel]pp
melke [mei de mesine]pp
fervje [mei de fingers]pp
wjudde [mei de hân]pp

According to Rappaport & Levin (1988, 29), the choice of this preposition can not be an accidental matter. They claim there is a connection with the with-phrase in the locative alternation: both should act as what they call a theme of change of location. In general, they state, "instruments are entities manipulated by an agent in order to bring about an action".

The same point is made by Jackendoff (1990, 142). He claims that in a sentence such as

(131) Phil opened the door with a key

the whole action can be divided into two smaller ones, both, significantly, I think, located by Jackendoff in his action tier. First, the Actor acts on the Instrument, and second, the Instrument acts on the Patient. In his conceptual structure for a sentence such as (131) he therefore explicitly assumes an affectedness relation between Phil and the key.

Some additional evidence for the claim that an Instrument can be affected can be found in the work of Van den Berg (1988). On the basis of Dutch data he makes it plausible that, notwithstanding their deletability, instrumental
phrases can be thought of not solely as adjuncts, but that they have certain features in common with complements. In particular, it can be argued that instrumentals are a kind of hidden NP. I will present here two of Van den Berg’s tests, thereby translating his Dutch examples into Frisian.

The first test concerns pseudo-cleft sentences. It appears that NP’s can undergo this rule:

(132) a. De bakker ferkeapet brea
    The baker sells bread
   b. Wat de bakker ferkeapet, is brea
       What the baker sells, is bread

Pure adjuncts, on the other hand, refuse to be pseudo-clefted:

(133) a. Marijke siet op ’e wál
    Marijke sat at the waterside
   b. *Dër’t Marijke op siet, wie de wál
       Where Marijke at sat, was the waterside

Now, instrumentals tend to go along with NP’s in this respect:

(134) a. Piter snie it brea mei in knyft
    Piter cut the bread with a knife
   b. Dër’t Piter it brea mei snie, wie in knyft
       Where Piter the bread with cut, was a knife
       'It was a knife with which Piter cut the bread'

Middles are the subject of a second test. At first sight, an object-NP can be put in subject position in such constructions:

(135) a. Ik lês dat boek mei nocht
    I read that book with pleasure
   b. Dat boek lêst noflik
       That book reads with pleasure

On the other hand, adjuncts are pretty poor in middles:

(136) a. It sliept noflik mei iepene ruten
    It sleeps nicely with open windows
   b. ?? Iepene ruten sliepe noflik
       Open windows sleep nicely
Here again, it appears that instrumentals behave in the same way as NP's:

(137) a. It skriuwt noflik mei dy pinne  
   It writes nicely with that pencil  
   b. Dy pinne skriuwt noflik  
      That pencil writes nicely

Van den Berg concludes from these and other facts that instrumental phrases should indeed be considered as being NP's, and that, following proposals of E. Hoekstra (1988), the preposition *mei* merely serves as a case assigner. This fits nicely with Rappaport & Levin's (1988) analysis of the *with*-phrase in the locative alternation, as we have seen.

Assuming that the analysis above makes some sense, then this could be interpreted as an indication that an affectedness relation could again be at stake here. To that end, it must be reasoned that the canonical affected argument is the direct argument, and that this argument shows up superficially as an NP. Besides, the evidence provided by Van den Berg gives even more support in the case of the behaviour of instrumentals in medial constructions, as we have seen earlier that the possibility of a middle construction seems sensitive to the availability of an affected argument. Therefore, all in all, it seems not unreasonable that instrumentals can indeed be affected. And that means that the analysis summarized in (116) can be maintained, and at the same time, of course, that it is even further supported.

A third major category of incorporated nouns could be identified as having a PP cognate bearing a Locative or Goal role. I combine these two here, as in practice it is sometimes hard to say which one to choose (as is not unusual with theta role labels in general, of course). Taking inventory of the incorporation verbs in the WFT with an oblique argument cognate, it appears that this is the largest group, so I will give a good many examples. Different from the previous categories, there is not a single preposition involved in the corresponding PP. Here, you can come across prepositions such as *op* ('on', 'at'), *tsjin* ('against'), *yn* ('in'), *oer* ('over'), *om* ('for') and *nei* ('to'). I include the most obvious corresponding prepositions in the list:

(138) búchsprytrinne  
   bonkeplúzje  
   rútsjetikje  
   snoefiskje  
   einsjittle  
   autoride  
   bédnigje  
   (bowsprit-walk)  
   (bone-munch)  
   (window-tap)  
   (pike-fish)  
   (duck-shoot)  
   (car-drive)  
   (bed-piss)  
   (op)  
   (op)  
   (tsjin, op)  
   (op)  
   (op)  
   (yn)  
   (op)
Usually, a location functions as an adjunct in the sentence, and as we have seen that adjuncts are not allowed to incorporate, we will have to show that in the complex verbs of (138) they have another function; otherwise our system can not be upheld. Indeed I think that it can be made clear that there is a difference. To take one example, why can we say bèdmige (bed-piss), and not *bedleze (bed-read)? The answer is to be sought in the character of the action involved. When you read in bed, the bed just functions as a location where the action of reading is happening. The bed itself does not undergo a change by the action. The state of affairs when you piss is clearly different. As a result of the pissing, the bed becomes wet and dirty, and thus undergoes a change. One could thus say that the bed is affected by the action of pissing.

And so, not unexpectedly, we again meet the feature of affectedness as a conditioning factor. Of the verbs in (138), those such as bonkeplüzje, rutsjetikje, jlaakswadzje, houtfykje and bilknipe can clearly be indicated as undergoing a change of state in the element designated by the incorporated noun. In houtfykje, the wood gets another shape by the carving, in jlaakswadzje, the tax is flattened by the kicking, in rutsjetikje the window is forced to give a sound as a result of the tapping, and in bilknipe, the thigh is aching because of the pinching, to give a few illustrations.

There are also cases where the idea of mastering the element can be focused on. A nice example in this respect is autoride, which at first sight could be paraphrased syntactically as ride yn in auto (ride in a car). However, this is not exactly the same as what is meant by autoride, as the latter can only be used with respect to the driver. He is controlling the car, his actions influence the driving, which can not be said of the passengers. The same element of mastering is involved in cases as bûchsprytrinne and sleatsjespringe. In the first example, caused by the difficulty of the action, it can be felt that the bowsprit is mastered or even conquered by walking over it. This situation is different from let us say walking on the street. No wonder, that a word such as *strjittrinne is not attested in the WFT-material, and to my ears, that complex verb sounds very strange indeed. This same idea of mastering or conquering is also present in those verbs where the incorporated
noun could more readily be called a Goal rather than a Locative. *Snoekfiskje* (pike-fish), *einsjitte* (duck-shoot), *hazzejeie* (hare-hunt), *ikelsykje* (acorn-search) and *gasboarje* (gas-drill) belong to this group. A special case is the situation where the Goal is a prize in a contest. The typical corresponding preposition for this category is *om*. Good examples are *priissjonge* (pricesing) and *spekride* (bacon-skate).

Apart from the pure semantic relation between the incorporated noun and the verb, there is another indication that a notion of affectedness is playing a role in the category related to Locatives and Goals. The point is that most of the oblique arguments involved can be promoted to a direct argument when the verb is prefixed by *be*-. Compare

(139) a. De matroazen rinne oer de bûchspryt
    The sailors walk over the bowsprit

b. De matroazen berinne de bûchspryt
    The sailors PREFIX-walk the bowsprit

Veenstra (1988, 151-154) discusses the semantic differences before and after Frisian *be*-prefixation at length, and from his account, which also includes literature about the same prefix in German, it can be distilled that the process displays an affectedness effect. We therefore might conclude that these verbs in principle can enter into an affectedness relation with their oblique argument. In this vein, it is by no means surprising that the situation of walking on the street, which we discussed above, can not undergo *be*-prefixing:

(140) a. De bern rinne op 'e strjitte
    The children walk on the street

b. * De bern berinne de strjitte
    The children PREFIX-alk the street

Unfortunately, it is not the case that every verb that allows incorporation also permits its oblique argument to be promoted to a direct one by means of *be*-prefixation. I have no explanation for the fact, but it appears that from the list of (138) especially those obliques with a preposition other than *op* or *yn* refuse such an operation: 30

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30 At the same time, this fact is a clear indication that these verbs cannot be considered as having undergone a "pruning" of a prefix (or particle), which I dealt with at the end of section 4.5, simply because there is no prefix (or particle) available.
On the other hand, the other side of the coin is also true: not every verb which allows be- prefixation permits noun incorporation. To give one example, instead of shooting at a duck, one could also approach this popular bird less aggressively by shining at him (with a lamp). This can be prefixed, as in (142)b, but not incorporated, witness (142)c:

(142) a. De koaiker skynde op 'e ein
   The decoy-man shined at the duck
   'The decoy-man shined at the duck'

   b. De koaiker beskynde de ein
   The decoy-man PREFIX-shined the duck
   'The decoy-man shined at the duck'

   c. * De koaiker einskynde
   The decoy-man duck-shined

The exact reason for this behaviour is not clear to me; perhaps the degree of affectedness plays a role here. It is obvious that there remains a lot to be investigated in this area. What is important on a more general level is that Veenstra considers the original Locative or Goal of potential be-verbs as an argument of the verb, and not as an adjunct. This feature perfectly corresponds to our needs with respect to incorporation.

A last case which I would call attention to is a group of actions which is easily involved in incorporation and which can probably best be considered as a subcase of the Locative/Goal category. I allude here to the playing of a musical instrument:

(143) pianospylje
    (piano-play)
fluitspylje
    (flute-play)
fioelspylje
    (violin-play)
fioeleseagje
    (violin-saw, i.e. play the violin poorly)
hoarnblaze
    (horn-blow)

In these and comparable examples, when used in a PP, the featuring preposition is always op:

(144) op 'e piano spylje
    at the piano play
    'play at the piano'
However, the best paraphrase of the incorporation verbs is significantly the use of *be*-prefixation:

(145) de piano bespylje
   the piano PREFIX-play
   'play the piano'

Maybe also significantly, in a language such as English the musical instrument is expressed as a direct argument: *play the piano.* And again, the idea of mastering the instrument referred to by the incorporated noun seems to be present in these cases.

In conclusion, the feature of affectedness plays a prominent role in the group of Locatives/Goals, as it already did with respect to Instruments and the *sulletje*-class. And as these verbs are all able to stand alone without their complement, the category of oblique arguments therefore does not appear to deviate from what we found earlier with respect to direct arguments. Hence, these results are not in contradiction with, and thus support, our analysis as it is summarized in (116).

### 4.8 Multiple internal arguments

So far, we dealt with predicates where there was only one internal argument, albeit a direct or an oblique one. We now enter the more complicated cases, where two or more internal arguments can be counted. It should be stressed that the term "argument" should be interpreted in a somewhat looser sense here, as predicate-like elements such as resultatives also enter the scene. A by-product of the discussion to come is that it can throw new light on old problems like the ban on double incorporation (cf. section 4.2) and the peculiarities of type II incorporation (cf. section 2.6). These issues will be dealt with in this section, too.

The structures with multiple internal arguments appear to display a remarkable feature: the direct argument of the verb can not be incorporated. The only counterexample to this generalization will be dealt with at the very end.

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31 Such a possibility exists even in Frisian for some of the verbs of (138), as in *in ein sjitte* or *ikels sykke.* As such, these verbs might better be accounted for in the previous sections. Note however, that the paraphrase with a direct argument does not seem the most appropriate one. For instance, *in ein sjitte* implies that the duck is hit, which is not the case in *einsjitte,* nor in *op in ein sjitte.* Moreover, most verbs lack the possibility of representing the argument as a direct one, and can thus be considered as representatives of a separate class.
end of this section. When we first restrict ourselves to real NP arguments, none of the patterns distinguished by Jackendoff (1990, 260) involving a volitional Actor allows incorporation, nor of the direct argument nor of the secondary internal argument:

(146) a. De plysje ūntfytmanne de jonges de bal\textsuperscript{32}
   The policeman lost the boys the ball
b. * De plysje jongeūntfytmanne de bal
   The policeman boy-lost the ball
c. * De plysje balūntfytmanne de jonges
   The policeman ball-lost the boys

(147) a. De listlûker jœech it folk plakplaatsjes
   The first candidate gave the public stickers
b. * De listlûker plakplaatsjejœech it folk
   The first candidate sticker-gave the public
c. * De listlûker folkjœech plakplaatsjes
   The first candidate public-gave stickers

(148) a. De minister makke de soldaten sersjant
   The minister made the soldiers sergeant
b. * De minister soldaatmakke sersjant
   The minister soldier-made sergeant
c. * De minister sersjantmakke de soldaten
   The minister sergeant-made the soldiers

The same behaviour occurs when the second internal argument is a PP, for instance in the classical example with the verb _sette_ (‘put’). As the NP seems to be the argument primarily affected, I will here and in what follows restrict myself to that first argument:

(149) a. Beppe set de boeken op it rim
   Grandmother puts the books on the shelf
b. * Beppe boekset op it rim
   Grandmother book-puts on the shelf

\textsuperscript{32} This example is meant to represent a ditransitive with a Source argument, as in Jackendoff's "Bill lost Harry his job". Although it patterns with the rest, (146) has the difficulty that the verb contains a prefix, which could block incorporation anyway. The example would not build independent evidence, then. However, I am afraid this will be hard to find; at least I have not been able to construe a ditransitive sentence with a Source and without a verb containing a prefix or a particle. As such, (146) could have the relative advantage that its base verb *fytmanje* does not exist.
The same effect can be observed when a Goal (150) or Source (151) PP come into play:\(^{33}\)

(150) a. De feint triuwt de karre nei Akkrum ta
   The farm-hand pushes the cart to Akkrum to
   'The farm-hand pushes the cart to Akkrum'

   b. * De feint karretriuwt nei Akkrum ta
   The farm-hand cart-pushes to Akkrum to

(151) a. De feint triuwt de karre út it hok wei
   The farm-hand pushes the cart out the shed away
   'The farm-hand pushes the cart out of the shed'

   b. * De feint karretriuwt út it hok wei
   The farm-hand cart-pushes out the shed away

Given the analysis developed so far, it should be predicted that in the case of detransitivization the same pattern emerges. This happens to be the case, indeed, which in itself is a further indication that we are still on the right track. When we restrict ourselves to the direct objects, in terms of affectedness the most plausible candidates for non-projection, the following ungrammatical sentences are the result in comparison with (146)-(151):

(152) * De plysje ūntfytmmane de jonges
   The policeman lost the boys

(153) * De listlúker jœch it folk
   The first candidate gave the public

(154) * De minister makke de soldaten
   The minister made the soldiers

(155) * Beppe set op it rim
   Grandmother puts on the shelf

(156) * De feint triuwt nei Akkrum ta
   The farm-hand pushes to Akkrum to

(157) * De feint triuwt út it hok wei
   The farm-hand pushes out the shed away

Obviously, given a pattern with two internal arguments, it is not allowed to

\(^{33}\) When the PP has a less clear directional outfit, one can obtain a grammatical result when incorporating:

(i) Hy karretriuwt yn it hok
   He cart-pushes in the shed

Later on in this section, in discussing cases of type II incorporation, it will become clear that such examples should be interpreted differently.
drop one of them. Of course, it is always possible to account for this blocking by way of introducing a filter, as Jacobs (1994) does, but it is self-evident that this move can not give us even a glimpse of insight into the construction. So, let us dwell a little further upon this issue. In some way, it must be the case that the two arguments are dependent on each other. The idea of dependency indeed lies at the heart of those rare explanations in the literature where the phenomenon is observed with respect to detransitivization. With respect to triadic predicates such as give, for instance, Hellan (1988, 17) believes that the Θ-role of the indirect object is assigned configurationally, and is dependent on the availability of a direct object. Bresnan (1982, 373), amending a generalization of Bach (1979), states that where the object is a functional controller, detransitivization is impossible. A different explanation is provided by Tenny (1987), who, in her theory, assumes that the secondary element is a delimiting expression, which needs a scale, in this case filled by the object, along which the event is measured out.

