Infinitival innovations

A case study on Frisian-Dutch language contact

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Infinitival innovations

A case study on Frisian-Dutch language contact

Infinitivale innovaties

Een casusstudie over Fries-Nederlands taalcontact
(met een samenvatting in het Nederlands)

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List of abbreviations

1	1 st person
2	2 nd person
3	3 rd person
ACC	Accusative
Asp	Aspect
Class	Classifier
C	Complementizer
DIM	Diminutive
GEN	Genitive
INF	Infinitive
N	Noun
NI	Noun incorporation
Num	Number
PL	Plural
PLD	Primary Linguistic Data
PNI	Pseudo-noun incorporation
PRT	Particle
SG	Singular
T	Tense
UG	Universal Grammar
V	Verb

Chapter 1

Introduction

1.0 Introduction

The aim of this dissertation is to investigate the mechanisms of syntactic change in situations of language contact. This will be done by analyzing morphosyntactic innovations found in present-day Frisian in the domain of infinitival verbs. I will look at **what** kinds of changes there are in present-day Frisian, **how** they can be analyzed syntactically and **why** they have the particular form and appear in the particular areas of the grammar that they do.

This research was conducted in as part of the AThEME (Advancing The European Multilingual Experience) project.¹ I aim to contribute to the empirical knowledge on Frisian and Dutch contact phenomena, syntactic theory on infinitival verbs and to general theories on language contact and change. This dissertation is innovative in investigating changes that are currently taking place in Frisian and in combining theoretical syntax with an analysis of language contact.

The two languages of main interest in this dissertation are Dutch and Frisian.² Frisian is a regional minority language spoken in Fryslân, a province in the north of the Netherlands. While Dutch is the official and majority

¹ This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no. 613465.

² Outside of the Netherlands, Frisian is often referred to as "West-Frisian", to differentiate it from the North-Frisian and East-Frisian language varieties spoken in Germany. In this dissertation, I will use the term Frisian solely to refer to the West-Frisian variety spoken in the Netherlands.

language in the whole of the Netherlands, Frisian was given the status of official language in Fryslân in 2014. In Chapter 2, I will discuss the language situation in Fryslân in a bit more detail to provide a (socio)linguistic context for the syntactic changes which are discussed in this dissertation.

1.1 The present study

1.1.1 Research questions

In this dissertation I aim to answer three research questions. First, to discover what kind of changes we find in Frisian, there is the empirical question:

- (1) *The empirical question*
What kind of morphosyntactic innovations do present-day speakers of Frisian show in addition to the original patterns of their language?³

To find out what these innovations look like in the grammar, there is the syntactic question:

- (2) *The syntactic question*
How are these innovations represented in the speakers' grammars? How does this relate to the grammatical representation of the original patterns?

And finally, to investigate why we find these particular changes, there is the change question:

³ To establish the original patterns of Frisian, I used information from reference grammars (Tiersma 1985, E. Hoekstra 2018a-d), other work on Frisian syntax (mainly J. Hoekstra 1997, Dyk 1997, De Haan 2010) and information from native speakers. I am aware that grammars are not completely representative of actual language use in the community, and that they focus on a standard language, thereby omitting (dialectal) variation. However, I believe they can provide a solid starting point for this research, especially when supplemented by these other sources.

(3) *The change question*

Why do we find these innovations, i.e.:

Why do we find more innovations in certain areas of the grammar than in others?

Why do the innovations have this particular form?

In Chapter 2, I discuss my theory on language contact and change, and present three hypotheses with regard to the change question. The empirical Chapters 3, 4 and 5 aim to answer the research questions together, by means of three empirical case studies. The empirical domains are infinitival suffixes, noun incorporation and the absentive. There are three different reasons to choose these particular empirical domains. First of all, all three domains show microvariation (that is, Dutch and Frisian show some small but interesting differences in their morphosyntax in these domains). Secondly, for all three domains, there were signs of language change: the data from the questionnaire I administered to speakers of Frisian in the first stage of my study, showed that some speakers displayed innovations in their grammars. Therefore, these domains could give us insight into the nature of language change on a micro-level. Finally, the three areas are related to each other as they all concern infinitival verbs. The data and analyses of these areas together form a unit of new information and insights on the syntax of Dutch and Frisian infinitival verbs.

1.1.2 *Syntactic framework*

In this subsection I will briefly introduce the main assumptions I use in this dissertation. It is written within a generative framework. To be more specific, my view on syntax is based on the Distributed Morphology framework (Halle & Marantz 1993). This entails two important assumptions. First of all, I believe that all morphology is part of syntax, that is, there is no word-building in the lexicon or a separate morphological system. Each derivational or inflectional morpheme is represented on a syntactic node. Secondly, I believe that each concept enters syntax as a root, as in (4):

(4) $\sqrt{\text{DOG}}$

The root $\sqrt{\text{DOG}}$ includes semantic information, namely on what the concept

of $\sqrt{\text{DOG}}$ entails, but does not include any syntactic information. Following the line of Halle & Marantz (1993), but contra Borer (2013), I assume that a root, when it enters the syntax, needs to be categorized by means of a syntactic categorizer such as n^0 or v^0 .

Following Harley (2009) I assume that roots can have complements, and selectional features. For example, the root $\sqrt{\text{DESTROY}}$ can select an internal argument which has to be nominal, that is, there is always *something* which is destroyed.

The tree in (5) below sketches the clausal skeleton I assume, that is, the basic syntactic structure of a sentence.

At the bottom of the tree, we find the root with its internal argument as its complement. The root is then categorized as a verb by v^0 , and the external argument is introduced in the specifier of the vP projection. Above vP I assume a VoiceP layer, in which accusative case is assigned. Above VoiceP, I assume an Aspectual layer, where aspectual adverbs are located, which will be relevant in Chapter 3. Above AspP is Tense, where inflectional features are located. Finally, at the top of the tree we find the CP, the domain of complementizers. I believe that some of the projections in this structure, for example the CP, can have a more elaborate structure than presented here (see Rizzi 1997). However, as this is not directly related to the topic of this dissertation, I will use the tree structure in (5), which includes only the projections which are relevant here.

This section introduced the general syntactic assumptions for this

dissertation. Any additional assumptions concerning the syntactic structure will be discussed in the relevant sections of the next chapters.

1.1.3 *Data collection*

The empirical data in this dissertation were gathered by means of two digital questionnaires. These were distributed via Facebook. The first questionnaire consisted of two parts. The first part was a background questionnaire, which included questions about the following topics:⁴

- Place of birth
- Place of residence
- Province in which they have lived the majority of their lives
- Education level
- Whether they have had any education in Frisian
- Whether their parents spoke Frisian, Dutch or both
- In which kinds of situations they mostly use Dutch and Frisian (formal vs. informal)
- How much Frisian they speak on an average day (in %)
- How much Dutch they speak on an average day (in %)
- How much of other languages/dialects they speak on an average day (in %)

These external factors were not of primary interest in this study, but as they might influence language change, they were included in the questionnaire.

The second part of the questionnaire, administered approximately two months later, consisted of an acceptability judgment task. In this task, participants had to judge whether a given Frisian sentence sounded natural or unnatural to them on a 5-point Likert scale (Likert 1932), where 1 stood for “completely unnatural”, and 5 for “completely natural”. This method was chosen because it is clear that acceptability judgments form a continuous spectrum (Sprouse 2007:123) and because numeric scales offer the possibility of finding statistical effects. The gradual nature of judgments is taken into account in this dissertation, but I generally interpret the numbers 1 and 2 as reflecting judgments of ungrammaticality, while I interpret the numbers 4

⁴ The complete questionnaire can be found in the Appendix.

and 5 as reflecting judgments of grammaticality, based on the scales discussed in Spinner & Gass (2019, section 4.2.7). The number 3, which is the midpoint, is interpreted as “unclear”.

The task was introduced as follows (in Frisian, here translated into English):⁵

“We ask you to indicate for each sentence whether it sounds natural or unnatural to you, and if you could say it like this yourself. You can indicate this on a scale from 1 to 5, where 1 means ‘completely unnatural, I would never say it like this’ and 5 means ‘completely natural, I could also say it like this’.

We are interested in your daily use of language. It is therefore important that you think about your own speech, not about what kind of sentences would be suitable in formal situations, or what the official grammar rule would be. There are no right or wrong answers here!”

The acceptability judgment task consisted of 73 Frisian sentences, based on the following grammatical phenomena:

- Verb second in embedded clauses
- The Imperativum Pro Infinitivo-construction
- Preposition stranding
- *Gean* (“go”) and *bliuwe* (“stay”) as aspectual verbs
- Complementizer agreement
- Complementizer following a relative pronoun
- Infinitival suffixes
- Noun incorporation
- The absentive

All test items can be found in the Appendix. In Chapter 6, I will briefly discuss the results of the topics in the above which are not the main focus of this thesis

⁵ Despite these introductions, it should be kept in mind that prescriptivism might play a role in acceptability judgment tasks, especially written ones. Therefore, the results discussed in this dissertation might not provide a completely accurate reflection of speakers’ production or grammars. However, since the results are still very meaningful if we compare for example these results to the judgments of other linguistic structures, I will assume that this window into the speakers’ grammars provides us with sufficient information to make solid theoretical claims, and I will put the issue of prescriptivism and written questionnaires aside.

(i.e. Infinitival suffixes (Chapter 3), Noun incorporation (Chapter 4), The absentive (Chapter 5)).

The questionnaire did not include fillers, as the mixing of different phenomena within one questionnaire was supposed to mask the relevant parts of each item for the participants

All items were given in Standard Frisian and were checked for spelling and other possible errors by linguists with native knowledge of Frisian.

Approximately a year after the first, a second questionnaire was sent to the same group of participants. To ensure there were no significant changes in the linguistic behavior of the participants, the questions about their language background and language use were asked again. After this, 72 Frisian sentences were administered to be judged, again on a scale ranging from 1 (unnatural) to 5 (natural). These items all related to the three selected main empirical domains of this dissertation: infinitival suffixes, noun incorporation and the absentive.

560 participants participated in the first questionnaire. However, 33 participants were excluded from the analysis because neither Frisian nor Dutch was their native language and there was insufficient information on the other languages that they spoke. This left 537 participants for the data collection. This group consisted of 408 (76%) females and 129 (24%) males and their ages ranged from 17 to 86. 447 (83%) of the participants were native speakers of Frisian (i.e. they acquired Frisian before the age of 4). 124 speakers (23%) were bilingual from birth (they acquired both Frisian and Dutch before age 4). 247 (46%) speakers acquired Frisian from birth and Dutch from age 4 (primary school age in the Netherlands). The other speakers acquired either Dutch or Frisian later.

350 participants filled in the second questionnaire. These were a subset of the participants from the first questionnaire. Among them, there were 94 (27%) men and 256 (73%) women and their ages ranged from 18 to 86. 277 (79%) of them were native speakers of Frisian (i.e. they acquired Frisian before the age of 4). 75 (21%) of them were bilingual from birth. 159 (45%) speakers acquired Frisian from birth and Dutch from age 4. As can be seen from these percentages, this group is quite similar to the larger group who filled in the first questionnaire.

1.2 Chapter outline

In this subsection I will present a short preview of the remaining chapters in this book.

Chapter 2 presents my views on language contact and change. Following Rizzi (2017) I assume that there are three types of parameters: Spell-out parameters, Move parameters and Merge parameters. Following Biberauer & Roberts (2017), I assume that parameters also come in different sizes: they can apply to one item, or to a class of them. Based on these theories, I develop three hypotheses:

- (6) “Move before Merge”-hypothesis:
Move parameters are more prone to change than Merge parameters.
- (7) “Spell-out before Move and Merge”-hypothesis:
Spell-out parameters are more prone to change than Move parameters and Merge parameters.
- (8) “Small before big”-hypothesis:
Smaller parameters are more prone to change than bigger ones

These hypotheses will be explained in more depth in Chapter 2 and subsequently related to the data in Chapters 3, 4 and 5.