One could, more concretely, also think in the direction of an analysis in which both arguments are forming a Small Clause, where the SC may not be emptied at the cost of dangling the other participant. Such an idea would be confirmed by the behaviour of a construction where a SC analysis is classically applied to, viz. resultatives. Both with intransitive (158) and with transitive verbs (159) noun incorporation and detransitivization are forbidden:

(158) a. Hy rint de skuon skean
He runs the shoes slanting
 'He walks his shoes worn on one side'

b. * Hy skuonrint skean
He shoe-walks slanty

c. * Hy rint skean
He runs slanty

34 Specifically with respect to resultatives, one could alternatively also think of a complex verb analysis, as presented in Neeleman (1994). In that framework, it immediately comes to mind to rule out the combination with a resultative with the help of his Complexity Constraint (p. 300 e.f.), which roughly states that the head of an X′ may not branch. In our case the branching head would be the incorporational complex verb [NV]v. However, the Complexity Constraint can not be applicable in this case. The incorporated noun should be considered a stem, and then, according to Neeleman, the Complexity Constraint does not hold (p. 318). Moreover, nominals (i.e. the incorporated noun) seem to back out of the constraint anyway (pp. 332-33, note 9). But above all, the Complexity Constraint could never explain the behaviour of detransitives, simply because these do not branch.
4.8 multiple internal arguments

(159) a. Hy bakt de bóle brún  
He bakes the bread brown  

b. * Hy bólebakt brún  
He bread-bakes brown  

c. * Hy bakt brún  
He bakes brown

Note that without the resultative, (159)a would build a simple transitive structure. In that case there would not be any obstruction of incorporation, and indeed, the fully grammatical hy bólebakt would be the result.\(^{35}\)

A Small Clause is a concept typically used in syntax, but it may well be the case that something similar is available within a lexical approach. Carrier & Randall (1993), for instance, offer a representation for both resultatives and, interestingly, verbs like put, where the two internal arguments (or maybe more generally: elements) form one clause at LCS. For resultatives as run the pavement thin, the NP argument the pavement is analyzed by them as being the external argument of the adjective thin. As it seems that external arguments are not allowed to drop lexically, here we possibly have a natural ground for the non-deletability of the NP. For this explanation to be general, the same argument should of course be extended to the other cases as well. For verbs like put, Carrier & Randall (1993, 136) assume that the preposition of the locative internal argument carries its own LCS and PAS representations, and that it has its own internal and external arguments. For the preposition into in put the eggs into crates, for example, this means that crates functions as internal and the eggs as external argument.

I don't know whether a definitive solution for the behaviour of complex internal arguments can be established along the lines just sketched.\(^{36}\)

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\(^{35}\) This difference in incorporation behaviour undermines a proposal made by T. Hoekstra (1992, 163) to generalize over the transitive verbs that can take a resultative, and therefore to assign to the simple transitive verbs a Small Clause complement as well. The object would then be accompanied by an abstract predicate PRED, like this (Hoekstra’s (55)):  
(i) \[ V [\text{SC} \ NP \ PRED ] + \text{dyn} \]  
This parallelism in structure suggests a parallelism in incorporation capacity, which is not borne out by the facts, however.

\(^{36}\) Perhaps also the behaviour of the verbs combined with a prefix or a particle could be captured in this way. In section 4.5 we ascribed the resistance of such verbs to incorporate or detransitivize, and thus to drop their affected argument lexically, to the word formation process itself. This general idea would get a more solid structural ground when we assume that the prefixes or particles carry their own LCS-representation, and indeed this is what is attempted by Lieber & Baayen...
important, though, is that once more it has come out that there is a parallel between noun incorporation and detransitivization, and hence that the analysis manifested in (116) is strengthened again. That both noun incorporation and detransitivization are impossible in the case of more complex argument structures must be due to some independent factor. What should be clear is that a concept like the ECP can not be held responsible for this remarkable behaviour, where on the opposite, this principle would permit a movement in these structures, as we already showed in the previous chapter. It should further be noted that aspect cannot be the restricting factor, since these structures are not inherently terminative, as can be seen from the durative adverbial oerenlang ('for hours') in the following sentences:

(160) De listlûker jœech it folk oerenlang plakplaatsjes
    'The first candidate gave the public for hours stickers'
(161) Beppe sette oerenlang boeken op it rim
    'Grandmother put for hours books on the shelf'

It could be objected that there exist some counterexamples where the pattern above seems to be disturbed. For instance, notwithstanding the clear data in (149) with respect to a verb as sette ('put'), one can find incorporation verbs such as jerappelsette (potato-plant) and tegelsette (tile-put).

(162) Heit jerappelset
    'Our father plants potatoes'
(163) Buorman tegelset
    'Our neighbour fixes tiles'

But in fact, sette has been reduced to a dyadic verb in these cases. Adding a directional PP argument would render incorporation impossible:

(164) * Heit jerappelset yn 'e grûn
    'Father potato-plants into the soil'
(165) * Buorman tegelset tsjin 'e muorre
    'Neighbour tile-puts against the wall'

(1993). Note that within the Small Clause approach similar proposals have already been put forward by Hoekstra, Lansu & Westerduin (1987) and by T. Hoekstra (1992).
So, incorporation with *sette* regularly follows the rules as established thus far. That the PP argument can be omitted in cases like *jerappelsette* and *tegelsette* must be due to a pragmatic factor. That is, the Goal can remain implicit since its content in these specific actions is always constant: while planting potatoes it is always the soil, and you always tile against the wall. Pragmatic influences must also be the reason that detransitivization is permitted in an example like this:

(166) Buorfo jout oan 'e sinding
     Neighbour woman gives to the mission
     'The woman next door gives to the mission'

In this example, the chosen goal implies that the object given must be money. If we would take another goal, say *oan 'e hûn* ('to the dog'), the implication would be less straightforward. Detransitivization in that case would be out:

(167) * Buorfo jout oan 'e hûn
     Neighbour woman gives to the dog

Since the deletions we are discussing here are so strongly dependent on the pragmatic context, they must be instances of what Fillmore (1986) called "definite null complements" (cf. section 4.4). As such, they are no counterexamples to the more structural kind of detransitivization we are concerned with. For a sentence as (166), this is confirmed by noun incorporation, which gives an ungrammatical result, as expected:

(168) * Buorfo jildjout oan 'e sinding
     Neighbour woman money-gives to the mission

We may conclude, then, that noun incorporation or detransitivization in the case of more internal arguments is only permitted in the case of institutionalized activities, where the deleted argument is recoverable from the pragmatic context.

If one should say that the deletion in the above-named examples is rather idiosyncratic, then it must also be admitted that there are patterns where the second internal argument, always being a PP, can be omitted without any difficulty, for instance in (150)a, here repeated as (169)a:

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37 Of course, you can also tile upon the floor, but in Frisian this subtlety is expressed by the incorporation verb *tegellizze* (tile-lay), again not expressing the Goal argument.
Once the PP is omitted, incorporation and detransitivization cause no difficulties:

(170) a. De feint karretriuwt  
    The farm-hand cart-pushes  
    'The farm-hand pushes the cart'  
    b. De feint triuwt  
    The farm-hand pushes

The regularities thus remain intact, given the right properties of subject and object: incorporation and detransitivization are possible throughout, but can be prevented when the object is connected to a second internal argument.

I have no good answer to offer for the question of why that second argument is optional in such cases, but it must have something to do with its status as a PP. This can be seen from verbs exhibiting the locative alternation, which show again that the PP can drop (171)b, not the NP argument (171)c. Let us start with the variant where the locative is acting as the direct argument:

(171) a. Hy lade [de wein]_NP [mei hea]_PP  
    He loaded the wagon with hay  
    b. Hy lade [de wein]_NP  
    He loaded the wagon  
    c. * Hy lade [mei hea]_PP  
    He loaded with hay

This deletability of the PP cannot be an instance of detransitivization or the like. Otherwise it would be predicted that the noun hea ('hay') could incorporate, which is not the case:

(172) * Hy healade de wein  
    He hay-loaded the wagon

Presumably, the optionality of the PP can be attributed to a status in between argument and adjunct. What cannot be done is to rely on an analysis such as the one given by Rappaport & Levin (1988). They provide (p. 26) an LCS-representation of the English version of (171)a, where they subsume the
with-phrase in a so-called MEANS-clause, which could easily be assumed to 
be optional. But this option fails for the variant with the Location in a PP. 
Here they provide a LCS comparable with the one for put. Nevertheless, with 
lade (‘load’), this PP is equally well deletable:

(173) a. Hy lade [hea]NP [op ’e wein]PP 
       He loaded hay on the wagon 
   b. Hy lade [hea]NP 
       He loaded hay

And again, this deletability can have nothing to do with detransitivity, witness 
the impossibility of incorporation in:

(174) * Hy weinlade hea 
       He wagon-loaded hay

For the rest, the verbs with the locative alternation also follow the rules in a 
regular manner. When the PP is omitted, the remaining direct argument in-
corporates without any difficulty:

(175) a. Hy lade de wein 
       He loaded the wagon 
   b. Hy weinlade 
       He wagon-loaded 
       ’He loaded the wagon’

(176) a. Hy lade hea 
       He loaded hay 
   b. Hy healade 
       He hay-loaded 
       ’He loaded hay’

With the PP available, incorporation of the direct argument is out, which we 
saw is the general pattern with two internal arguments:

(177) a. Hy lade de wein mei hea 
       He loaded the wagon with hay 
   b. * Hy weinlade mei hea 
       He wagon-loaded with hay

(178) a. Hy lade hea op ’e wein 
       He loaded hay on the wagon 
   b. * Hy healade op ’e wein 
       He hay-loaded on the wagon
And without surprise, detransitivization fits into this pattern:

(179) * Hy lade mei hea  
      He loaded with hay

(180) * Hy lade op ’e wein  
      He loaded on the wagon

To complete the exposition, I turn shortly to those verbs which are generally supposed to have even three internal arguments. It appears that these do not deviate from the lines developed so far. I give just one example, *keapje* ('buy'), which, besides the external argument, can be thought to bear a Patient (in the example: *bōle*), a Source (here *de bakker*) and an amount of money for the exchange (*twa ġûne*). The full constellation, then, could be something like this:

(181) Wy keapje altyd bōle fan ’e bakker foar twa ġûne
      We buy always bread from the baker for two guilders

From these arguments, the Patient can be incorporated in principle: *bōle-keapje* (bread-buy), but this can only be achieved when the other arguments are not overt. When they are, incorporation fails in every combination otherwise possible when incorporation would not be applied:

(182) * Wy bōlekeapje altyd fan ’e bakker foar twa ġûne  
      We bread-buy always from the baker for two guilders

(183) a. Wy keapje altyd bōle fan ’e bakker
      We buy always bread from the baker

     b. * Wy bōlekeapje altyd fan ’e bakker
      We bread-buy always from the baker

(184) a. Wy keapje altyd bōle foar twa ġûne
      We buy always bread for two guilders

     b. * Wy bōlekeapje altyd foar twa ġûne
      We bread-buy always for two guilders

We therefore may conclude that as far as noun incorporation is concerned there is no principled difference between verbs with two or with even more internal arguments.

Interestingly, the behaviour of incorporation in the context of two (or more) internal arguments might provide an explanation for the intriguing fact that noun incorporation may be applied only once. Putative examples of double incorporation are ungrammatical, as we already saw in section 4.2. So, on the
basis of (171)a or (173)a, for instance, we can not get (185) or (186):

(185) * Hy weinhealade
   He wagon-hay-loaded
(186) * Hy heaweinlade
   He hay-wagon-loaded

Why should double incorporation be prohibited? The answer, I believe, is relatively simple: within an LCS-representation only one argument can be affected. This is self-evident in the case of dyadic verbs like jaan ('give') or sette ('put'). For instance in the examples (160)-(161) only the direct objects plakplaatsjes and boeken can be supposed to undergo a change of state. But, as we just argued, incorporation of these arguments is blocked by the existence of a second internal argument. The situation is less straightforward in the case of verbs that exhibit the locative alternation, such as lade ('load'). The examples (175)b and (176)b prove that both internal arguments can incorporate potentially. So, why cannot they – see (185) and (186) – incorporate at the same time? The reason must be that the locative alternation itself is a shift in affectedness. Of the two varieties, it is always the direct argument, de wein in (177)a and hea in (178)a, which is the affected argument. Rappaport & Levin (1988) account for this difference by postulating two different, though related, LCS-structures. Within one such structure, only one argument counts as affected. And since in our analysis noun incorporation is performed on the basis of LCS, there is only one argument available for incorporation. Hence, it is no accident that we never encounter cases of double incorporation.

In the meantime, "double" detransitivization is not excluded with verbs like lade ('load'):

(187) Hy lade
   He loaded

But it can be argued that this is not a double but just a single application of detransitivization, as it may be assumed to be derived from a structure where the PP-argument is omitted, and where there is thus only one internal argument left, as in (175)a and (176)a. Where this option is not available, "double" detransitivization, as in (188)c, is also out:

(188) a. Beppe set [de boeken],NP [op it rim],PP
   Grandmother puts the books on the shelf
b. * Beppe set [de boeken],NP
   Grandmother puts the books
If the analysis above for capturing the impossibility of double incorporation holds water, then we have another indication that noun incorporation is working on Lexical Conceptual Structure. The contrast with nominal compounding, typically being recursive, thus finds support in a different grammatical derivation. 38

Although so far the generalization that noun incorporation is prohibited in the context of two or more internal arguments seems to be established fairly well, there are nevertheless cases which might raise some questions. These exist for those sentences where there has been incorporation, but where nevertheless the secondary argument has remained overt. There is a difference with those configurations where noun incorporation failed, however: here it seems as if, in concert with incorporation, the secondary argument also gets a new function. Indeed, these are the cases of Mithun's (1984) type II noun incorporation, which we already got acquainted with in section 2.6. It can be shown, however, that the type II examples are not a violation of the rule of non-incorporability with two internal arguments. What in fact is happening there is that a non-argument is promoted to an argument position.

But let us turn to the data, in order to see whether the conjecture made above can be maintained. As far as it is productive, section 2.6 revealed that type II in Frisian can be divided in three separate cases, which after a closer look can be reduced to two. The first one is in the context of inalienable possession, as in

(189) Ik sīl him hierknippe
   I will him hair-cut
   'I will cut his hair'

(190) Ik sīl de lytse faam kontwaskje
   I will the little girl ass-wash
   'I will wash our little daughter's ass'

In these sentences, him and de lytse faam act as direct objects. This can be proven nicely when we passivize the first example, since the pronominal object form him then turns into nominative hij:

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38 Another, at first sight potential candidate to explain the ban on double incorporation, viz. Neeleman's (1994) Complexity Constraint, does not apply, as we argued above.
(191) Hij sil hierknipt wurde
   He will be hair-cut
   'His hair will be cut'

Without incorporation, the examples (189) and (190) would look like (192) and (193):

(192) Ik sil him it hier knippe
   I will him the hair cut
   'I will cut his hair'
(193) Ik sil de lytse faam de kont waskje
   I will the little girl the ass wash
   'I will wash our little girl's ass'

Here, the direct objects of (189) and (190) show up as indirect ones. Pas­sivization again reveals this fact, in that the object form *him* in (192) remains intact in this case:

(194) Him sil it hier knipt wurde
   Him will the hair cut be
   'His hair will be cut'

So, *him* and *de lytse faam* are datives in (192) and (193), free datives to be more precise. As such, they are not part of the argument structure of the verb (cf. Welke 1988, 72-74), which in this case presumably can be related to their role as Possessor. This can be seen most clearly with a concept such as *waskje* ('wash'). When you wash, you always wash something, which shows up as a direct object syntactically. But that this "something" is always in the possession of someone, is not essential to the concept of washing. A formal indication for the non-argumenthood of the Possessors might be expressed by their omissibility:

(195) Ik sil (him) it hier knippe
(196) Ik sil (de lytse faam) de kont waskje

Therefore, we can conclude that the Possessor is not part of the original argument structure of these verbs and, hence, that we have not met here a violation of the rule that incorporation is prohibited in the case of two internal arguments.