Chapter 3 discusses infinitival suffixes in Frisian and Dutch. In Frisian, there are two kinds of infinitival suffixes: infinitives ending in [ə] (orthography: *-e*, e.g. *rinne* “walk”) and infinitives ending in [ən] (orthography: *-en*, e.g. *rinnen* “walk”). In the first part of the chapter, I analyze the [ən]-infinitive. I show that it is a nominal infinitive, as traditionally assumed (see, among others, J. Hoekstra 1997) and that it includes an n^0 in its syntactic structure. I then show that the Dutch nominal infinitive has the same syntactic structure and that only the spell-out of n^0 is different ([ə], although it is written as *-en* in Dutch, too). Next I show that the Frisian infinitive ending in [ə] (e.g. *rinne* “walk”) is a verbal infinitive. Again, the Dutch verbal infinitive is actually the same. The language variation we find between Dutch and Frisian in infinitival suffixes is a matter of spell-out and can be captured in a Spell-out parameter. In the final part of the chapter, I discuss empirical data which shows that the phonological distinction between the two

infinitives in Frisian is disappearing for some speakers. I argue that this is the result of language contact with Dutch and of the involvement of a Spell-out parameter, which is vulnerable for change, based on the hypotheses from Chapter 2.

Chapter 4 discusses noun incorporation in Frisian and Dutch. In Frisian, nouns can productively incorporate into the verb, e.g. *mess(e)lypje* (“knife-sharpen”). In Dutch, a similar pattern occurs in which a nominal phrase incorporates into infinitival verbs, as in *aan het muizen vangen* (on the mice-catch.inf, i.e. “catching mice”). I argue that the elements which move to the verbs are not the same in Frisian and Dutch, as reflected in distinct Move parameters. Data from questionnaires show that many speakers of Frisian not only accept the traditional Frisian noun incorporation patterns, but also the patterns from Dutch. This signals language change; these speakers have a parametric setting which is similar to the Dutch parametric setting.

Chapter 5 discusses the absentive in Frisian (illustrated in (9)) and Dutch (illustrated in (10)).

(9)	Jan is te fiskjen.
<i>John is to fish.INF</i>
“John is off fishing”	Frisian
(10)	Jan is vissen
<i>John is fish.INF</i>
“John is off fishing”	Dutch

The absentive is a syntactic construction which expresses a subject’s absence. I show that there are differences between this construction in Frisian and Dutch and that they can be explained by means of a silent *go* analysis (based on Abraham 2008); that is, in both (9) and (10), there is a silent perfective verb *go*. The differences between Frisian *gean* (“go”) and Dutch *gaan* (“go”) can account for the differences we find in the absentive, such as the different types of infinitives (a bare infinitive in Dutch, a *te*-infinitive in Frisian). The variation between the Dutch and Frisian absentive can be captured by a Merge parameter (Frisian *gean* merges with a PP, while Dutch *gaan* merges with a vP). Finally, I discuss the change that is taking place in Frisian: some speakers accept a Dutch-like absentive, in addition to the original Frisian absentive.

Finally, **Chapter 6** concludes this dissertation. It summarizes how language change is restricted by the syntax of a construction; the type of parameter

which is involved influences whether and how the change occurs. The chapter touches upon some other relevant empirical data and provides suggestions for future research.

Chapter 2

Language contact and change from a syntactic perspective

2.0 Introduction

This chapter will present my views on language contact and change and relate them to the empirical domain of this thesis. At the end of this chapter, I will present three hypotheses which will be guiding throughout the thesis.

In the introduction of this thesis, I presented my research questions. They will be repeated below for the reader's convenience:

- (1) *The empirical question*
What kind of morphosyntactic innovations do present-day speakers of Frisian show in addition to the original patterns of their language?
- (2) *The syntactic question*
How are these innovations represented in the speakers' grammars? How does this relate to the grammatical representation of the original patterns?
- (3) *The change question*
Why do we find these innovations, i.e.:
Why do we find more innovations in certain areas of the grammar than in others?
Why do the innovations have this particular form?

The empirical domain which I will use to answer these questions is the domain of infinitives. In the next three chapters I will discuss three types of data: infinitival suffixes, noun incorporation, and the absentive, and I will analyze these data to answer *the empirical question* and *the syntactic question*. However, to answer *the change question*, a connection needs to be made between formal syntax and theories of language contact and language change. It is the goal of this chapter to provide this connection and give a theoretical context to the changes that we find in the grammars of Frisian speakers.

It is beyond the scope of this thesis to provide extensive overviews of the literature on language contact and change that has emerged over the years. Instead, I will give a brief overview of the most important notions, and discuss only what is directly relevant for this thesis. Before I do this, however, I will sketch the Dutch / Frisian language situation, to give the reader an idea of the intensity of language contact between these languages.

2.1 The Dutch / Frisian language situation

Frisian is a West-Frisian language variety spoken in the province of Friesland, in the northern part of the Netherlands. Traditionally, three main dialects are identified: Wâldfrysk (Forest Frisian), Klaaifrysk (Clay Frisian) and Súdwesthoeks (Southwest quarter). Most of the differences between these dialects are lexical and phonological (Tiersma 1985). For the current study, these three dialects are not considered separately; I refer to “Frisian” as one variety.

There are almost 500.000 speakers of Frisian, which is approximately 75% of the 640.000 inhabitants of the province in 2007 (Nortier 2009:49). These numbers are restricted to a definition of speaker as “being able to speak and understand the language”. There are approximately 352.000 native speakers in 2007, which is a little more than half of the inhabitants of the province.

Since 2014, Frisian has been recognized by the Dutch government as an official language. Although it has a written standard, Frisian is more an oral language: only 15% of the population report that they write it well (Provinsje Fryslan 2015).

Frisian and Dutch are both West-Germanic languages. They are closely related, and show much overlap in the lexicon as well as in the domains of syntax, morphology and phonology. The differences between the languages

are therefore sometimes subtle and make an interesting case for research on language change. In the last few decades, the social situation changed a lot: in the 20th century, the Dutch-Frisian language situation has changed from “stable diglossia” to “unstable bilingualism” (De Haan 2010a:234). Dutch and Frisian have existed side by side in the north of the Netherlands for centuries. When Dutch became the standard language of the entire country of the Netherlands, Frisian remained to be the language spoken by the lower and middle class of the population. It was mainly used in informal settings. Dutch was the language used for formal matters and mostly a second language for the Frisian people (Van Bree & Versloot 2008). In the cities, Dutch had a more important role and the contact dialect *Stadsfrysk* (“Town Frisian”) emerged (Van Bree & Versloot 2008), which shows characteristics from both languages, although its syntax seems to be mostly Frisian. Besides these contact dialects, Dutch and Frisian of course have influenced each other somewhat during the centuries, but during the last century, Dutch seems to have a bigger impact than before (De Haan 2010a). Since 1901, all children are obliged to go to school from the age of 6, where education is in Dutch (possibly supplemented by Frisian or English, but the official main language is Dutch (Dutch Law on Primary Education 1981:Article 9)). Moreover, Dutch is used more and more at home and in public life. Although Dutch is not native for everyone, it is at least a second language for practically all Frisian speakers (De Haan 2010a). The status of Dutch has therefore changed a lot in the last century and it is now clearly the majority language (De Haan 2010a). This dissertation therefore focusses on the current language contact situation, in which we expect much language change, although it is clear that Frisian and Dutch have always been in contact.

Majority languages can have much impact on minority languages. Especially if two varieties are very similar, as are Dutch and Frisian, contact-induced changes can occur easily (Thomason 2001). This is indeed what we see in Dutch-Frisian language contact. It is most notable in the lexical domain, as a substantial amount of Dutch words have become part of the Frisian vocabulary (De Haan 2010a). However, morphological and syntactic changes are also visible. For example, in Frisian, the word order of a verbal complex is different from the Dutch word order. While in Frisian a three verb cluster always has the order 3-2-1 (where 1 is the finite verb which selects verb 2, and verb 2 selects verb 3), as illustrated in (4), the canonical order in Dutch is 1-2-3, as in (5):

- (4) Hy sei dat er Jan [helpe₃ wold₂ hat₁] Frisian
He said that he Jan [help wanted has]
 “He said that he has wanted to help Jan.”
- (5) Hij zei dat hij Jan [heeft₁ willen₂ helpen₃] Dutch
He said that he Jan [has wanted help]
 “He said that he has wanted to help Jan.”

Recently the Dutch order has also been used by some Frisian speakers (De Haan 2010), and there are even innovations of orders which used to be ungrammatical in both Frisian and Dutch (Koenenman & Postma 2006), as illustrated below in (6). Here, the order is 1-3-2, which used to be ungrammatical both in Dutch and in Frisian.

- (6) De plysjeman fertelt dat de fandaal syn mes
The policeman says that the vandal his knife
 [hat₁ ynleverje₃ moatte₂].
has turn in must
 “The policeman says that the vandal has had to turn in his knife.”

Subtle influence in the domain of morphology can for example be found on plural- and linking suffixes. In Dutch, these are homophonous and homographic, as can be seen in (7): they are both written as *-en*, and both pronounced as [ə]. In Frisian, there is a difference between these suffixes: while the plural suffix involves a pronounced [n], the linking suffix does not; this difference is also reflected in the orthography (see (8)).

- (7) twee boeken boekenkast Dutch
two books book-SUFF-closet
 “bookcase”
- (8) twa boeken boekekast Frisian
two books book-SUFF-closet
 “bookcase”

Hanssen et al. (2015) showed that some speakers tend to treat the suffixes as homophonous in Frisian, too, under the influence of Dutch: they pronounce the plural as [ə], without and [n], too.

In short, there is much contact between Dutch and Frisian, which results in some (subtle) contact-induced changes. In the next chapters of this dissertation, I will discuss three other cases of Frisian language change under influence of Dutch. The remainder of this chapter focuses on language contact and change from a more general point of view. It is important to keep in mind that for Dutch and Frisian, there is not only very intensive contact, but there are also a lot of similarities between the languages to begin with.

2.2 Language contact

2.2.1 *Borrowing, imposition and change*

Language contact occurs when two or more languages or varieties are used in the same environment. As languages are not living entities, it is, of course, the speakers rather than the languages itself who are in contact. Speakers of different languages can come in contact with each other. In order to understand each other, at least one of them needs to get familiar with the other's language. Language contact then occurs when one speaker speaks two or more languages or varieties. The languages are in contact in the mind of the speaker (Grosjean 1982). There are different ideas on how this would actually work; does the speaker have control over two different grammars which sometimes overlap? Or does the speaker have one grammar with multiple options and select the appropriate one per context? In any case, there is interaction between the grammars of the languages.

In these multilingual contexts, features of one language are often transferred to another. The most common process is the borrowing of words from one language into another. English, for example, has many French loanwords in its vocabulary, such as *restaurant*, *ballet* and *croissant*. However, if there is a long and stable situation of contact between two languages, phonological and syntactic features might also be borrowed (Thomason 2001).

It is important to clarify the notions of borrowing and transfer at this point. Borrowing has traditionally been defined as “the incorporation of foreign features into a group's native language by speakers of that language” (Thomason & Kaufman 1988: 37). This means that L2 material is brought into an L1 at the level of the community. Transfer, or imposition (van Coetsem 2000), on the other hand, is viewed from the opposite direction: the incorporation of L1 features into an L2 (Hickey 2012:18-19), at the level of the

individual. However, different definitions of borrowing and transfer have been used in the literature. It is also not always clear which language should be viewed as L1 and which as L2; some speakers acquired two languages at the same time, or are more proficient in a language which is not their first learned language. In this dissertation, I focus both on speakers for whom Frisian is a first language and speakers for whom it is a second language, so I do not focus on a particular direction of change. Contact-induced changes in Frisian could be caused by transfer of second language speakers from their L1 (Dutch) into their L2 (Frisian), but it can also be native speakers of Frisian who borrow L2 (Dutch) features into their first language. Another reason to avoid the confusing terms borrowing and transfer/imposition is that it is not always the case that linguistic material is directly taken over from one language into the other. In fact, I will argue in this chapter that syntactic change is far more subtle: it is a change in the setting of parameters in the functional lexicon, which can be triggered by contact. Therefore, when I speak about change under the influence of language contact, I will use the neutral wording “contact-induced change”.