There is a second, though even more marginal, context where type II in­corporation can be observed. Here, some locatives are involved, which seem
to be promoted to direct object after incorporation has taken place. Examples are:

(197) Ik sil trije fak souder ferveskjirje
    I will three section loft paint-scour
    'I will scour the paint from three sections of the loft'

(198) Wy moatte de keamer noch behangplakke
    We must the room still wallpaper-stick
    'We must still stick wallpaper in the room'

(199) Ik sil de keamer flierfeie
    I will the room floor-sweep
    'I will sweep the floor in the room'

That these locatives have become direct objects, can be seen when we change
the sentences into a passive, and at the same time pluralize the object. The by
then plural subjects agree in number with the finite verb, for instance in:

(200) De keamers sille flierfage wurde
    The room-PLUR will-PLUR floor-swept be
    'The floors of the rooms will be swept'

When incorporation has not been applied, the locative direct objects in (197)-(199) show up as ordinary PP's:

(201) Ik sil [op trije fak souder] _PP_ de ferve skjirje
    I will on three section loft the paint scour
    'I will scour the paint on three sections of the loft'

(202) Wy moatte [yn ’e keamer] _PP_ noch behang plakke
    We must in the room still wallpaper stick
    'We must still stick wallpaper in the room'

(203) Ik sil [yn ’e keamer] _PP_ de flier feie
    I will in the room the floor sweep
    'I will sweep the floor in the room'

Here, the locatives function as pure adjuncts; no stronger relation with the
later incorporated noun nor with the verb can be pointed out. As in the fore­
going subcase, the new direct object comes from outside the verb's argument
structure, and again these cases are no infringement on the rule of non­
incorporability with two internal arguments.

At this point, it is worth questioning why it must be a non-argument that
has the opportunity to promote to the direct object position. I think this
problem is not very hard to solve. Suppose that it was a genuine argument
that would make the change. In that case, the verb's original argument structure would be disturbed. With a new argument from outside, everything remains intact, especially when the new argument fits into the selectional restrictions of the verb, as we will happen to see. By the way, the same principle seems to be obeyed in the general case of noun incorporation with simple transitive verbs. There, an argument may only be incorporated when the verb permits the dropping of the argument place anyway, thus also when the verb allows detransitivization. In that case, too, no infringement is made on the argument structure, since the open place was accommodated for anyway.

The promotion of an element from outside is thus the less dramatic when that element would fit into the selectional possibilities of the verb. And this is indeed the case with all the examples we dealt with so far. Without exception, the new objects are able to function as such:

(204) Ik sil him knippe
      I will him cut
(205) Ik sil de lytse faam waskje
      I will the little girl wash
(206) Ik sil trije fak souder skirije
      I will three section loft scour
(207) Wy moatte de keamer noch plakke
      We must the room still stick
(208) Ik sil de keamer feie
      I will the room sweep

The reason is that in Frisian it is equally well possible to say that you cut your hair as that you say that you cut someone (where it is intended that you cut someone's hair). The same applies for instance to the sweeping of the floor, where you can also inform that you sweep a room (and again, this must be interpreted as that the room's floor is swept).

Where this interchangeability of objects fails, type II incorporation also blocks. For instance, parallel to (192) one could say:

(209) Ik sil him de blikke meane
      I will him the lawn mow
      'I will mow his lawn'

but now incorporation gives an ungrammatical result:

(210) * Ik sil him blikkemeane
      I will him lawn-mow
The obvious reason is, that you can not mow someone. Lawn-mowing is simply a restricted form of mowing, and you can not run counter to its selectional requirements. A similar restriction applies to the subcase where a locative is promoted:

(211) a. Hy lèst de krante [yn 'e tún]PP
    He reads the paper in the garden
b. * Hy krantlèst [de tún]NP
    He paper-reads the garden

Here, (211)b must be ruled out because in our world it is simply not conceivable for a garden to be read. Presumably, it is this typical constellation that is a main cause for type II incorporation being such a marginal phenomenon in Frisian.

As we saw in section 2.6, a third instance of a change of function of a phrase after noun incorporation can be distinguished, viz. where a directional phrase turns into a pure locative. As such, this could be interpreted as another example of type II. However, it can be argued that this is only seemingly so. In fact, in these cases, besides the incorporation itself there is no change at all. An example of the phenomenon is (212):

(212) Jelke lege de jiskepanne op 'e ruchskerne
    Jelke emptied the ashtray at the dunghill

Here, the PP op 'e ruchskerne functions as a Goal: the content of the ashtray is moving towards the dunghill. But what happens after noun incorporation?:

(213) Jelke jiskepannelege op 'e ruchskerne
    Jelke ashtray-emptied at the dunghill

Now, the sentence can only be interpreted as Jelke standing on the dunghill, being busy emptying ashtrays. So, the PP op 'e ruchskerne now merely denotes the location where the action is performed.

However, this is the only feature that reminds one of type II. Note first that the phrase involved retains its status as a PP. Second, the verb leegje ('empty') suggests very much a verb like sette ('put'), with its two internal arguments, one of them also being a Goal-PP. But then, a change in an opposite direction must have taken place. In the foregoing cases of type II, a non-argument became an argument of the verb. Now, an argument ceases to exist as such, since the locational phrase in (213) can be thought of as an adjunct. Moreover, when the PP in (212) is argumental, the incorporation in
(213) would then be a violation of the rule of non-incorporability with two internal arguments.

In fact, these objections disappear like snow in summer when we take a closer look at an example like (212). We then see that the sentence is ambiguous. Besides the obvious interpretation of the PP as a directional phrase, there is nothing that prevents us from interpreting it purely local, and thus as an adjunct, at the same time. It is this interpretation that is retained after incorporation. In (213), we simply have a case of noun incorporation in a context of one internal argument, and nothing irregular is happening there. The putative change of a directional to a locational phrase can thus not be subsumed under type II noun incorporation, simply because there is no change at all.

4.9 A note on subjects

There is one category left that in itself does not play a major role in incorporation, but that for the sake of completeness nevertheless deserves a few remarks. It is the argument that is mostly called external, but as I also want to include unaccusative verbs, let us simply refer to it as "subject". The role of subjects in incorporation has already been discussed rather extensively in Chapter 3. There, it appeared that in general this category is not involved in incorporation. Putative counterexamples as *it jongesriden* (the boy-s-sketen) could be neutralized as cases of nominal compounding, the second member of the compound being the nominalized form of the verb *ride* (skate).

The task to be performed here is to give an explanation within our framework for the non-incorporability of subjects. Obviously, we can not make use of a syntactic principle such as the ECP, the more so since it predicts that subjects of unaccusative verbs, being internal at D-structure, could incorporate in principle, which is not in accordance with the Frisian facts, as we saw in section 3.3. So, we will have to look for another way to account for the non-incorporability of subjects. In the light of the discussion in this chapter this task is rather simple. Recall that we generalized that it is always affected arguments that may incorporate. As subjects normally are not affected, it seems quite natural that we do not find incorporated subjects. But from a different angle we can come to the same outcome. Recall that we stated that the process of incorporation has the effect that the sentence contains one argument less: the incorporated argument disappears as such. With regard to the subject, this would have the consequence that in syntactic structure the sentence would not have an argument position for it. With an appeal to Chomsky's (1992) Extended Projection Principle, which roughly states that every sentence needs a subject, this state of affairs can easily be ruled out. So
even if it could be maintained that some subjects are indeed affected – and 
with respect to some unaccusative verbs I would not exclude this beforehand – even then incorporation of these subjects would be prevented by the 
Extended Projection Principle.

The only escape hatch for subjects one can imagine, then, is that use is 
made of an expletive subject. And indeed, this is exactly the state of affairs in 
those few cases where subject incorporation is attested. In section 3.3 I gave 
the examples (214) and (215), with expletive *it*, and a comparable (216) could 
be added:

(214) It begjint te sniewiskjen
     It begins to snow-fly
     'The snow begins to fly'
(215) It begjint te sniejeien
     It begins to snow-fly
     'The snow begins to fly'
(216) It begjint te sänstowen
     It begins to sand-blow
     'The sand begins to blow'

The striking thing is that not all instances of meteorological phenomena can 
incorporate in this manner. The falling of the rain, for instance, can not be en-
coded this way:

(217) * It begjint te reinfallen
     It begins to rain-fall
     'The rain begins to fall'

This brought me to the assumption in section 3.3 that examples like (214)-(216) 
are simply idiosyncratic. However, it may well be the case that such a 
conclusion is drawn too hurriedly. In line with the pattern well-known by 
now, the possibility to incorporate appears to run parallel to the possibility to 
drop the argument altogether, comparable in this way to the process earlier 
called "detransitivization", which would be an unhappy term with respect to 
these intransitive verbs, of course. Compare (214) – (217) with (218) – (221):

(218) It begjint te wiskjen
     It begins to fly
(219) It begjint te jeien
     It begins to fly
(220) It begjint te stowen
     It begins to blow
4.9 a note on subjects

(221) * It begijnt te fallen
       It begins to fall

What can underlie the difference in behaviour of these verbs? It might be that it has something to do with the contrast unergative vs. unaccusative, as the first three verbs belong to the first category and falle to the second, witness the choice of the auxiliary hawwe ('have') vs. wêze ('be'), respectively:

(222) De snie hat / *is wiske
       The snow has flown
(223) De snie hat / *is jage
       The snow has flown
(224) It sân hat / *is stood
       The sand has blown
(225) De rein *hat / is fallen
       The rain has fallen

In this respect (222) – (223) are in accordance with the other incorporation verbs, which also exhibit auxiliary hawwe when they are used as a participle.

However, what seems to be more important is that these examples can not be considered to have subjects in the prototypical sense. That is, their subjects can hardly be interpreted as Actors, where it is much more the case that there is a force outside the snow and the sand that makes them move. Purely semantically, one could thus say that these substances, by way of their movement, must be qualified as Themes in the framework of Jackendoff (1990), but with respect to the action tier, they function as Patients. Their possibility to enter in a test frame as (10) (cf. section 4.3) reveals this property. Translated into Frisian this would result in the fully acceptable:

(226) Wat der mei de snie barde, wie, dat er wiske
       'What happened to the snow was that it flew'
(227) Wat der mei it sân barde, wie, dat it stode
       'What happened to the sand was that it blew'

When we consider the sentences (214) – (216) in this way, we see that they fit quite nicely in the pattern discovered so far. The main difference is that here the volitional Actor remains implicit. It is interpreted as a force of nature, that affects the moving entity. Thanks to the availability of an expletive subject, this affected entity is allowed to incorporate, since in that constellation the Extended Projection Principle is not violated.
4.10 Concluding remarks

In this chapter, I claimed that Frisian noun incorporation can best be derived lexically. In this way, the properties of the phenomenon can easily be accounted for. Moreover, some disadvantages of a syntactic approach, mentioned in the previous chapter, are now overcome immediately. Among them are the lack of stranding phenomena, the lack of referential capacity of the incorporated noun, and the fact that a putative trace cannot be demonstrated to be syntactically active.

The system governing the process appears to be fairly simple. It consists of two conditioning factors, viz. a volitional Actor and an affected internal argument, which the latter is permitted to incorporate freely. This can only be restricted by a condition that the direct argument may never drop in the case of multiple internal arguments, and by the inherent durativity of the resulting verb, which works as an output condition. This durative aspect is directly read off from the unquantified incorporated noun.

The result of this essentially semantically based system is that it can pick out the right direct and oblique arguments to incorporate, and even the scarce incorporation of subjects can be accommodated for. As mentioned, multiple internal arguments fall away for an independent reason. At the same time, the latter circumstance provides an explanation for the general ban on double incorporation and the existence of type II noun incorporation in Frisian. Another feature of the analysis is that it explains the parallel with detransitives. Hence, the intransitivity of the resulting complex verb and the difficulties of incorporation when prefixed or "particelized" verbs are involved can be accounted for in a natural way.
5 Origin

5.1 Introduction

The problem to be dealt with in this chapter can be formulated quite easily: why is it that Frisian displays noun incorporation? For this is a remarkable feature of the language if one surveys the linguistic map of Europe. To the best of my knowledge, it is only reported of such "exotic" languages, at least from a general European perspective, as Turkish (Enç 1991, 9; Mardirussian 1975, 386) and Hungarian (Kiefer 1990-'91; Marácz 1989, 183-186) that they show a regular pattern of noun incorporation. Within the large families of Slavonic and Romance the phenomenon seems to be absent.

Of the Germanic languages Frisian is the main exception to the general rule, as will appear in section 2 of this chapter. So far, we have only dealt with modern West Frisian. In order to inquire about the extension of the phenomenon, the scope has to be widened, both in time and in place. To that end, in section 3, older stages of Frisian, and the dialects of East and North Frisian, enter the scene. The core of this chapter is formed by section 4, where a proposal is put forward which might explain why noun incorporation does occur in Frisian. It draws heavily on the existence of two infinitives in the language. If this relation is correct, it could have certain implications for other languages. These concern the neighbouring dialect of Groningen and English. For the Groningen dialect it is to be expected that it shows no noun incorporation, but it does, and for English, that it should have the process, where it does not. In section 5 and 6 an attempt is made to reconcile these paradoxes. Finally, it could be supposed that the existence of noun incorporation in Frisian is under pressure. Why it has nevertheless been maintained quite well is the subject of section 7.

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When we take a closer look at the Germanic languages, we indeed see that noun incorporation is only a very marginal phenomenon at best. No wonder, when not acquainted with the Frisian facts, one could easily conclude that "the formation of verbal compounds is unproductive in Germanic languages", as Booij (1993, 39) does. Of the West Germanic relatives of Frisian, Fleischer (1983, 309) mentions for German that only about 35 complex verbs with a nominal non-head have been attested there, and by far the most of these are

\[1 \text{ The foundations of this chapter have been laid in Dyk (1992b).} \]
even split up under Verb Second, exceptions being:

(1) Er lobpreist ihn  
He honour-praises him  
'He praises him'

(2) Er hohnlächelt  
He scorn-smiles  
'He laughed derisively'

No wonder, Fanselow (1988, 14), admitting that *rasen-mähen* ('lawn-mow') seems to exist, but *wiesen-mähen* ('meadow-mow') and *apfel-essen* ('apple-eat') surely not, wants to exclude the possibility of N-V compounding in German, even on principled semantic grounds.

In English, a similar situation obtains. Although it can not be denied that in the language a few N-V-combinations do exist, they are by no means formed by a productive process (Adams 1973, 109; Boase-Beier 1987, 74; Lieber 1992, 58; Marchand 1969, 101; Selkirk 1982, 15). They exhibit several irregularities. One further difference with Frisian is, for instance, the fact that of the existing complex verbs the majority has a non-head which cannot be considered to be a syntactic argument of the verb. Examples are Lieber’s (1983, 262) *hand-make* or *play-act* and Shimamura’s (1983, 272) *air-condition* or *breast-feed*. On the other hand, Shimamura points out that regular objects as in *meat-eat* or *tax-pay* are inconceivable. Moreover, Baker (1988a, 78) mentions that some of the English "noun incorporations" have no unincorporated counterpart. *Babysit* is one of his examples:

(3) a. I babysat for the deOrios last week  
b. * I sat the baby for the deOrios last week

Most of the above-named authors do not consider the existing English verbs as a result of a regular process of compounding, but rather as the outcome of backformation. Most plausible candidates are nouns containing the suffixes *-er (globetrot < globetrotter)* or *-ing (window-shop < window-shopping)*, where the suffixes are stripped.

With respect to the situation in Dutch, fairly good overviews are available in Den Hertog (1903), J.W. de Vries (1975), Paulissen (1985), Booij (1992a) and De Haas & Trommelen (1993). At a general level, within the group of combinations of a noun and a verb, Dutch appears to possess the same con-

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2 And the numbers are growing (Miller 1993; Preuss 1960/1961). The latter provides an extensive list of attested cases.
structurations as in Frisian that we judged irrelevant with respect to noun incorporation and that we already excluded earlier for our purposes in Chapter 1. These consist of the so-called separable compounds (e.g. ademhalen, 'breathe', which are split up under Verb Second, e.g. zij haalde moeilijk adem, literally 'she took difficultly breath'), cases of N to V conversion, where the source is a nominal compound (e.g. sjoelbakken, 'play shuffleboard', from the complex noun sjoelbak, 'shuffleboard'), and a group of some 25 verbs (cf. Weggelaar 1986), where the noun, typically designating a part of the body, is preceded by the verb, instead of followed (e.g. likkebaarden, 'lick one's lips', from likken 'lick' and baard 'beard').

What is left, then, is a small group of compounds which superficially resemble the Frisian incorporation verbs. Bierbrouwen (beer-brew) is an example. However, of this group at least six important differences with Frisian noun incorporation can be observed.