2.2.2 *Where do we find change?*

One important question in language contact and change research is where we find change. It does not seem to be the case that anything goes: there are parts of language in which we find a lot of change (e.g. the lexicon) and parts which seem more stable (e.g. word order phenomena) (Thomason 2001). But why is this the case, and what are exactly the areas where we find more change?

The big, if not the biggest, factors which influence contact-induced change are social factors (Thomason 2001). Whether a language changes or not depends to a great extent on its speakers and their attitudes. However, that does not mean that language internal factors do not play a role as well. This dissertation is focused on language internal factors. However, it is important to note that I do not want to claim that social factors do not influence language change.

Turning to linguistic factors, it has been shown that the type of linguistic item is relevant for determining whether change occurs easily. Thomason & Kaufman (1988) developed a borrowing scale, which shows what kind of items change more easily and more often:

(9) Borrowing scale Thomason & Kaufman (1988): both in terms of quantity and time

Casual contact	Category 1:	Content words
	Category 2:	Function words, minor phonological features, lexical semantic features
	Category 3:	Adpositions, derivational suffixes, phonemes
	Category 4:	Word order, distinctive features in phonology, inflectional morphology
	Category 5:	Significant typological disruption, phonetic changes
Intense contact		

Scales such as this one are based on large data collections and give an overview of tendencies. However, they do not explain why the scale is as such, and how the changes work exactly. Moreover, the phenomena which are mentioned in the scale are quite general. The three case studies presented in this dissertation would probably fall in category four, as they are morpho-syntactical. We know that the language contact between Dutch and Frisian is quite intense, especially in the last century. This scale would not inform us any further than showing that, given this intense contact between Dutch and Frisian, these cases are indeed expected to show some change. Therefore, one aim of this dissertation is to make more precise what aspects of language are likely to change based on linguistic factors.

Besides a borrowing scale, there have been other attempts to identify aspects of language which are likely to change. One common process which occurs in many cases of language change is grammaticalization. Grammaticalization is the change of a lexical item into a functional one. It is a process which is extremely common in languages. For example, in many languages, the lexical verb *have* has grammaticalized into a past tense marker, and verbs like *want* have become future markers. In Chapter 5 of this dissertation, we will see an example in Frisian: the verb *gean* (“go”) which used to be a motion verb only, can now also be used as a verb which indicates future. Heine & Kuteva (2003) showed that grammaticalization and contact-induced change often go hand in hand; i.e., contact can facilitate a grammaticalization process which was already likely to happen. However, grammaticalization is a description of a process, not an explanation. Even though we know it is a common process, it is not entirely clear why it happens

so often. In this dissertation, I will discuss why such a change would be more likely than another, as one of the goals of this dissertation is to make more precise how syntactic change works and how the way in which changes occur is restricted by the language structure.

To sum up this section, previous work on what kind of (syntactic) change we find more often is not informative enough. We need to zoom into the change in detail and find out how this is represented in speakers' grammars. In the next section, I will present my view on how syntactic change works.

2.3 Syntactic change

A way to understand language change is by means of the traditional distinction between E-language and I-language (Chomsky 1986a). I-language (internal language) is the linguistic knowledge that a speaker of a language has in his mind, whereas E-language (external language), is the language that is "out there" in the world; a set of behavioral habits, the speech of a community. E-language is sometimes viewed as the product of I-language; the linguistic knowledge in one's mind determines how one speaks. For language change, this is an essential point: change in I-language will become visible in E-language.

It is generally assumed by generativists that language change occurs in the process of language acquisition. According to some linguists, language change is "a failure of the transmission of features" (Kroch 2001). A speaker's I-language is formed by combining the principles of UG with language specific information based on cues in the Primary Linguistic Data: the input that a child receives. If a child analyzes the input as being part of grammar X, which is different from his parents' grammar Y, transmission has "failed" and the child's I-language is different from the previous generation. As Yang (2000) presents it: if the E-language of a parent is ambiguous with regards to some construction (i.e. more than one grammar could be underlying this output), a child might opt for a grammar different from the one of his parents. At this point, the change is happening, but is not visible yet. However, if this new I-language leads the child to produce output that is different from their parents' E-language, the result of the change is visible.

Although in the scenario above a change has happened, we usually only speak of language change if many people express this new E-language, not if it happens only in one individual speaker. Often when people speak about

language change this is actually what they mean: the spread of a change through a community. Language change thus happens at two levels: on the individual, I-language level (which is not directly visible) and on the communal, E-language level. According to Gerritsen & Stein (1992), language change actually consists of three steps. First, something in the input needs to change, such as the frequency of a particular construction, or contact with another language, which leads speakers to reanalyze this input. Second, reanalysis occurs and leads to a change in the speakers' I-language. Third, the change could spread through the speech community. Whether this happens is, according to Gerritsen & Stein (1992), determined by social factors more than by linguistic factors.

How then does this spread of the change in E-language occur? Most generativists would probably assume that this is composed of I-language changes for each individual speaker, which all lead to the same grammar. Matthews (2002) discusses this point and wonders whether it would be possible for speakers to not "have" a construction in their I-language, but still pick it up in their language use. A positive answer to this question might lead one to ask why we need two levels of analyzing language change in the first place. On the other hand, assuming that a change might be picked up in E-language without speakers actually changing their I-language, would explain intra-speaker variation and change in competent adult speakers of a language (which is difficult to explain if one assumes that all changes happen in language acquisition). As we know that prescriptivism and conventions may also influence speakers' language production, this idea does not seem to be far-fetched. However, this does not contradict the claim that change happens in I-language. There are also ways to explain intra-speaker variation on the basis of I-languages only. One is to assume that I-languages are not solid: over the course of one's life, small changes can still happen. Another possibility is that a speaker can have multiple parameter settings, or multiple grammars, as suggested by Roeper (1999). Roeper (1999) claims that speakers can have multiple, conflicting mini-grammars, of which the use depends on the context. For example, speakers of English would have a verb second parameter setting in their grammars for quotation contexts, while in regular contexts, they do not allow for verb second. These possibilities co-exist. Similarly, optionality could be characterized by multiple grammars. Speakers who show intra-speaker variation in a situation where we find language change, could therefore also have multiple grammars.

Padovan and colleagues (2016), among others, show that grammatical borrowing is often not the borrowing of a full construction, but rather the borrowing of linguistic features, which would mean that new constructions cannot be “picked up” in language use (E-language) as Matthews (2002) suggested, but that the change has to be on the level of I-language. For example, the Cimbrian complementizer *ke* used to have [+indicative] features, but under Italian influence by *che*, the Italian counterpart of this complementizer, it picked up a [+subjunctive] feature and can now be used with subjunctive embedded clauses. Since abstract features are not identifiable at the level of E-language, this means that change has to happen on the level of I-language. Therefore, I assume that syntactic change happens at the level of I-language, mostly, but not necessarily, during language acquisition.

Now that we have established what it is that could be described as syntactic change, the next step is to look at what could trigger such a process. As suggested above, a reanalysis might be triggered by ambiguous input: input with more than one possible underlying grammar. An example of this are the English modals which used to be expressed in V, but later moved to T (Lightfoot 2006). If there are no intervening words between T and V, it is impossible to infer whether a verb is in T or in V in English. At this point, language learners might assume that the modal is in T, even though in their parents’ I-language, it is actually in V. The fact that the child assumes the modal verb to be in T only becomes clear when the child starts to produce a sentence that does contain intervening material between T and V, with the modal occurring before this material. There is one problem with this analysis. If the input was always ambiguous, why did the change not happen earlier, in a previous generation? Duguine & Irurtzun (2014) acknowledge this problem and state that although ambiguous input can be a prerequisite for a change, it is definitely not enough to trigger it. Instead, they propose that language change is the consequence of a combination of three factors: ambiguous input, language contact and universal processes (such as a tendency for grammaticalization).

The next question is then how language contact can trigger change. It is often assumed that in contact situations, imperfect learning by adult L2-learners plays a big role (Thomason 2001). The change would be in principle similar to the process described above, but it is the adult L2 learner who mixes the input with their knowledge of their L1. However, transfer can also occur in the language acquisition process of bilingual children. In fact, Aboh (2015)

suggests that bilingual language acquisition is actually not different from monolingual language acquisition. In both cases, it is simply a recombination of features that were found in the input. According to Aboh’s feature recombination model of language acquisition, speakers acquire lexical and grammatical items which involve certain feature combinations. Each item has phonological, semantic and syntactic features, as shown in (10).

(10) (Taken from Aboh 2016:8)

Lexical/grammatical item

These features will determine the behavior of a lexical item and are (unconsciously) taken from the input. However, as each language learner receives a lot of different input from different sources, especially in a multilingual environment, their selection of features from the input might be slightly different than the feature combination that other speakers of the same language have in their I-language. For example, a language learner might select, for a particular lexical item, a semantic feature from input variety X, while taking a syntactic feature from input variety Y. This will then lead to an output which is a bit different from the other speakers in the population. If multiple speakers make this recombination of features, this new output spreads among the population and it can be observed as a change in E-language. However, for the acquirer, it was only one moment of feature selection from the input.

One example of feature recombination would be the verb *njan* (“eat”) in the creole language Saramaccan. Two languages with a great influence on this creole are English and the African language Gungbe. The verb *njan* takes features from both: it follows the syntax of the English verb *eat*: it is optionally transitive, as shown in (11) (Aboh 2009:332):

- (11) a. Ai mi njan (kaa)
 yes 1SG eat already
 “Yes I’ve eaten already.”
 b. Ai mi njan soni
 yes 1SG eat something
 “Yes I’ve eaten something.”

The syntax of the corresponding verb *dù* in Gungbe is different, as it is obligatory transitive (Aboh 2009:329):

- (12) a. Kòfí dù nú
 Kofi eat thing
 “Kofi ate.”
 b. *Kòfí dù ...
 Kofi eat

However, the Samaraccan verb *njan* shares a semantic property with Gungbe, in which the verb is not used in a literal sense, as in (13). Here, “eating money” is used figuratively, meaning “spending” (Aboh 2009:333):

- (13) a. njan moni Samaraccan
 b. dù àkwé Gungbe
 eat money
 “to spend”

Aboh (2009) concludes that the verb *njan* combines English syntax with Gungbe semantics.

While I will not follow the specifics of this model, Aboh’s approach clearly shows how language contact (in the sense of a bilingual mind) can lead to language change. One might argue that bilingual children generally do not mix up input; from an early stage, they know how to separate multiple languages. However, even if they know how to tell multiple languages apart, this does not mean that they cannot recycle features from one language into the other. Especially when certain data in language X is ambiguous and allows for more than one hypothesis, the child can postulate the presence of a feature she found in language Y. Recall the example discussed above about the verb *eat*. Suppose a child would be acquiring Gungbe and English. In

Gungbe, the verb *dù* is obligatorily transitive. This means that the child only receives input with transitive contexts. However, in principle, this input could be considered as ambiguous: many verbs which sometimes have an object do not obligatorily have this, so one could hypothesize that *dù* takes an optional direct object. Following *the subset principle* (Berwick 1985), this is not what would happen: the child would assume the minimal grammar on the basis of positive evidence, so she would expect the verb to always be transitive. As a monolingual speaker, the child would therefore probably not innovate anything here. However, if the child also speaks English and knows that in English the verb *eat* is in fact optionally transitive, she could take this feature from English and attach it to *dù*. If this feature was not present for other speakers of the language, this could result in language change (Aboh 2009, see also Duguine & Irurtzun (2014) for a case on Basque under the influence on French).