The unproductiveness of the category is a feature that is generally noted, for instance in Trommelen & Zonneveld (1986, 160):

"One may seriously doubt the readiness of V to occur as a right-hand member of Dutch compounds: insofar as it does, the phenomenon appears to be marked (unproductive, closed)"

This deficiency, however, is not restricted to not coming into being of new combinations. Many existing complex verbs suffer from a defective paradigm. Speakers avoid a finite verb or a past participle, or they are uncertain about its shape. But when these forms occur, it is striking that they are always regular, that is, the complex verb shows weak conjugation even when the verbal head itself is strong (cf. Booij 1991, 203). So, stofzuigen (dust-suck, i.e. 'to vacuum') has as its preterite stofzuigde, in contrast with the head zuigen with its strong preterite zoog. And beeldhouwen (sculpture-hew, i.e. 'to sculpture') shows a participle gebeeldhouwd, which would have been *gebeeldhouwen if the verb was conjugated along the lines of its strong head houwen. In contrast, in noun incorporation in Frisian strong conjugation remains intact. The preterite and participle of lèze are lies and lèzen, and in the incorporation verb krantlèze (paper-read) these are retained in krantlies and krantlèzen, respectively.

The Dutch verbs above have another property that is deviant from the general Frisian pattern: they remain transitive. Don et al (1994, 109) give sentences which clearly illustrate the point:

(4) a. Margot stofzuigt de kamer
    Margot vacuums the room
b. Eddy beeldhouwt zijn moeder
   Eddy sculptures his mother

At the semantic level, the Dutch complex verbs are deviant in that many do not display a compositional meaning. De Haas & Trommelen (1993, 446) mention some typical examples. Among them are *nachtbraken* ('make a night of it'), which has nothing to do with *braken* ('vomit'), and *kieskauwen* ('keep on about, nag'), which is relatable only in a rather abstract metaphorical way to its literal meaning 'chew at or with molars'.

This lack of a transparent meaning is without doubt connected to a sixth property of the Dutch complex verbs: many of them can not be related to a construction in which the noun is not incorporated, and in which it thus should act as the head of a phrasal NP. As we just saw, Baker (1988a, 78) noted the same fact for English. Of the true verbal compounds mentioned by Booij (1992a), none of the triple *raadplegen* ('consult'), *grasduinen* ('browse') and *zinspelen* ('allude') can occur in a construction where the noun acts as the head of an independent NP:

\[
\begin{align*}
(5) & \quad * \text{Hij pleegt de raad} \\
& \quad \text{He commits the advice} \\
(6) & \quad * \text{Hij duint het gras} \\
& \quad \text{He dunes the grass} \\
(7) & \quad * \text{Hij speelt de zin.} \\
& \quad \text{He plays the sense}
\end{align*}
\]

In a series of papers, Booij (1989a; 1989b; 1990a; 1991; 1992) has shown that several of the above-named properties can be accounted for if we analyze the Dutch complex verbs as the result of backformation, where the suffixes -er (agent nouns), -ing (action nouns) or -en (infinitives) have been stripped. In any case, what stands out from the overview above is the picture that the Dutch N-V combinations radically differ from what is going on in Frisian noun incorporation.

All in all, one could say there is a considerable amount of agreement among various authors that Dutch can not be said to possess a productive pattern of noun incorporation. However, recently this standard view has been questioned, albeit with some reservation, by Ackema (1995): "N-V compounding may be productive in Dutch, but it is hard to establish this with certainty" (Ackema 1995, 108). But even if he were right, there remains the striking difference that in Frisian Verb Second contexts the noun is fronted along with the verb, where in Dutch the noun is stranded. Ackema claims that this fact is not inconsistent with a compound analysis, in that the behaviour of the Dutch noun-verb combinations can be paralleled to that of Dutch
5.2 germanic

particle-verb combinations. In any case, the separability of the putative Dutch verbs indicates that the relationship between verb and noun is not as tight as it is in Frisian.³

To find a relatively clear productive pattern of N-V compounding within Germanic, we probably have to wend our way towards the north. According to Josefsson (1993), in Swedish⁴ one can meet sentences like this (examples and glosses are Josefssons's):

(8) Läkaren hjärt#opererade patienten
Doctor-the heart#operated patient-the
(9) Sömmerskan mått#beräknade kläningen
Seamer-the measure#calculated dress-the
(10) Bonden ving#klippte sina gäss
Farmer-the wing#cut his geese

What is striking about these sentences is the fact that they are transitive. This seems to be a general condition in Swedish: "Noun incorporation is licit only as long as the verb's transitivity is left unaffected" (p. 277). The Swedish construction is only possible when the incorporated noun and the syntactic object enter into a part-whole relation, where the incorporated noun is always the part and the object is the whole, as is exemplified in (8)-(10).

That transitivity is obligatory can be deduced from the ungrammaticality of the Frisian type of noun incorporation in Swedish (cf. Josefsson 1993, 275):

(11) * Jag kaffe#kokar
     I coffee#boil
(12) * Grannen gräs#klippte hela dagen
     Neighbour-the grass#cut the whole day
(13) * Varför äppel#äter du hela tiden?
     Why apple#eat you the whole time

Swedish noun incorporation resembles Mithun's (1984) type II. What is strange, however, is the lack of type I noun incorporation in the language, contrary to Mithun's implicational theory (cf. section 2.6.). A reason could be,

³ The separability of Dutch particle verbs has had the effect that their compound status has been questioned either. Booij (1990b), for instance, analyzes them as being phrasal.
⁴ Valery Berkov (personal communication) informed me that in Norwegian something similar obtains.
I would suggest, the construction's somewhat artificial origin in newspaper headlines.

However that may be, it will be clear that Swedish noun incorporation, despite its relative productivity, is radically different from the process in Frisian. We may still conclude, then, that Frisian occupies a unique position within the Germanic languages in this respect.

The central aim of this chapter is to detect why Frisian has this unique position. Actually, this problem breaks down into two questions. The most obvious one is why Frisian has the possibility. I will try to give an answer to this question in section 4. Here, I want to dwell a little upon the other side of the coin, namely why the other Germanic languages lack the possibility of noun incorporation. For, as a matter of fact, this is not an obvious state of affairs beforehand. It is clear from its existence in Frisian and many other languages that noun incorporation is an option of Universal Grammar, and at first sight, nothing could prevent a semantically inspired derivation like the one presented in the previous chapter to be applied to the other languages as well.

I think the beginning of an answer to the question of why the other Germanic languages have no noun incorporation can be found by taking a different perspective. For, actually, why should they have? There does not seem to be a compelling need for a language to use noun incorporation. As we saw in section 2.7, the same message, centering around the property of durativity, can equally well be encoded by using a syntactic construction made up of a verb and a bare phrasal object. Even more, the normal appearance, also in terms of frequency, of a verb and its arguments is syntactic, and not morphological. As we have seen in the preceding chapter, incorporation is only possible under certain conditions. All arguments of a verb can be expressed as an NP, but not all arguments can be incorporated. Every incorporated noun can be converted to an NP, but not every NP can be transformed into an incorporated noun. Additionally, a full NP has all the quantificational and modificational possibilities it has, but an incorporated noun is heavily restricted in this respect. So, incorporation really must be the marked option.5

In fact, the hypothesis presented here is supported by the characteristics of those rare NV-combinations that actually have come into existence in the languages we discussed in this section (with the exception of the deviating Swedish case, of course). Especially the account of the Dutch and English data is insightful. The Dutch complex verbs appear to deviate in various respects: morphologically (defective paradigm, no strong conjugation), semantically (no compositional meaning) and syntactically (unexpected

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5 For different language types the balance of markedness may be reversed. Baker (1996, 281 ff.) claims this is the case for polysynthetic languages.
argument structure, no syntactic paraphrase). Of the English examples it was reported that the noun could not be considered to be a syntactic argument of the verbal head. Indeed, Shimamura (1983), who studied the existing English complex verbs in some detail, concludes that the non-head noun does not function as first sister in the sense of Roeper & Siegel (1978). Furthermore, he generalizes (p. 276) that the more transparent a meaning a complex verb has, the less acceptable it is. Or to put it from a different angle in the words of Oshita (1995, 200), "the more idiosyncratic the base compound's meaning is, the more likely the two major constituents X and V are reanalysed as one semantic unit". These authors offer no clear explanation for their findings, but I think they become natural once we accept the perspective above. Typically, it is the regular, transparent, argumental complements of a verb that can easily be expressed in a syntactic way, and that, given the predominant way of syntactically encoding such arguments, are always projected in the syntax, indeed. Hence, as long as we eat meat in English or wij eten vlees in Dutch, it will not be the case that we meat-eat or wij vleeseten in these languages.

But then, we are still left with the question of why Frisian, with respect to these kind of arguments, also tolerates the seemingly marked option of noun incorporation. Why is it that Frisians both ite fleis and fleisite? However, before we get the inspiration for a possible answer, we shall first have to take a closer look at the language in a somewhat wider sense than was hitherto the case.

5.3 Frisia Magna

So far, the unicity of Frisian with respect to noun incorporation is only evidenced for so-called Modern West Frisian. This section is intended to step over the boundaries of "modern" and "west" and to widen the scope both in a historical and geographical dimension. This boils down to the question of whether it can be shown that noun incorporation also occurs in older stages of the language and in the dialects of East and North Frisian. This is not always an easy task, since we no longer can trust our native speaker intuitions and therefore have to rely on texts, which are sometimes scarce, and dictionaries, which are mostly concise, and facts which are not always very clear, and all this for a phenomenon which after all is not exceptionally frequent. Nevertheless, at the end we will get the impression that noun incorporation indeed also occurs in Frisian in a broader sense. This fact is important inasfar it can put us on the right track to answer the main question of this chapter.

Frisian has a written tradition from about 1200 onwards. Historically, the language is divided into three periods: Old Frisian (ca. 1200 - ca. 1550), Middle Frisian (ca. 1550 - 1800) and New Frisian (after 1800). For Old
Frisian, I have regrettably not been able to find examples of noun incorporation, although I must admit I have not been looking for them very extensively. The search might be hampered by the fact that as to content and style Old Frisian is rather one-sided; the sources mainly consist of legal texts.

For Middle Frisian, instances of noun incorporation can be traced, however. The oldest one I have come across is from Cornelis Kiliaan's dictionary (1599A). Here we find the compound *hey-loghen* ('hay-load'), nowadays *healoegje*. Chronologically next is number 718 of the proverbs in the Burmania collection (1614A):

(14) Meij heren ist quae kers ijet
With gentlemen is-it badly cherry-eat
'He who sups with the devil should have a long spoon'

Since the object *kers* shows up in singular form, without any determiner, one can not but conclude that it must be incorporated here. This is more or less confirmed typographically in a version that appeared some 50 years later (Gabbema ms.), where it is spelled as one word: *kersytten*. Significantly, the same proverb still exists in modern Dutch, but as this is a non-incorporating language, the object there occurs as a phrasal bare plural, *kersen*, as expected:

(15) Met grote heren is het kwaad kersen eten

As we have seen in Chapter 2, one of the favourite contexts for noun incorporation are *te*-infinitives. In the seventeenth century, there was no difference in this respect. Here are two illustrations, from 1661B, page 11, rule 424-5, and 1676A, p. 127, r. 55, respectively:

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6 This could not have been done without the invaluable help of Willem Visser, who kept an eye on things while correcting the input for the linguistic database of Middle Frisian, compiled at the Fryske Akademy.

7 Middle Frisian texts are referred to by way of a code, invented by A. Feitsma and used in the system of the coming Middle Frisian dictionary. It consists of the year of publication, followed by a capital letter. For bibliographical information, see the References to Frisian texts at the end of this book. Page and rule numbers refer to the editions presented in that list.
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(16) Ick may hir net lang lisse / Te honne melken
    I may here not long lay / To dog-milk
    'I am not allowed to dawdle here for a long time'

(17) Nu uyt to Pool-sluychtjen
    Now out to tussock-level
    'Let us go out leveling tussocks'

That incorporation has taken place can be established from the fact that the count nouns *hûn* and *pôle* (modern spelling) are without a plural suffix, so they do not act as phrasal bare plurals. In (17) this observation is supported by the spelling as a single word, albeit with a hyphen, and by the fact that *pôle* lost its final schwa as a result of compounding.\(^8\)

Incorporations in *te-*infinitives can be found in the 18th century as well. In this example from 1701C, p. 52, r. 1, an incorporational interpretation is again supported by typography:

(18) Din soe ick weer op Birgumer Heyde to Maargh-yten
    Then should I again at Birgumer Heyde to black pudding-eat
    'Then I should again go to Birgumer Heyde to eat black pudding'

Noun incorporation can also be found in nominalizations. In the following example, from 1774A, p. 34, r. 194, this is clear from the lack of a plural suffix in the count noun object, and from typography:

(19) Meits Heit nou fort it nettelzwyljen dien
    Make father now immediately the nettle-windrowing finished
    'Father should now finish the windrowing of nettles'

The same considerations apply in the following uses as infinitives, from 1746H, p. 40, r. 24 and 1779M, p. 7, r. 2, respectively:

(20) Aysiekke, fischje, of wyldsyette? sis it vry
    Egg-seek, fish, or game-shoot? say it free
    'Searching eggs, fishing, shooting game? say it free'

(21) ... of 't jimme Barge slagtje zoenne
    ... whether you pig-slaughter should
    '... whether you should slaughter pigs'

That noun incorporation had its place throughout the whole verbal system can

\(^8\) Assuming, of course, that the word had a final schwa in Middle Frisian, too.
be deduced from the following uses as a finite verb in Verb Second and Verb First position. They can be found in 1774A, p. 44, r. 447 and in ca. 1784B, p. 37, r. 20:

(22) Ik bargevoerje sels
    I pig-feed self
    'I feed (the) pigs by myself'

(23) Lanmiette jimme mey sok goed ...
    Land-measure you with such things ...
    'Are you surveying land with such things?'

All this leads to the conclusion that noun incorporation is not just a feature of modern West Frisian, but that it already existed in older stages of the language as well.

Let us now pass on to the geographical dimension. Traditionally, a distinction is made between West, East and North Frisian. From the medieval East Frisian area along the North Sea coast between the rivers Lauwers and Weser, only one tiny little language island is left: Saterland, where in three villages, in former times surrounded by impassable moorlands, at most 2000 people still speak their Seeltersk. In order to gather data from this dialect, the newly published comprehensive dictionary of Kramer (1992) is a very useful help. The following citations are from this source. I deliberately choose examples with count noun objects in singular form, the safest indication that incorporation has taken place:

(24) [Woaks brukte me] tou Boomäntjen (p. 34)
    Wax used one to tree-graft
    'Wax was used to graft trees'

(25) Eeiše säike dat geen je mäd de Fuurke (p. 49)
    Worm-seek that went they with the fork
    'They used a fork for searching worms'

(26) Bjütïntsper [wud uk (...) brukt tou] Pipe scheenmoakjen (p. 248)
    Bent-grass was also used to pipe-clean
    'Bent-grass was also used for cleaning the pipe'

(27) Dan kuden se Ponkouke baake (p. 267)
    Then could they pancake-bake
    'Then, they could bake pancakes'

(28) Un 'Bounere, tou Pot utschrabjen, (...) wuden fon Heede moaked
    (p. 294)
    And scrubbing-brushes, used for scraping out pots, were made from heath'
    'And scrubbing-brushes, used for scraping out pots, were made from heath'
Furthermore, I add two examples from *Ooldenhuus*, a collection of Seelter texts:

(29) Foar loange Tid geen in Strukelje moal 'n Moon wai tou Boomoutakjen (p. 27)
For long time went in Strukelje once a man away to tree-debranch
'A long time ago a man in Strukelje (German: Strücklingen) once left in order to cut off branches from trees'

(30) Nu truch dät Scheepkoowebauen hieden doo Loorper Nood, dät ... (p. 51)
Now through the sheep fold-build had the Lorupers fear, that ...
'Due to the building of sheep folds, the Loruppers feared that ...'

Hence, the conclusion may be drawn that noun incorporation can also be found in the East Frisian dialect of Saterland.

North Frisian, spoken along the west coast of Schleswig-Holstein in Germany, roughly between Husum and the Danish border, is linguistically speaking a very heterogeneous area. Most villages are trilingual, as besides the own Frisian dialect High and Low German are also spoken. In some of them these are even supplemented by Standard Danish and South Jutlandish (Århammar 1976; Larsen 1983; Walker 1993). North Frisian itself is commonly divided in ten dialects (Århammar 1968). The main division is between the dialects of the mainland and those of the islands (Helgoland, Sylt, Föhr and Amrum). It is not my purpose to investigate all of them, but rather pick out one representative of the main groups.

For the island dialects, let us take Fering-Oomrang, the twin dialect of Föhr and Amrum, as an example. The choice is appropriate insofar as a publication from a native speaker is available (Ebert 1989) in which noun incorporation is mentioned. In her discussion of the *uunt*-construction (comparable to West Frisian *oan it*) she states explicitly (p. 295) that the verb has no direct object as such, but that it is incorporated. Examples are:

(31) a. Hat as uunt anhenrupin
   She is ON IT ducks-call
   'She is calling the ducks'

b. Hat as uunt kukenbaagen
   She is ON IT cakes-bake
   'She is baking cakes'

c. Hat as uunt brekenklütjin
   She is ON IT trousers-repair
   'She is repairing trousers'
The first three examples show a plural morpheme -en, but according to Ebert it is semantically empty:

"Nomen und Verb bilden zusammen ein gängiges Muster, d.h. sie benennen eine typische Aktivität, so daß sie gewissermaßen zu einem Begriff verschmelzen. Die Funktion der Inkorporierung ist die Atelisierung des Prädikats."

Ebert consequently spells the verb and the incorporated noun as one word, also in other constructions (p. 300 and 304, respectively):

(32) Hat sat tu hőözenstoopin
    She sits to stockings-darn
    'She was darning stockings'

(33) Jo skel daaling fooderkeer
    They shall today hay-drive
    'Today, they will transport the hay'

This use is sometimes found elsewhere, for instance in the dictionary of Wilts (1986) in the entries gredpluuge ('meadow-plough') and greefmaage (gravedig), but more often not, even by the same author: piip greew ('channel-dig') or tu busem besen ('to stable look at'). The singular, determinerless form of these count noun objects strongly suggests that there has been incorporation here. Another illustrating example stems from Skuulbuk, p. 47:

(34) ... kön jam wirem greew
    ... can you worm dig
    '... Can you dig worms'

where the plural form would have been wirmer. Therefore, this again confirms that in Fering-Öömrag noun incorporation is possible.

A happy choice for a dialect of the coastal area might be Mooring, spoken in a region called Bøokinharde, in that it earned a description in the most exhaustive grammar of a single North Frisian dialect to date: Bendsen (1860). He states (p. 253) that verbs in this dialect can compound with nouns. Of
5.4 **A solution**

So far, the picture has emerged that noun incorporation does exist in Frisian, and not in the other Germanic languages. In order to give a rationale for this distribution, it seems appropriate to look for a feature which is common to all the Frisian dialects, and which is missing elsewhere. If we could manage to detect a relationship between such a feature and noun incorporation, in a sense we could claim to have offered an explanation for the existence of the phenomenon in Frisian.

In order to find a suitable key, it seems advisable to look at the special

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9 Bendsen uses the *en*-infinitive as the citation form for verbs, which was not unusual in nineteenth century Frisian philology (compare Epkema (1824) for West Frisian and Johansen (1862) for Fering-Öümrang). See Halbertsma (1865) for a contemporary criticism of this habit.
properties of the Frisian verbal system. In their overview of Frisian grammar, J. Hoekstra & Tiersma (1994, 530) mention two unique properties: most Frisian dialects have two classes of weak verbs, and furthermore two manifestations of the infinitive can be found among all of them. With respect to the two conjugational classes, I really should not know whatever connection to the existence of noun incorporation could be established. But the other feature promises to provide better perspectives.

Frisian infinitives occur in two different shapes, one ending in a suffix -e [a], the other in a suffix -en [en]. I will call them the e- and en-infinitive, respectively. These forms have their roots in the history of the language. Leaving details aside, the following development can be sketched. In the other Old West-Germanic languages the form of the gerund, commonly -ane, eventually reduced to -an or -en. This way, they became identical with the original infinitival ending -an, which also reduced to -en. This led to a single form -en, which can still be observed in modern Dutch and modern High and Low German. With respect to the gerund, Frisian shows the same picture, of which the form -en is the contemporary result. However, the original Old Germanic infinitive -en had a different development. Before its emergence in Old Frisian texts it had already lost its final /n/. Therefore, the Old Frisian infinitival ending became -a, as in for instance helpa ('help') or kapia ('buy'). This full vowel later reduced to schwa. The upshot is that nowadays Frisian exhibits two infinitives, viz. one ending in -e, the other in -en.

It appears that in the modern dialects these infinitives are not used arbitrarily; a clear distribution can be observed. I will now give an overview, which, by the way, is by no means claimed to be exhaustive. But it should provide enough for our purposes. The e-infinitive, then, can be found after

10 This suffix can, and often must, undergo sonantization. The final /n/ then heads the syllable on its own, and can be subject to subsequent assimilation depending on the place of articulation of the previous consonant. See Dyk (1987) for details with respect to West Frisian. This phonological issue has no ramifications for the point I wish to make here, however. Nor has the fact that there exists a small set of monosyllabic verbs, among them West Frisian gean ('go'), stean ('stand'), sjen ('see') and dwaan ('do'), which show just one form for both infinitival uses.

11 See for instance Steller (1928), where Old Frisian is compared to Old English and Old Saxon in this respect.

12 The data stem from at least the following works. For West Frisian: Halbertsma (1865), Kalma (1950) and Visser (1989). For East Frisian: Kramer (1982) (Saterland), Fort (1980) (Saterland), Minssen (1849; 1854) (Saterland) and Ehrentraut (1849) (Wangerooge). For North Frisian: Århammar (1964) (Amrum), Schmidt-Petersen & Craigie (1928) (Föhr and Amrum), Möller (1909) (Sylt), Siebs (1898) (Sylt), Borchert, R. & N. Århammar (1987) (Helgoland), Bauer (1925) (Bökingharde) and Jensen (1925) (Wiedingharde). See also Johannsen (1955) for a general
modal auxiliaries such as West Frisian *kinne* ('can'), *meie* ('may'), *moatte* ('must'), *sille* ('shall') and *wolle* ('want'):

(37) Hy kin/mei/moat/sil/wol komme/*kommen*
    He can/may/must/shall/wants (to) come

The auxiliary of causality, West Frisian *litte* ('let'), also selects an *e*-infinitive:

(38) Hy lit it hynder drave/*draven*
    He lets the horse trot

Finally, in some dialects, as Saterlandic (*Seeltersk*: Kramer 1982, 33) and Fe­ring (J. Hoekstra 1992, 137-8), but not in West Frisian, the verb *gung* (go) takes an *e*-infinitive:

(39) Hi gënt sitte (Saterlandic)
    He goes sit
    'He sits down'

The distribution of the *en*-infinitive follows a more differentiated pattern. I mention the following instances:¹³

A) After the infinitive marker *te/tu* ('to'):

(40) Ik gean te fytsen/*fytse*
    I go to cycle
    'I go out cycling'

(41) Ik kum om di tö helpen (Sölring (Sylt): Möller 1909, 17)
    I come COMP you to help
    'I came to help you'

(42) to badn (Mooring: Bauer 1925, 106)
    to bath

¹³North Frisian perspective. It should be stressed that not every source mentions all the contexts to be dealt with in the account to follow. In addition, some authors make use of a wealth of diacritics to cope with phonetic peculiarities. For technical reasons, I have not always been able to duplicate their notations completely. The choice of the kind of infinitive, however, will always stand out clearly enough. For reasons of consistency, I have chosen to gloss the examples by the way of an infinitive, where from an English perspective an *-ing*-form would have been more appropriate in many cases. A comparison of Frisian *-en* and English *-ing* will be pursued in section 5.6.
B) After prepositions:

(43) Foar iten/*ite thús komme!
    'Be home before dinner (supper)'
(44) Medd jéd hábben ron hi weg (Saterlandic: Minssen 1854, 169)
    'Having got the money, he ran away'

C) In nominalizations (also embedded in a PP):

(45) Sin sgryvn (Wiedingharde: Jensen 1925, 131)
    His write
    'His writing'
(46) Bi 't Baksen wens gau weat Heesen (Helgolandic: Borchert, R. & N. Århammar 1987, 98)
    With the "baksen" (pull a boat on the beach) gets-one quickly wet socks
    'While pulling a boat on the beach one can easily get wet socks'
(47) Dåt Bäiden låt dåt Huuljen nit (Saterlandic: Fort 1980, 220)
    The child lets the scream not
    'The child does not stop screaming'
(48) Elts praat fan myn súpen, mar nimmen fan myn toarst (West Frisian wisdom)
    Everybody talks about my drink, but nobody about my thirst
    'Everybody talks about my drinking, but nobody about my thirst'

To this use, the familiar oan it-construction could be added:

(49) Hi blift an t Loopen (Saterlandic: Kramer 1982, 33)
    He remains ON IT walk
    'He keeps on walking'

D) As subject or object:

(50) Freestikken du wi dollung ni (Helgolandic: Borchert, R. & N. Århammar 1987, 98)
    'We do not eat breakfast today'
(51) Ėrn ēn drānk hålt'lit ēn sīl tāhūpe (Wiedingharde: Jensen 1925, 131)
Eat and drink keeps body and soul together
'Eating and drinking keeps body and soul together'

(52) ... dat Jan smoken wol wurdearret (West Frisian: Visser 1989, 55)
... that Jan smoke [particle] appreciates
'... that Jan appreciates smoking'

E) As a predicate noun (Visser 1989, 52):

(53) It wurdt/is/bliuwt oppassen/#oppasse
It becomes/is/remains be careful
'One should be/remain careful'

F) After the phrase *neat oars as or oars neat as* ('nothing else but'):

(54) Hi kon ārs nix urz mīōen (Saterlandic: Minssen 1849, 169)
He could else nothing but mow
'The only thing he could do was mowing'

(55) Hi dā nant ūss spellin (Fering: Schmidt-Petersen & Craigie 1928, 32)
He does nothing but play
'The only thing he does is playing'

G) As complement of perception verbs like *sjen* ('see'), *hearre* ('hear') and *fiele* ('feel'), and after the verbs *bliuwe* ('remain'), *hawwe* ('have') and *komme* ('come'):

(56) Ik sjoch him rinnen/#rinne
I see him walk
'I see him walking'

(57) Ik hear him roppen/#roppe
I hear him call
'I hear him calling'

(58) Ik fiel it kālder wurden/#wurde
I feel it colder get
'I feel it is getting colder'

(59) Ik bliuw fytsen/#fytse
I remain cycle
'I keep on cycling'
Now, what have these instances of the *en*-infinitive in common? The division of these contexts might look a little bit heterogeneous, but under closer scrutiny they do appear to exhibit a common feature: all, except one, show up in a context which could be qualified as nominal. This can most clearly be seen from (C), where the *en*-infinitive is preceded by an article or a possessive pronoun. Another clear indication is case (B), as an NP typically fills in as complement of a preposition. When we furthermore assume that the element te/teu acts as a preposition, too – which is claimed for Frisian by J. Hoekstra (1992) and which is in each case in accordance with the historical facts\(^{14}\) – then case (A) can be accounted for under the same heading. In (D) and (E) the *en*-infinitive shows up in other typical case-marked positions. And in case (F) it enters a kind of comparison with *neat* (nothing), which can be considered as a negated NP.

So, the upshot is that *-en* typically occurs in nominal contexts. Hence, one can ascribe nominal properties to this suffix, a conclusion drawn earlier by several researchers, among them Reuland (1983), De Haan (1984), Visser (1989) and J. Hoekstra (1992). The result would be that Frisian exhibits two infinitives: a verbal one, *-e*, and a nominal *-en*.

The situation is a little bit more complicated, however. So far, we have not explicated the cases under (G). This was done for a good reason, since an argument for their standing in a nominal context would be hard to find. This is supported by language history, since earlier these cases were present participles.\(^{15}\) Moreover, they show a deviant behaviour with respect to the

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\(^{14}\) As mentioned above, in Old Frisian, the verb (gerund) in cases like (A) ended in *-ane* or *-ene*. The final schwa is generally considered to be an instantiation of nominal declension, of a dative, to be more precise, as it is governed by the preposition to (cf. Steller 1928, 58; Nielsen 1981, 170).

\(^{15}\) To some extent there must have been some exchange with the gerund, however, as sentence (60) in North Eastern West Frisian dialects is nowadays construed with a *te*-infinitive:

(i) Ik haw dêr lân te lizzen
    I have there land to lay

See for details Hoekema (1963), who also points at a similar variation within Danish/Juttish.
obligatoriness of incorporation, as we will see in section 5.7. Therefore, I will assume that case (G) above exemplifies a different phenomenon, and I agree with J. Hoekstra (1992, 139, note 21) that it cannot be qualified as nominal. For ease of reference, I will henceforth reserve the term *en*-infinitive for contexts such as (A)-(G) only.

It is this separate nominal infinitival suffix which can be connected to the existence of noun incorporation in Frisian, I would argue. Note that in general noun incorporation is not permitted in the other Germanic languages, or to put it differently, an incorporated noun is not licensed there. At the end of section 5.2 I already suggested a possible reason why, which boiled down to the circumstance that as a rule a verb takes an object which is phrasal. But as the *en*-infinitive is nominal, one could say that a verb with this suffix attached to it is in a sense no longer a verb but rather a noun. And if it is a noun, then it need not obey the restriction concerned, since this was stated for verbs. Therefore, a structure such as the following can be built without difficulties, the more so as nominal compounding is very productive in Frisian (and in Dutch, cf. Booij 1989b, 27):

(62)

In order to "verbalize" this structure, a reinterpretation is needed, so that *-en* is interpreted as suffixing a complex verb:

(63)
Once such a structure is available, backformation can be applied: the suffix -en is stripped, and a complex verb \([\text{NV}v]\) is left.

In essence, this analysis is the same as the one Booij (1989b) applied with respect to complex verbs in Dutch. A crucial difference with the situation in Dutch, however, is the circumstance that in Dutch the formation of verbal compounds is an incidental matter, whereas in Frisian verbal compounding is productive. It is here that the existence of two infinitive suffixes, and thus the availability of a special nominal one in Frisian, can come into play. According to J. Hoekstra (1992), the morphological distinctness between the two infinitival endings -e and -en has led to a different feature specification for Frisian -en in comparison to Dutch or German -en. The latter, being the general infinitival suffix for these languages, would be underspecified as \([\varnothing N, \varnothing V]\). The exact feature specification should be filled in according to the syntactic environment the infinitive is inserted in, in the same spirit as proposals concerning English -ing by Milsark (1988). Frisian -en, on the other hand, would be positively nominal: \([+N, \varnothing V]\). If Hoekstra is correct, then one could say that Frisian -en is nominal by itself, or strongly nominal.

At this point a comparison with other "strong" nominal suffixes could be insightful. One example is Germanic -er, building nomina agentis on the basis of verbs. So, on the basis of, for example, Dutch bakken (‘bake’) one can obtain bakker (‘baker’). But it is a well-known fact that the same suffix can also occur in complex nouns in which the Patient role of the verb is expressed: broodbakker (‘breadbaker’). One possible structure (Lieber 1983; Botha 1984) for such synthetic compounds is \([\text{NV}]_{\text{v}}\text{er}\)\text{N}. Parallel to this, and given the inherently strong nominal character of Frisian -en, it could be imagined that a structure like (63) could easily be formed, indeed. And from this, it is a relatively easy step to backformation by stripping the right-wing suffix, just as occurred in Dutch with some -er or -ing derivatives (cf. Booij 1989b).

In fact, the step is far easier, since there is an essential difference between these derivatives with -er and -ing and formations with Frisian -en. The former are real nouns; for instance, they can be pluralized and in a proposition they function as arguments. But the nouniness of Frisian -en derivatives is less clear: pluralization makes no sense, and in the oan it-construction and especially in te-infinitives, which appeared to be the core case of Frisian noun incorporation, they rather function as predicates. So, they can quite easily be identified as verbs, where the -en ending is viewed as just an infinitive suffix, indeed. And if such a suffix could be added, other verbal suffixes could be added as well. Once this stage is reached, the NV combination just functions as a verbal stem, which leaves no other conclusion than that a noun and a verb can compound to a complex verb.

So I take it that noun incorporation in Frisian could come into existence by way of the dual nature of the unique -en suffix in the language. On the one
hand its nominal character allows creation of a suitable structure; its verbal character on the other hand enables reinterpretation of this structure as verbal. The latter general property must be the reason that the reinterpretation has been on such a large scale that it might be characterized as structural and as such has led to productive NV compounding in Frisian. Here there is a clear difference with, for instance, Dutch, where the suffixes -er and -ing are strictly nominal and could stand at the basis of only a few incidental backformations.