I expect language change in general to be even easier for languages which resemble each other, such as Frisian and Dutch. Following Wolf (1996), I assume that Dutch and Frisian show a lot of structural neutrality (i.e. context in which the structure of the two languages is, at least superficially, similar). As this makes code-switching easy (Wolf 1996), it is for a child not always clear whether she is getting Dutch or Frisian input from her environment. Admittedly, this is a bit speculative. The key point here is that I, following work by Aboh (2009, 2015), assume that bilingualism can lead to language change by positing features from one language onto the grammar of another. It is important to remember that this is (often) not done consciously, and that what linguists view as a change is often not a change for the speaker in which the change occurs. As the language learner does not know what the grammar used to look like before he learned it, the innovated grammar that the linguist observes is simply the learner's acquired grammar.

In the next section I will discuss what changes in grammar look like concretely. I will propose that grammar consist of parameters which can change, and that these parameters are quite restricted in their format.

2.4 Parameters

2.4.1 *Types of parameters*

The traditional (Chomskyan) view on I-language is that it emerges from a

richly specified Universal Grammar (UG) and the Primary Linguistic Data (PLD) that a child is exposed to. In the principles & parameters framework (see Chomsky 1981a, Chomsky & Lasnik 1993 among others), UG was viewed as richly specified. It consisted of many parameters, which had to be set on the basis of limited evidence from the PLD. A well-known example is the “Null subject parameter”. In some languages, for example many Romance languages, pronominal subjects can be dropped (see (14) for an Italian example). In other languages, such as Dutch, this is ungrammatical (see (15)).

- (14) (Voi) state leggendo un libro. Italian
 You are reading a book
 “You are reading a book.”
- (15) *(Jij) leest een boek. Dutch
 You read a book
 Intended: “You read a book.”

Within the minimalist framework, and especially since Chomsky (2005), the view on UG has massively changed; it is now assumed to contain very little. In the most radical case, UG is said to consist of only the operation Merge, but it might also include the operation Agree and a formal feature inventory. With such an underspecified UG, I-language is no longer assumed to emerge from UG and PLD only, since this would not provide the language acquirer with enough information: there would not be any parameters which can guide the child in language learning. Therefore, third factor principles come into play as well in guiding the acquirer towards a grammar. Chomsky views the third factor as general cognitive principles and learning biases, such as economy. When hypothesizing the grammar of a language, a language learner should always make economical choices. However, there is no common definition of what exactly it means to be economical, although several researchers have made their own proposals (see e.g. Biberauer 2017 on her principle of *Maximise Minimal Means*, which states that the learner should make maximum use of the means he has already available).

The big question in this new model is: do we still have parameters? If not, what would be the alternative? If they still exist, then where are they? They cannot be in UG if UG only consists of Merge, Agree and a formal feature inventory.

Nowadays, variation is often viewed as variation in the formal features of

functional heads in the lexicon. This idea is commonly referred to as the “Borer-Chomsky Conjecture” (following Baker 2008, based on Borer 1984 and Chomsky 1995). These formal features are for example Case features or Phi features. The null subject parameter mentioned above, for example, would in this framework be explained by variation in the formal features of T (Biberauer & Roberts 2017): whether a T-head requires an overt item in its specifier. Gianollo, Guardiano & Longobardi (2008) and Rizzi (2017) have made (similar) concrete proposals on the format of a parameter. Following Rizzi (2017) I assume that parameters are expressed as a feature on functional heads (“X has F”) and there are only three possible types of parameters: Merge parameters, Move parameters and Spell-out parameters. In this dissertation, I will discuss three case studies, one for each type of parameter. I will now discuss what these parameters look like.

First, there are Merge parameters, which correspond roughly to what used to be called c-selection: it specifies the (syntactic) type of object an item can merge with (e.g. “Merge with an N”). Adger & Svenonius (2010) mention that there is a widespread view nowadays that there is little or no c-selection, and that complementation is determined by non-syntactic factors (see for example Borer (2005)). In this thesis, I follow the idea of Borer and many others that lexical items do not come with a label and can in principle be inserted in any kind of syntactic category. However, that does not have to mean that there is no categorical selection, and this categorical selection can be implemented by means of features. Following Rizzi (2017) I therefore propose that a head (X) can have selectional features. I propose that this can be visualized as in (16), where X is a functional head and Y(P) is a syntactic object whose category is to be determined:

- (16) Merge parameter
 X: F_{Merge}: Y(P)

Second, there are parameters of the type Move. These, according to Rizzi (2017), consist of two subparameters. The first subparameter specifies the type of goal that the element can connect with. For example, an interrogative C would have a Move feature which makes it look for a connection with an wh-element. The second subparameter specifies whether there is internal merge (movement) from the goal, or only covert movement. The feature specifies whether this functional head attracts its goal. For example, whether the wh-element would move to spec,CP or stay in its place, if we are dealing with a

wh-in-situ language. Move parameters also specify whether the probe/goal relation is a relation with a head or with a phrase (and, subsequently, whether there is movement to a head (head movement), or movement towards its projection (i.e., movement to a spec, phrasal movement)). According to Rizzi (2017), a Move parameter would look approximately like in (17).

- (17) Move parameter
 X: SF_(lex): Y
 (IMF_(lex): Y)

In this representation, functional head X is endowed with a search feature (SF) to search for a goal (which is either a lexical head (lex) or a phrase): a syntactic object of type Y. Optionally, there is an Internal Merge feature (IMF) which attracts this goal to move. In (minimalist) terms of features, the search feature would be an uninterpretable feature, in need of checking. The internal merge feature would be similar to an EPP feature. For ease of representation, I will present Move parameters as in (18), in which the (P) shows the distinction between heads or phrases:

- (18) Move parameter:
 X: F_{search} Y(P)
 (F_{IM} Y(P))

The third type of parameter Rizzi distinguishes in the functional lexicon are Spell-out parameters. These specify whether a head is null or needs to be phonologically realized, and whether a head can license a null specifier. I take this a bit broader, and say that it can also contain a specific way to spell-out an item, as in (19):

- (19) Spell-out parameter:
 X: $\emptyset$ / ...
 Spec,X: can/cannot be $\emptyset$

For example, for English, if X in this example referred to the syntactic item *declarative complementizer*, then its values would be $\emptyset$ or *that*. An interrogative complementizer, however, would be specified as not being able to be empty; it has to be spelled out as *whether/if*.