In the view above, the existence of the special nominal -en infinitive thus plays a crucial role for the existence of noun incorporation in Frisian. A further question, however, is whether this role should be interpreted in a synchronic or diachronic sense. In other words, is the process of reinterpretation as sketched above still active, and can it be maintained that Frisian noun incorporation is still performed by some form of backformation? Or should we have to conclude that it occurred in the past, with the net effect of having been a trigger which made an ordinary compounding process available?

I think there are indications which are in favour of the latter option. A good argument could be the conspicuous difference in conjugational class between the Frisian complex verbs and for instance those in Dutch. In Dutch, these verbs show weak forms, even if the simplex verb is strong. So, Dutch stofzuigen (dust-suck, i.e. 'to vacuum') has as its preterite stofzuigde, and not *stofzoog, as one would expect on the basis of the strong conjugation of the base verb zuigen ('suck'). Booij (1989b) explains this behaviour by claiming that stofzuigen is a backformation from stofzuiger ('vacuum cleaner'). In its nominal origin there was not a proper path for the feature <strong> to percolate, and therefore for the backformed verb weak declension, which is the default one, is chosen. The Frisian complex verbs, however, invariably show the same declension as their constituting simplex verb. If noun and verb are coined to \( [NV]_v \), the conjugational feature can find a proper percolation path upwards, since the dominating node is non-distinct from the source node.

One could thus say that Frisian noun incorporation, as far as conjugation is concerned, is directed from the constituting verb. But this can also be concluded for other areas as well. For instance, the affectedness condition as discovered in Chapter 4 applies in the verbal and not in the nominal domain. And also in terms of simplicity a derivation which builds up a structure with the least possible steps should be preferred to a procedure where first a more complex structure is erected which is then partially broken down again. No wonder, then, that a phenomenon such as backformation has such a marginal position in grammar.
All these considerations\textsuperscript{16} lead me to believe that nowadays Frisian noun incorporation is simply performed by combining a noun and a verb into one compound and that the complex route of reinterpretation once occurred in the past to make this possible. So, I assume that for generations Frisian children conclude on the basis of the data presented to them that the combination of a noun and a verb is just a possible option in their language. This option once came into existence on the basis of the availability of a separate, nominal, infinitival suffix. That I situate the role of this suffix in the past is not to say, of course, that it could not have a supportive function in the present. The -\textit{en}-suffix is still there, so in principle the whole procedure of reanalysis could be applied again. Nevertheless, I think there are enough reasons to assume that the derivation of the Frisian complex verbs is primarily performed by compounding.

The view presented here concerning the central role of the \textit{en}-infinitive in the settlement of noun incorporation might find some support in a recent dialectsyntactical atlas covering The Netherlands and Flanders (Gerritsen 1991). My formulation is rather cautious, since the questionnaire seems to focus on the issue of word order, and not so much on morphological incorporation, as can be seen from the suggested answer put in standard Dutch terms:

(64) "Marie zit te aardappelen schillen"
    Marie sits to potatoes peel
    'Marie is peeling potatoes'

The object could also be interpreted very well as a bare phrase here, in which case the answers to the question could only indicate in which area sentential \textit{te}-infinitives (cf. J. Hoekstra 1989) do occur.

But let us leave these considerations aside and assume that the responses with the word order as in (64) indeed indicate that noun incorporation has taken place. We observe on the maps (numbers 40-42) that the phenomenon is concentrated in three areas: Fryslân, of course, and in West-Friesland and the province of Groningen (with an incidental spread southwards in the province of Drenthe). These areas are all situated in the north of the Netherlands, Groningen east of Fryslân, and West-Friesland to the west, separated from Fryslân proper by the former Zuiderzee, now Lake IJsselmeer (see also the map in Chapter 1). So-called "Westfries" and "Gronings" are generally considered to be dialects of Dutch, not of Frisian.\textsuperscript{17} The interesting case is West-

\textsuperscript{16} In the next section a possible additional one will be discussed.

\textsuperscript{17} There may be a Frisian substratum in these dialects, though. For Westfries this was argued for recently by E. Hoekstra (1994), who also provides an overview of the
fries. That this dialect indeed possesses noun incorporation is confirmed by data provided by E. Hoekstra (1994, 89):

(65) Ik gaan te heerknippen  
    I go to hair-cut  
    'I let my hair cut'
(66) Je kom niet meer te vleisvragen  
    You come not more to meat-ask  
    'You no longer come asking for meat'

But Hoekstra reveals another remarkable property of Westfries: it has two infinitival suffixes at its disposal, -e and -en, whose distribution runs completely parallel to the distribution in Frisian. So, what we see here is a clear confirmation of our thesis that a separate en-infinitive could be a source for the existence of noun incorporation.

It would have been nice when the Groningen dialect could provide similar evidence. Alas, the situation there is not that straightforward but, rather, so complicated that it deserves a separate treatment. This will be done in the next section.

5.5 The Groningen dialect

Besides the data provided by Gerritsen (1991) there are other indications that noun incorporation exists in the Dutch province of Groningen. Schuurman & Wierenga (1986), responding to Evers (1984), who attempted to rule out V-headed compounds in natural languages on principled grounds, try to show that NV-compounds can be found in the Low Saxon dialect spoken there. And indeed, their following examples, with a bare singular count noun object, provide strong evidence for that claim:

(67) ... dat Jaan zat te bouk lezen  
    that John sat to book read  
    'that John was reading a book'
(68) ... dat Marie blift te pankouk eten  
    that Marie stays to pancake eat  
    'that Marie stays for eating pancakes'

debate about this issue. The Frisian substratum in Gronings will be touched on in the next section.
If the Groningen dialect indeed has noun incorporation, too, then the hypothesis put forward in the previous section is in trouble, for, according to Ter Laan (1953), this dialect is in possession of only one infinitival suffix, namely -en, just as in for instance Dutch and German. So it seems as if we have to abandon our idea that the existence of a separate nominal infinitival suffix is responsible for the existence of noun incorporation.

There could be a way to avoid the problems, however. Schuurman (1987), studying Groningen noun incorporation in the context of te-infinitives, claims that the process should be characterized as syntactical, and not morphological. If she is right, then it could be asserted that the Groningen variety of noun incorporation is a different phenomenon, and hence our idea about the raison d'etre of the phenomenon in Frisian could be maintained.

Some of the evidence Schuurman provides indeed strongly points to a syntactic direction. One is that the alleged incorporated nouns can be modified externally:

(71) Wils wel leuven dat e haile doagen niks aans dut as bie toavel zitten te foto's ienplakken van ons leste vekaansie?
Want-you well believe that he whole days nothing else does but at table sit to photo's paste of our latest holidays?
"Would you believe that he does not do anything else but pasting photo's of our latest holidays?"

(72) Hai komt al joaren bie ons te haardbroden kopen, haarde en zachte
He comes already years to us to "haadbroden" buy, hard and soft
'For years, he comes to us to buy "haardbroden", hard (ones) and soft (ones)'

Here the PP van ons leste vekaansie and the apposition haarde en zachte are separated from the modified constituent by the verb, which indicates the syntactic status of that constituent. The PP can also be adjacent to the noun, but then the anaphoric (ons) and deictic (leste) elements again point at the same, i.e. syntactical, conclusion:

(73) te foto's van ons leste vekaansie ienplakken
However, on closer scrutiny, some doubt could be cast on some of her arguments pro syntax. One point Schuurman seems to have overlooked is the circumstance that in emphatic contexts more things can be acceptable than as expressed neutrally. This might be the reason that referring expressions such as proper names or NPs accompanied by a demonstrative show up:

(74) Nou mot je ophollen te Pieter Moatje pesten
    Now should you stop to Pieter Moatje tease
    'Now you should stop teasing Pieter Moatje'
(75) En ast nou nog ain moal lapst te dei kiender ploagen ...
    And if-you now still one time dare to those children tease ...
    'And if you once more dare to tease those children ...'

I could equally well use such sentences in Frisian, when translated literally. However, when put in a neutral context, they become ungrammatical there:

(76) * Hy hold op te Pieter Moatje narjen
    He stopped to Pieter Moatje tease
    'He stopped teasing Pieter Moatje'
(77) * Hy begjint te dy bern narjen
    He starts to those children tease
    'He starts teasing those children'

A particular pragmatic context can also have other special effects. Articles can not be co-incorporated, but Schuurman asserts that the incorporated noun can be interpreted as an indefinite NP, even if an indefinite article is not available:

(78) Hai zat te bouk lezen
    He sat to book read
    'He was sitting, reading a book'

When you are reading, you can only read one book at the time, but that is an incidental property of the particular event, and has nothing to do with the fact of incorporation. On the contrary, typical for incorporation is that the number or amount of the referent of the incorporated noun can not be estimated in principle, as we have seen in section 2.7. A particular pragmatic context may further establish some otherwise unexpected anaphoric relationships, as we saw in section 3.2. For Schuurman (p. 189), however, the alleged referen-
tiality of the incorporated noun is one of her arguments to view Groningen noun incorporation as syntactic.

In one case (p. 187), Schuurman relies on a comparison with nominal compounding, where a diminutive noun can only act as the left-hand member if the basic form can not, and vice versa, as Van Zonneveld (1983) discovered for Dutch. So, *vrouwjesaap (wife-DIM-monkey, 'female monkey') is permitted, where *vrouwapaap (wife-monkey) is excluded, while *diertjesstuin (animal-DIM-garden) is out since there already exists dierentuin for 'zoo'. In the case of noun incorporation, on the other hand, both manifestations of a noun are easily composable, and since Schuurman considers nominal compounding a morphological process, she concludes that noun incorporation can not be a matter of morphology. However, it is questionable whether the established correspondence is valid. For one thing, Van Zonneveld stated his condition for Dutch, so the situation in the Groningen dialect might be different. For Frisian, for example, it can not be applied absolutely, since for instance beanesop and beantsjesop ('bean soup') or beanstestok and beantsjesok ('bean-pole') can both be found in the WFT dictionary. But leaving that aside, it is doubtful whether one can rely on a parallel with nominal compounding, since there are more differences to be discerned between the two processes. For instance, noun incorporation never shows a transitional sound -s-, where nominal compounding can and, as we saw in section 4.2, noun incorporation is not recursive.

As we have seen that the three arguments pro syntax we discussed above may be less convincing as they have been presented by Schuurman, in other places she even acknowledges that the construction in the Groningen dialect shows properties which directly favour a morphological analysis. In my view, the most convincing among them is the exclusion of gain, which negates NPs (see the discussion at the end of section 2.3 with respect to Frisian). Therefore, it is remarkable that Schuurman's final conclusion is that noun incorporation in the Groningen dialect is a syntactic process. But on closer reading her position seems to be hybrid:

"In my opinion none of the observations (...) is of decisive importance with respect to the question whether the incorporation construction in the Groningen dialect should be understood as being morphological or syntactical. Only when taken together they support the syntactic approach. It cannot be denied, however, that the construction has several typical morphological characteristics" (Schuurman 1987, 191-2)

And a little farther:
5.5 the groningen dialect

"It is my claim that the construction in our dialect with incorporated elements behaves like a real phrase and that therefore the node dominating it is a V'. Only in this way can the many syntactic characteristics of the construction be accounted for. On the other hand, none of the morphological features can be explained in this way" (Schuurman 1987, 192)

Schuurman leaves us with the somewhat paradoxical situation that a phenomenon is syntactical and morphological at the same time. How could this paradox arise? The answer to this question, I would suggest, is that she has not defined the problem clearly enough. Her premise seems to be that in every instance where a nominal shows up in a te-infinitive, this nominal is incorporated. However, it is not impossible that the Groningen te-infinitive has a less unitary make-up than is assumed by Schuurman. For instance, look at the evidence she provides to argue that the incorporated element can be marked for number (which in Schuurman's view would be an argument against morphology):

(79)  a. Hai zat te kraant lezen
     He sat to newspaper read
     'He was sitting, reading a newspaper'

      b. Hai zat te kraanten lezen
     He sat to newspapers read

Instead of assuming that the incorporated nominal could be marked for number, we could also try to evaluate the nominals of (79)a and (79)b in their own right. We then see in (79)a a singular count noun without a determiner. Since the bare singular count noun cannot have a definite interpretation (Schuurman 1987, 186), it can only be licensed as part of a compound. Therefore, (79)a could best be viewed as a morphological construction, and hence as a real example of noun incorporation. The nominal of (79)b, on the other hand, is plural, and as a bare plural it has the possibility to represent an NP on its own. In that case, (79)b would be an example of an ordinary syntactical construction, and would have nothing to do with noun incorporation.

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19 This restriction of non-definiteness is necessary since the Groningen dialect, at least large geographical parts of it, has the curious property that definite nouns, at least those taking the article *de*, can occur without the article (Ter Laan 1953, 35):

(i) Kou staait in sloot
     Cow stands in dig
     'The cow is standing in the dig'

Definite nominals are excluded in *te*-infinitives, however.
in the strict, morphological, sense. Summarizing, I opt for the following analyses for (79)a and (79)b:

\[
(80) \quad \text{a. } \text{te } [[\text{NV}]_{\text{VP}}} \\
\text{b. } \text{te } [\text{NP } \text{V}]_{\text{VP}}
\]

If this analysis could be applied to the Groningen te-infinitives in general, then the morphological properties would follow from (80)a, and the syntactical characteristics could be ascribed to (80)b. As in Schuurman's data it is the plural "incorporated" count nouns that correspond to the syntactical properties, I will assume that an analysis like (80) in principle is correct. In that case the paradox in Schuurman's approach would have been solved.

The acceptance of the analysis (80) has the further consequence that in the Groningen dialect morphological noun incorporation, symbolized by case (80)a, can be found, indeed. This view seems to be supported by Reker (1991), although it must be admitted that his argumentation is a little bit impressionistic. He asserts that combinations as *eerappelschillen* (potato-peel), *kovwiedrinken* (coffee-drink), *kraantlezen* (paper-read) or *staalschou­nen* (stable-clean) are more felt as a unit than they are in Dutch (VLW *inl.*, 1) and that these are verbs whose object is fused with the verb itself (VLW *samenst.*, 9). Therefore, let us assume that noun incorporation in the Groningen dialect is not basically different from noun incorporation in Frisian. But then we are back at our initial problem, viz. how Groningen can have the phenomenon while superficially only one infinitival suffix can be found there.

This, however, is the situation nowadays. Typical for the Groningen area is that it has been Frisian-speaking before. The language became extinct there after the Middle Ages – at least we have no written material after that time – and was then replaced by a Low Saxon dialect. However, many Frisian features remained in this dialect, cf. W. de Vries (1942) and Heeroma & Naarding (1961), and especially for morpho-syntactic properties E. Hoekstra (forthcoming). Apparently, one of these surviving properties is noun incorporation. If this property of the Groningen dialect can be attributed to a former Frisian substratum, then this might be a further indication that the role of the Frisian -en suffix in the reanalysis as described in the previous section should indeed be viewed as diachronic. At least, it is not easily conceivable how one general infinitival suffix could do the job. In Frisian, the phonological difference between -e and -en can be linked to a different syntactic distribution. When the -en is typically found in nominal contexts, then it is

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20 This work is currently being published in installments, so I might have missed some material at the time of writing this thesis.
conceivable that it be ascribed strong nominal features. These conditions are not met in a language where there is only one general infinitival suffix, which consequently cannot be ascribed a preference for one certain context. If this view is correct, than the reanalysis should have been performed in a stage when there still was a difference between the infinitival suffixes. The possibility of morphologically composing a noun with a verb into a new complex verb would then have been taken over by the speakers into their new dialect, just as they adopted other features of the old language.

5.6 English revisited

As the Groningen dialect was a language in which we did not expect to find noun incorporation, on the other hand there is a language which seems to possess favourable conditions comparable to Frisian, and which therefore could be expected to show up the phenomenon, but which nevertheless does not. That language is English.

What could play the central role here is the suffix -ing. Although it is certainly not my claim that this suffix has exactly the same properties as Frisian -en, a quick look at the sentences (40)-(55), while trying to correct the glosses into good English, might reveal to the reader that both suffixes behave in the same way in many cases. It is also reported of English -ing that it has a hybrid character, in that nominal and verbal characteristics can be ascribed to it at the same time. This point has been taken up in for instance Baker (1985), Pullum (1991) and Drijkoningen (1992); see also the first section of Richardsen Westergaard (1990) for a short research survey of older literature.

That in principle -ing could play a role similar to Frisian -en is proven by the existence of synthetic compounds built with the help of this suffix. Here are some examples, most of them drawn from Roeper & Siegel (1978):

(81) mountain-climbing
cake-baking
meat-eating
checker-playing
bell-ringing
boat-making
gum-chewing
flower-growing

There is, however, also a clear difference between the languages. In Frisian, the phenomenon has spread throughout the total verbal paradigm, whereas in
English it has not. So the question emerges as to why English can not be said to have noun incorporation.

One could answer this question by positing a general constraint which prevents English verbal compounds from being created, as Lieber (1992, 58) does, but this would certainly not be an insightful solution to the problem. One could alternatively look for certain distributional differences between -ing and -en and try to use these as a tool for an explanation of why Frisian -en could function as a bridge to paradigmatical spread and English -ing could not. However, I am afraid that this will be a dead-end street, the more so since -ing certainly seems to have no less possibilities on the verbal side. Therefore, I propose to take a more radical stand by simply assuming that -en and -ing are essentially identical with respect to the issue under discussion, i.e. in their hybrid character. The solution, then, has to be sought elsewhere. In syntax, I would suggest.

One main difference between English and Frisian syntax is their underlying order, SVO and SOV, respectively. For Frisian this means that the canonical position of the object is to the left of the verb. This happens to be in accordance with the position taken by the incorporated noun. In English, on the other hand, the situation is different. There a phrasal object is to be found to the right of the verb, whereas the incorporated noun, due to the morphological right-headedness of the language, would still stand at the left. In my view, it is this potential clash of the positions of what is felt to be the object of the verb which is the obstacle to noun incorporation becoming established in English. In this conflict, the much stronger influence from the syntactic side dictates the eventual result. I thus fully agree with Marchand (1969, 105), who states that "traditional linguistic habits tend to prevent speakers from breaking up old syntactic patterns by which verbal complements follow the verb in sentences". Noun incorporation is thus in a state of competition with syntactic structures. These in general can prevent it from coming into being, since the same meaning can alternatively be expressed by syntactic means (cf. section 5.2), and noun incorporation can be blocked even where the initial conditions seem to be favourable, such as the availability of a hybrid suffix -ing.

That a certain syntactic state of affairs can indeed have a deep influence on morphological structures can be illustrated from the language of English children. Clark, Hecht & Mulford (1986) observed children using agent and instrument nouns, who, although they had mastered the suffix -er, still employed a verb-object order, resulting in such forms as dryer-hair. They could stick to this habit until at the age of five or six the correct hairdryer emerged. The authors (p. 22) ascribe the anomaly to a generalization apparently drawn by the children:
Although in the case of agent and instrument nouns, which in the end are arguments, this generalization is given up after some years, it is quite well imaginable that in the case of real verbs it is to be sustained, the more so where the syntax is able to encode the same message by its own means. In my opinion, this is the reason why English, notwithstanding our initial expectations, does not show noun incorporation.

5.7 Reason of maintenance

We have seen that Frisian possesses the right conditions for noun incorporation to exist: a separate nominal infinitival suffix and, in contrast to English, a syntactic OV-order. Nevertheless, it is not unreasonable to suppose that the phenomenon might be under pressure. The same syntactic force which we assumed in section 5.2 to prevent morphological NV complex verbs in the other Germanic languages is also working in Frisian, of course. In Frisian, too, the encoding of a verb and its argument can be achieved by syntactic manners, and seen in terms of frequency, this is by far the most common way of doing so. Moreover, in contrast to the morphological expression, this syntactic encoding is not constrained with respect to aspect, quantification or modification.

That Frisian noun incorporation is indeed under pressure might be distilled from some signals from North and East Frisian, and also from the Groningen dialect. In the latter, for instance, it is not possible to use incorporation verbs in finite positions (Schuurman & Wierenga 1986, 339), where we have seen in section 2.4 that in West Frisian this was the weakest context, too. According to Volkert Faltings (personal communication), the same situation as in Groningen obtains in the North Frisian dialect of Feer (German: Föhr), even when the finite sentence is strengthened with a durative adjunct: 21

(83) * Wi piipgreew al a hiale dai
We ditch-dig already the whole day

Furthermore, reading North and East Frisian texts, it is my impression that noun incorporation is less frequent there than in West Frisian. This subjective idea is supported by a likewise impressionistic observation by R. Århammar

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21 This restriction, however, might also be due to the one claimed for Fering by Ebert (1989, 308), namely that detransitives cannot normally occur in the simple present.
Leaving the other dialects aside, one might wonder why West Frisian, notwithstanding syntactic counter-forces, is nevertheless quite successful in preserving noun incorporation. I could think of two factors which might be important in this respect.

One is the factor of recognizability, i.e. in West Frisian it is relatively easy for language users to determine whether the noun has been incorporated or not. Restricting ourselves to direct arguments, the point becomes clear especially in the case of count noun objects, since mass nouns as phrasal object or as incorporated noun differ only slightly in their respective accentuation. Count nouns, however, show a further, and more conspicuous, difference. Confronted with their appearance as a bare plural, which of course would be the most appropriate basis of comparison from a semantic point of view, the incorporated count nouns have a different outlook. West Frisian has two plural morphemes, -s and -en (/ən/), the latter being the most frequent. When a count noun with a s-plural is incorporated, the stem is used for incorporation:

(84) a. Gurbe wol apels ite
   Gurbe wants apples eat
   'Gurbe wants to eat apples'

b. Gurbe wol apelite
   Gurbe wants apple-eat
   'Gurbe wants to eat apples'

The count nouns with an en-plural also change after incorporation, in that an allomorph with a final schwa is chosen. And, as we have seen in section 2.5, even this schwa may sometimes disappear, resulting in an incorporated noun which has the same shape as its singular form, for example with the noun byt ('beet'):

(85) a. Heit sil biten dolle
    Father will beets dig
    'Father will dig beets'

b. Heit sil bit(e)dolle
    Father will beet-dig
    'Father will dig beets'

This system fits in with the one for nominal compounding, for instance in:
This property of West Frisian, which seems to be an accidental feature of the compounding system, is a happy coincidence which helps to give noun incorporation a stronger identity. Neighbouring languages may show a less perceptible difference between a plural noun and a left-hand noun of a compound, especially for compounds with a first member which forms its plural by way of the suffix -en. Dutch, for instance, retains the full plural form in bietenmachine (literally: beets-machine). Ungrammatical is *bietemachine, with the reservation that this actually might be the pronunciation of a great many Dutchmen. But then these speakers would also pronounce plural bieten without final [n], so that the plural form and the left-hand member of the compound would again become identical.

Another factor which might favour the maintenance of noun incorporation in West Frisian is the fact that there are a few, but important for noun incorporation, syntactic contexts in which incorporation in a sense might be considered as obligatory. These contexts include prepositional and sentential te-infinitives and the oan it-construction. In these surroundings phrasal objects, even bare ones, are not permitted:

(88) a. Heit giet te jerappeldollen
   Father goes to potato-dig
   'Father goes out, digging potatoes'

b. * Heit giet te jerappels dollen
   Father goes to potatoes dig

(89) a. Heit is oan it jerappeldollen
   Father is ON IT potato-dig
   'Father is digging potatoes'

b. * Heit is oan it jerappels dollen
   Father is ON IT potatoes dig

With respect to the oan it-construction, what counts is the object position directly at the left of the verb. In a position at the left of the construction as a whole, phrasal objects may occur, even specific ones:

(90) Heit is [dy jerappels]NP oan it dollen
    Father is those potatoes ON IT dig
    'Father is digging those potatoes'
This, however, is not the point at issue. Important is that at the canonical object position directly at the left of the verb only incorporated objects are allowed. It is to be expected that this gives noun incorporation a higher frequency, and a higher prominence in the eyes of the language user, and in this way strengthens its position.

It is not impossible that this restriction is beginning to suffer from erosion. In a nonrepresentative questionnaire, a few of my colleagues accepted sentences with bare plural objects. As we saw in section 5.5, a greater freedom in the choice of the object might also play a role in the te-infinitives of the Groningen dialect. The same could be the case in East and North Frisian dialects. In Kramer (1992, 267), a dictionary of Seeltersk, I found under the entry boake ('bake') two citations with the count noun object Ponkouke ('pancake'):

(91) Dan kuden se Ponkouke baake
    Then could they pancake-bake
    'Then, they could bake pancakes'
(92) Määme waas an t Ponkouken baken
    Mother was ON IT pancakes bake
    'Mother was baking pancakes'

In (91), the object shows up in bare singular form, which is an indication that it is incorporated there. In (92), on the other hand, in an oan it-construction, we find the object as bare plural, so it might well be the case that in this case it is still phrasal. A comparable example from Kramer (1992), p. 352, is:

(93) Ju is (...) an t Swine fodderjen
    She is ON IT pigs feed
    'She is feeding pigs'

Again we encounter a bare plural form in the context of an oan it-construction (93), since the singular is Swin ('pig'). In the North Frisian dialect of Föhr/Amrum one can find examples like this, which point in the same direction:

(94) Ick stunn ütjt för a Guardörr tu Skollen gremmen (Düntjis, p. 14)
    I stood out before the garden door to plaices gut
    'I was standing before the garden door, gutting plaice'
(95) Wi sat tu biljen bisen (Ebert 1994, 22)
    We sat to pictures look
    'We were looking at pictures'
The singulars of the bare plural objects in these te-infinitives are skol ('plaice') and bilj ('picture').

If it really is the case that East and North Frisian are less restrictive with respect to the choice of the object in these contexts, then this might be a reason why these dialects seem to show noun incorporation less frequently than West Frisian does. But much is unsettled in this area, so I leave this issue to further research. What stands out, however, is that the restriction in West Frisian is still quite vivid. Also in texts it is hardly ever the case that one encounters a non-incorporated object in these contexts.

It is tempting to speculate about the background of this obligation to incorporation, especially in these contexts. Apparently, a phrasal object is not licensed here. For a phrasal object to be licensed, it needs to be case-marked. Presumably, the Frisian verb has totally lost its case-assigning properties in the constructions at hand, and therefore, no single phrasal object, even not a bare one, is left to be allowed in the canonical object position. There seems to be but one factor to be blamed for this situation: the Frisian en-infinitive. It is the en-infinitive which shows up in the te-infinitives and in the oan it-construction. Recall from section 5.4 that we attributed the features [0V,+N] to the en-suffix. It must have been these strong nominal features which have swallowed up the case-assigning capacities of the verb in these constructions. The only potential "object" that is left, then, is an incorporated noun, since as a non-syntactical unit this needs no case at all. So, what we described earlier as obligatory incorporation boils down to no other object types capable of being licensed in the position at hand.

That it is indeed the strong nominal character of -en that causes this behaviour can be seen from other contexts of the overview (A)-(G) in section 5.4. After prepositions (case (B)) and in subject position (case (D)), for instance, a similar effect can be observed:

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22 For instance, one has to bear in mind that the plural morpheme just mentioned could just function as a linking morpheme in a compound. In that case the examples above would again be real instances of noun incorporation, of course. Plural linking morphemes in nominal compounds can be encountered both in Fering and Seeltersk. For the latter, a look in Fort (1980) yields compounds as (plural morpheme within square brackets) Hone[n]tied (rooster[s]time', i.e. early in the morning), Mutte[n]späk ('sow[s]pork') or Muz[e]falle ('[mice]trap'). From Wilts (1986) I noted for Fering-Ömrrang, among others, kanink[en]hok ('rabbit[s]hutch'), sink[en]kaag ('raisin[s]bread'), and from the title itself wurd[en]buk ('word[s]book', i.e. dictionary).
Now it can be demonstrated that case (G) of section 5.4, the en-infinitive in for instance the complement of perception verbs, is really different. These contexts do not show any restriction whatsoever with respect to the choice of the object:

The facts of (98) corroborate our initial impression that this is no nominal context at all and that its historical source as present participle indicates that this en-suffix is deviating from the others. It is only the en-infinitive with true nominal features that blocks phrasal objects and in this way strengthens the position of noun incorporation. We thus see that, together with the fact that incorporated objects have a different outlook from their non-incorporated counterparts, it is again the typical nominal en-infinitive that is of crucial importance for Frisian noun incorporation, this time not as impetus to the process, but rather as a factor to uphold its position.

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23 This is not true for all instances of nominal -en, however. Non-bare nominalizations show a much greater freedom, apparently under influence of the preceding determiner. And in the oan it-construction the restriction only applies to the position immediately to the left of the verb, and not to a position to the left of oan, as (90) shows. In that case the whole construction acts as a verb, and no restrictions with respect to case-marking apply (cf. Smits 1987; Ebert & Hoekstra 1996).
5.8 Concluding remarks

In this chapter we dealt with the question why there is noun incorporation in Frisian. In other Germanic languages the phenomenon appears to be absent, whereas in Frisian, also taken in a wider sense than discussed in the previous chapters, it can be observed. We hypothesized that essential for its appearance is the existence of a separate infinitival suffix *-en* that exhibits strong nominal features. These can be held responsible both for the emergence and the maintenance of noun incorporation. Its existence in the Groningen dialect can be accounted for by referring to a Frisian substratum which underlies this dialect. The situation is different for English, where no noun incorporation can be found despite the presence of a distinct suffix *-ing* with properties comparable to Frisian *-en*. That it has not come to a breakthrough in English can be ascribed to its underlying VO-order. Therefore, the existence of noun incorporation in Frisian must be the result of the interplay of two independent factors: its underlying OV-order, and, most important, its infinitival suffix *-en*. 
6 Summary

This book was about noun incorporation in Frisian. In the introductory chapter we started by giving a short description of the phenomenon of noun incorporation in general, and we provided the first indications that it also exists in Frisian. The instances of noun incorporation had to be distinguished from other complex verbs in which a noun shows up. Noun incorporation is interesting since it can be considered a typical borderline phenomenon between morphology and syntax. In this book, this aspect was mainly dealt with in the Chapters 3 and 4, which were devoted to the questions where and how. The other two central questions of this thesis, what and why, were the subject of Chapters 2 and 5, respectively.

Chapter 2, roughly intended to describe what Frisian noun incorporation actually is, gave a more thorough introduction to various properties of the phenomenon. Naturally, we started by presenting an overview of the (scarce) existing literature. Then we presented ample evidence concerning the status of the noun-verb combinations. Whichever perspective we took, whether it was phonological, morphological or syntactic, the result each time was that they should be considered as words. Categorically, these words are verbs. It appeared that in principle these complex verbs can occupy most verbal positions, preferences first of all dependent on the inherent durative aspect. This durativity is just a natural consequence of the fact that incorporated nouns can not be quantified. There are two other issues that received attention in this chapter. The first is the linking element that may occur between the incorporated noun and the verb. Sometimes the diminutive suffix acts as such, but more often we see an intervening schwa. The other issue is which type of noun incorporation, as described in the literature, can be distinguished for Frisian. It appeared to be a relatively simple variety, superficially to be characterized as a verb and an object merged into a new intransitive verb. Occasionally, transitive incorporation verbs can also be observed. Then, another phrase is promoted to the new verb’s direct object.

In the third chapter, the question was dealt with of where noun incorporation in Frisian is performed. With respect to noun incorporation in general it is a vexing problem where to locate it: in syntax, or in a separate morphological component, i.e. the lexicon. Here the question is applied to the phenomenon in Frisian. Several criteria given in the literature were discussed, but not all appeared valid or applicable to the Frisian case. However, the most solid theory in the field, Mark C. Baker’s syntactic approach, makes predictions that are not borne out. Moreover, a consequence of a syntactic movement analysis would be that the putative traces should be syntactically active, which does not appear to be the case. Also a solution by way of reanalysis did not appear appropriate. Therefore, the result of this chapter is that noun incorporation in Frisian would be better performed in the lexicon.
Such a lexical analysis was the subject of the fourth chapter, which tried to account for how the phenomenon in Frisian should be analyzed. A basic thread running through the entire chapter is a parallel with detransitive verbs: to a large extent, detransitivization and noun incorporation display the same properties and appear to occur under the same conditions. This is interpreted in such a way that both phenomena display an empty argument place in syntactic structure. In the mapping of lexical conceptual structure onto predicate argument structure, the semantic argument is not projected. Conditions for this non-projection are a volitional subject and an affected object. In addition, the inherent durative aspect may have a blocking effect. The conditions also apply with respect to the incorporation of nouns that can be related to oblique arguments. In case a verb has more internal arguments, incorporation is blocked when the arguments are dependent on each other. This behaviour could also shed some light upon the existence of type II incorporation and the non-existence of double incorporation.

Chapter 5 discussed the question of why noun incorporation can be found in Frisian. Compounding of a noun with a verb does not appear to be productive in the neighbouring languages, where in Frisian it is. We gave examples from earlier stages of the language, and also from East and North Frisian dialects, which show that the phenomenon is more widespread than the modern West Frisian variety that was focussed upon hitherto. To account for the difference, it seemed appropriate to look for a property which is manifest in Frisian but not in the other languages. This property is claimed to be the availability of two infinitival suffixes, and especially the -en-suffix. This suffix can be attributed strong nominal features, which must have laid the foundation for the possibility of composition of a noun and a verb. In another way, this suffix can also play a role in the maintenance of incorporation. On the basis of the analysis presented here one would expect that English should have noun incorporation, whereas it appears it does not, and at the same time that the neighbouring Groningen dialect should not display the phenomenon, whereas it appears it does. The first paradox could be resolved by pointing to the underlying SVO order of English, and the latter by the fact that the Groningen dialect area had been Frisian-speaking earlier; therefore, a Frisian substratum might underlie the present-day Low Saxon dialect.
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**Gearfetting yn it Frysk**

Dit boek giet oer in eigenaardichheid yn 'e grammatika fan it Frysk: nomenynkorporaasje. Ornaris is in argumint fan in tiidwurd yn 'e sinbou werom te finen as in aparte konstitutuïnt, byg. *Gurbe slipet [de messen]*. In argumint lykas *de messen* kin lykwols yn it Frysk ek mei it tiidwurd gearrane ta in gearset tiidwurd: *messeslypje*, of ek wol: *messlypje*. Yn sa'n gefal sizze we dat it argumint ynkorporerre is. In diidlike aanwizing dat *mes(se)* yndied in part fan in wurd wurden is, stiet al yn it ynliedende haadstik. Ornaris is it sa dat syntaktyske konstitutuïnten ferpleatst wurde kinne, en parten fan wurden net. Dérfandinne dat *Gurbe messlipet al* in goede haadsin is en *Gurbe slipet mes* net. Wannear't *de messen* syntaktysk al as in parte konstitutuïnt realisearre wurdt, is de folchoarder krekt oarsom; dan kin *Gurbe de messen slipet* net, mar moat it wèze *Gurbe slipet de messen*. Nomenynkorporaasje is nijsgirrich omdat ynkorporaasjetiidwurden eigenskippen fan wurden hawwe, en tagelyk in relaasje sjen litte dy't him ek yn sinnen oppeneearret. De fraach is dan ek wèrt ynkykorporaasje syn beslach krijt: yn 'e sinbou of yn 'e wurdfoarning.

Eär't dy fraach behannele wurdt, wordt de lèzer yn haadstik 2 earst neier yn 'e kunde brocht mei it ferskynsel yn it Frysk. Der wordt begûn mei in oer-sjoch fan 'e eardere literatuer, mar dat kin koart om 'e hoeke, want it ferskynsel is oant no ta kwealik bestudearre. Dèrnei wurde der gâns arguminten hy-droegen dy't sjen litte dat wy hjir wier mei in kompleks wurd te krijen hawwe dèrt in ynkorporaerre haadwurd in diel fan utmakket. De aanwizings komme fan trederlei mèd: fonology, morfology en syntaksis. Dan wordt besjoen hoe it komplekse tiidwurd him as tiidwurd hâldt. It docht bliken dat it hast oeral wol foarkomme kin, en dat de foarkar foar of tsjinnichheid yn beskate konstruksjes benammen stjoerd wordt troch it durative aspekt dat hylyt mei ynkorporaasje anneks is. Dat aspekt is op himsels wer in natuerlik gefolch fan 'e keale foarm fan it ynkorporaerre haadwurd sels. Noch twa oare underswerpen kriejn yn dit haadstik it omtinken. Yn it foarste plak it ferbinings-elemint dat tusken haadwurd en tiidwurd opduke kin. It ferlytsingefterheaksel kin somtiden dy funksje ha, mar faker fine wy in schwa. En fierders wordt noch neigongen ta hokker type oft de Fryskse nomenynkorporaasje eins heart. It hat út 'e literatuer bliken dien, dat it ferskynsel him net oeral op 'e wrâld op in gelikense wize oppeneearret. Yn it Frysk ha wy te krijen mei in navenant ienfâldige variant: tiidwurd en argumint rane gear ta in syntaktysk yntransityf tiidwurd. Dèrnjonken hat it Frysk ek in wat fierdergeand type, dèr't in oare konstitutuïnt it plak ynmint fan it ynkorporaerre argumint, hie dat syntaktysk realisearre wurden.

Yn haadstik 3 komt de fraach oan 'e oarder wèrt we it ferskynsel pleatse moatte: heart it ta it mèd fan 'e sin of ta it mèd fan it wurd? Dy fraach is net unyk foar it Frysk; hy komt hyltiten werom at it om nomenynkorporaasje giet.
Der wurdt hji earst besocht om te sjen oft der út 'e literatuer ek gaadlike kritearia te heljen binne dy't in Ljocht op 'e kwestje smite kin soene, mar dat falt noch neat net ta: of se binne fan harsels net botte helder, of se binne dom-wei net ta te passen op it Frysk. Dat leit oars mei M. Baker syn goed útwurke teory, dy't útháldt dat it komplekse tiidwurd úntstien wèze kin troch in ferepleating fan it ynkorporareэрre haadwurd yn 'e syntaksis, wèrby't op it oar-spronlike plak yn it tiidwurdlike komplemint in spoar beneftbluwt. Dy teory docht beskate foarsizzings oer wat al as net ynkorporareэрre wurde kin. Lykwols, dy foarsizzings komme foar it Frysk net út. Boppedat, sa wurdt hji útholden, soe it spoar in beskate syntaktsyske aktiviteit sjen litte moatte, mar dèr is ek neat fan te fernimmen. At dérnei dan noch bliken docht dat in wer-analyze op grún fan in syntaktsyske oerflaktestruktuur likëmyn yn 'e reden leit, wurdt konkludeэрre dat it komplekse tiidwurd foarme wèze moat binnen de wurdfoarmingskompoinint sels, oftevol yn it leksikon.

Yn haaststik 4 wurdt dan besocht om in leksikale analyze fan it ferskynsel fan it ferskynsel te jaan. De reade tried yn it ferhaal is in fiergeande parallel mei detransitiven, dat binne op harsels transitive tiidwurden dy't ek sùnder in foarwerp foarkomme kinne, lykas bygelyks yn Gurbe slipet. Der wurdt hji útholden dat dy oerienkomst der is omdat we by nomenynkorporaasje en detransitiviteit yn beide gefallen te krijen hawwe mei in leech argumintsplak yn 'e syntaksis. It úntstiet omdat binnen it leksikon it semantyske argumint út 'e leksikaal-konseptuele struktuur net projekteэрre wurdt nei de predikaat-argumintsstruktuur. De betingstens dèrfoar binne dat it únderwerp fan 'e sin in persoan oantsjut dy't de troch it tiidwurd útdrukte hanneling sels yn gong sette wol en dat it foarwerp de hanneling úndergiet. Dèrby kin it durative aspekt, dat altyd mei ynkorporaasje annees is, noch wer in blokkearjende rolle spylje. De betingstens fan fòlysjonaliteit en affekteardens jilde ek foar de ynkorporaasje fan arguminten dy't ornaaris útdrukt wurde yn ferhâldingswurdkloften. Oars rint it mei dy tiidwurden dy't twa (of mear) ynterne arguminten by har hawwe. At dy fan inoar ôfhinklik binne, kinne se net ynkorporareэрre wurde, ek al binne de grún-betingstens geûnstich. Dat hâlden en dragen fan twa ynterne arguminten smyt ek ljocht op it feit dat ðûbelde ynkorporaasje ferbean is en op dy gefallen yn it Frysk dèr't in oare konstituïnt it syntaktsyske plak fan it ynkorporareэрre haadwurd ynnimt.

Yn haaststik 5 komt de kwestje op it aljemint wèrom oft it Frysk eins nomenynkorporaasje hat. Oanbuorjende talen hawwe ynsidinteel wol haadwurd-tiidwurdgearsettings, mar botte produktyf is dy foarming dèr net, wylst er dat yn it Frysk al is. Der kin ek sji litten wurde dat it ferskynsel wider fïemet as it hjoeddeiske Westerlauwerske Frysk; yn ålder Frysk en yn East- en Noard-Fryskse dialekten kinne jo ek foarbylden fan nomenynkorporaasje oanwize. It foarkommen fan nomenynkorporaasje yn it Frysk soe dan eins ek yn ferbân brocht wurde moatte mei in eigenskip dy't it Frysk al hat en oare
Germaanske talen net. Der wurdt hjir útholden dat dat it foarkommen fan twa ynfinityfútgongen wêze moat, en dan benammen fan dy op -en. Troch dy syn sterk nominale eigenskippen kin it oannimlik makke wurde dat er oan 'e basis stien hat fan 'e mooglikheid ta gearsetting fan haadwurd en tiidwurd. Boppe-dat spilet er ek noch in rolle yn it fuortbestean fan 'e konstruksje. De hypteze dat it bestean fan twa aparte ynfinityfútgongen oan 'e widze stien hat fan nomenynkorporaasje, smyt wol fuortendaliks swierrichheden op mei twa oare talen. Mei it Ingelsk, dat gjin nomenynkorporaasje sjen lit, mar dat mei syn efterheaksel -ing wol in gaadlike oansetter yn 'e hûs liket te hawwen. It leit yn 'e reden dat it SVO-karakter fan it Ingelsk nomenynkorporaasje opkeard hat. En mei it Grinslânsk, dêr't fan bliken docht dat it wol nomenynkorporaasje hat, mar gjin twa ynfinityfútgongen. In berop op it feit dat it gebiet earder Frysktalich west hat, kin de tsjinstridichheid lykwols oplosse.
Samenvatting in het Nederlands

Dit boek gaat over een eigenaardigheid in de grammatica van het Fries: nomenincorporatie. Gewoonlijk is een argument van een werkwoord in de syntaxis terug te vinden als een zelfstandige constituent, bijvoorbeeld in het Friese Gurbe slipet [de messen], 'Gurbe slijpt de messen'. Een argument als de messen kan evenwel in het Fries ook met het werkwoord samensmelten tot een samengesteld werkwoord: messeslypje, of ook wel: messlypje. In dat geval is het argument geïncorporeerd. Een duidelijke aanwijzing dat mes(se) inderdaad een deel van een woord geworden is, wordt gegeven in het inleidende hoofdstuk. Gewoonlijk is het zo dat syntactische constituenten kunnen worden verplaatst, maar delen van woorden niet. Vandaar dat in hoofdzinnen Gurbe messslipet, 'Gurbe messlijpt', grammaticaal is en *Gurbe slipet mes, 'Gurbe slijpt mes', niet. Wanneer de messen syntactisch wel als een zelfstandige constituent gerealiseerd wordt, is de volgorde precies omgekeerd; dan kan *Gurbe de messen slipet, 'Gurbe de messen slijpt', juist niet, maar is het Gurbe slipet de messen, 'Gurbe slijpt de messen'. Nomenincorporatie is interessant omdat incorporatiewerkwoorden eigenschappen van woorden bezitten en tegelijk een relatie laten zien die ook in zinnen voorkomt. De vraag is dan ook waar het verschijnsel gesitueerd moet worden: in de zinsbouw of in de woordvorming.

Voordat die vraag wordt beantwoord, wordt de lezer in hoofdstuk 2 eerst nader in kennis gebracht met het verschijnsel in het Fries. Er wordt begonnen met een overzicht van de schaarse oudere literatuur. Daarna worden er een heleboel argumenten gegeven, zowel fonologische, morfologische als syntactische, die aantonen dat wij hier inderdaad te maken hebben met een complex woord waarvan het geïncorporeerde nomen deel uitmaakt. Vervolgens wordt nagegaan hoe het complexe werkwoord zich gedraagt als werkwoord. Het blijkt dat het bijna overal wel kan voorkomen, en dat de grotere of geringere voorkeur voor bepaalde constructies vooral gestuurd wordt door het aan incorporatie inherente duratieve aspect. Die durativiteit is op zich weer een gevolg van de kale vorm van het geïncorporeerde nomen zelf. Er komen in dit hoofdstuk nog twee andere onderwerpen aan de orde. In de eerste plaats is dat het verbindingselement dat tussen nomen en verbum kan opduiken. Dat kan het diminutiefsuffix zijn, maar vaker vinden wij hier een schwa. En voorts wordt nog nagegaan tot welk type de Friese nomenincorporatie eigenlijk behoort. Uit de literatuur is namelijk gebleken dat het verschijnsel zich niet overal ter wereld op eenzelfde wijze manifesteert. In het Fries treffen wij een relatief eenvoudige variant aan, waarbij werkwoord en argument samensmelten tot één syntactisch intransitief werkwoord. Daarnaast bestaan er in het Fries ook voorbeelden van een wat verdergaand type, waarbij een andere constituent de syntactische plaats inneemt die het geïncorporeerde argument zou bezetten indien dat syntactisch gerealiseerd zou zijn.
In hoofdstuk 3 komt de vraag aan de orde waar het verschijnsel gesitueerd moet worden: hoort het tot het terrein van de zin of tot dat van het woord? Die vraag is niet uniek voor het Fries; hij komt voortdurend terug als het om nomenincorporatie gaat. Om de vraag te beantwoorden voor het Fries wordt eerst geprobeerd om uit de literatuur over nomenincorporatie bruikbare criteria te halen die een nader licht op de kwestie zouden kunnen werpen. Veel levert deze exercitie echter niet op. Vruchtbaarder daarentegen is de toepassing van de goed uitgewerkte theorie van M. Baker, die aanneemt dat het geïncorporeerde nomen in de syntaxis kan zijn verplaatst uit het complement van het werkwoord, onder achterlating van een spoor. Deze theorie doet bepaalde voorspellingen over wat wel of niet geïncorporeerd zou kunnen worden. Voor het Fries blijken die voorspellingen echter niet uit te komen. Bovendien, zo wordt hier geponeerd, zou het spoor een bepaalde syntactische activiteit moeten vertonen, hetgeen niet het geval is. Als bovendien blijkt dat een eventuele oplossing met behulp van heranalyse van syntactische oppervlaktestrukturen evenmin adequaat is, kan worden geconcludeerd dat het meer in de rede ligt om aan te nemen dat de Friese complexe werkwoorden gevormd moeten zijn binnen de woordvormingscomponent zelf, met andere woorden in het lexicon.

In hoofdstuk 4 wordt vervolgens gepoogd het verschijnsel lexicaal te analyseren. De rode draad in het verhaal is een vergaande parallel met detransitieven, dat zijn op zich transitieve werkwoorden die ook zonder object voor kunnen komen, zoals bijvoorbeeld in *Gurbe slipet*, 'Gurbe slijpt'. Deze overeenkomst tussen nomenincorporatie en detransitiviteit, zo wordt hier beargumenteerd, is een gevolg van een lege argumentsplaats in de syntaxis. Die ontstaat doordat binnen het lexicon het semantische argument uit de lexicaal-conceptuele structuur niet geprojecteerd wordt naar de predicaat-argumentstructuur. Voorwaarden daarvoor zijn, dat het subject van de zin de handeling zelf wil en dat het object de handeling ondergaat. Het inherent duratieve aspect kan daarbij een blokkerende rol spelen. De voorwaarden van volitionaliteit en geaffecteerdeheid blijken ook te gelden voor de incorporatie van argumenten die gewoonlijk worden uitgedrukt in een voorzetselconstituut. Anders ligt het met werkwoorden met twee (of meer) interne argumenten. Als die afhankelijk zijn van elkaar, kunnen ze niet geïncorporeerd worden, ook al zijn de condities gunstig. Het gedrag van werkwoorden met twee interne argumenten geeft ook meer duidelijkheid over het feit dat dubbele incorporatie verboden is en over die gevallen in het Fries waarbij een andere constituut de syntactische plaats van het geïncorporeerde nomen inneemt.

In hoofdstuk 5 komt de vraag aan de orde waarom er eigenlijk nomenincorporatie in het Fries voorkomt. Aangrenzende talen hebben incidenteel wel samenstellingen van een zelfstandig naamwoord met een werkwoord, maar bijster productief is die vorming in die talen niet, terwijl dat in het Fries wel