I have now discussed the three types of parameters that are proposed by

Rizzi (2017), the approach that I follow. A big advantage of Rizzi's approach to parameters is that, even though there may be a large number of parameters, as the functional lexicon can be huge, the limited set of *types* of parameters makes them learnable for a child.

Rizzi does not go into detail about the status of these parameters, whether some of them are easier to acquire than others, for example, or whether some are more prone to change. I will propose that being prone to change does in fact partly depend on the type of parameter. I will discuss this in section 2.5.

2.4.2 *Parameter sizes*

Parameters do not only come in different types, according to Biberauer & Roberts (2017) they also come in different sizes. What this means is that one parameter can either apply to one specific item, or to more. For example, imagine a Merge parameter which says "Merge with object of type NP", which the child discovers to be relevant for the determiner *the*. The question is whether this is relevant only for *the*, or for a subclass of heads similar to *the*, such as all definite determiners. Or perhaps it is relevant to all determiners (i.e. also for indefinite determiner *a*, demonstratives (e.g. *those*) and possessives (e.g. *my*)). The different parameter sizes which Biberauer & Roberts propose are illustrated below in (20).⁶

⁶ On the next page, these categories will be further illustrated by an example from language acquisition.

- (20) For a given value v_i of a parametrically variant feature F:
- a. Macroparameters: all functional heads of the relevant type share v_i
 - b. Mesoparameters: all functional heads of a given naturally definable class (e.g. [+V]) share v_i
 - c. Microparameters: a small subclass of functional heads (e.g. modal auxiliaries) shows v_i
 - d. Nanoparameters: one or more individual lexical items is/are specified for v_i

This approach creates a bridge between two somewhat opposing views. On the one hand, there is the idea, following the Borer-Chomsky conjecture (Baker 2008), that all variation is located in the lexicon, on functional heads. This idea has inspired the microvariation approach to language which has been very popular in the last few decades (see for example Barbiers 2013 and van Craenenbroeck & van Koppen 2017 for a discussion of this). Microvariationists have been comparing very closely related languages, or multiple varieties of the same language, finding very subtle differences between these languages. For example, for Dutch, it was found that all dialects have verb clusters, but there is a lot of variation between the word orders of these dialects (van Craenenbroeck & van Koppen 2017, Dros-Hendriks 2018). Another example would be that while Standard Dutch is not a pro-drop language, some Dutch dialects allow pro-drop for the second person singular. No dialect is a true pro-drop language like Italian, though, showing that the variation with Standard Dutch is on a lower level. This is exactly what the Borer-Chomsky conjecture would predict for such closely related languages: as these languages show much overlap in the lexicon, and the lexicon is the locus of variation, variation between these varieties should be limited (van Craenenbroeck & van Koppen 2017). Many linguists believe that macroparameters exist, too (see for example Baker 2008). Indeed, if there was only micro-variation, we would expect the parameter values to be completely random, but in fact we often see clustering properties (Baker 2008). Biberauer & Roberts's (2017) theory can explain how both these views are right: parameters come in different sizes.

How does this work more concretely? Biberauer & Roberts (2017) propose that when children learn a language, the learning path works in a top-down fashion: their first hypothesis is that when they discover a feature, it will apply

to all functional heads. For example, if they discover that a language is head-final for verbs, they will assume that it is head-final in all respects, until they are confronted with evidence for the contrary. The learning path would proceed as in (21) (taken from Biberauer & Roberts 2017):

Language acquisition proceeds in a top-down fashion, but if we look at language change, it actually works bottom-up. That is, nano-parameters are often the first to change, and only after multiple nano-parameters change, this might lead to changes in higher-level parameters. The reason for this is that for a macro parameter to change (e.g. for an entire language to become head final), a lot of ambiguous input is needed. It would be much easier for a small parameter, which is relevant to only one or a small class of lexical heads, to change. Consider head-finality again: it would be much more likely for a child to switch the order of two specific items, or for example of D's and N's only, than switching the order of all items (as compared to the previous generation). This classification of parameters is therefore not only useful descriptively, but it can also give us insight in the stability of languages. It might even help to predict which things might change in a language and which changes will not, as will become clear in section 2.5.

The theory of Biberauer & Roberts (2017) can easily be integrated with the three types of parameters (following Rizzi 2017) I discussed earlier in this chapter, repeated here in (22)-(24).

- (22) Merge parameter
X: F_{Merge}: Y(P)

(23) Move parameter

X: F_{search} Y(P)
 (F_{IM} Y(P))

(24) Spell-out parameter

X: $\emptyset$ / ...
 Spec,X: can/cannot be $\emptyset$

The different sizes of parameters which Biberauer & Roberts (2017) discuss are represented by the nature of X: whether X applies to one specific lexical item (of which we will see an example in Chapter 5), or to a class of items (which is the case in Chapter 3 and 4).

In this section I have discussed my view on language variation and I have shown that parameters can vary in two ways: their type and their size. In the next section, I will discuss what type of predictions we can make about the ways languages change.

2.5 Towards a hypothesis

In this chapter, I have sketched a brief overview of the aspects of language contact and change which are relevant to this dissertation. I have discussed how the Dutch-Frisian language situation involves a lot of language contact, with some contact-induced changes as a result. I showed that traditional inventories of which linguistic items are prone to change are not detailed enough when studying syntactic change. I discussed that syntactic change happens in I-language, when acquiring the parametric settings of a particular language. Finally, I proposed (following Rizzi 2017) that parameters are limited to three types: Merge, Move and Spellout and (following Biberauer & Roberts 2017) that they can differ in size (i.e. whether they are high-level, applying to all functional items, or low-level, applying to a small class of items or even one particular item).

One aim of this dissertation is to answer the question of why some aspects of syntax change more easily than others. As syntactic change consists of parametric changes, as argued above, we need to find out what kind of parameters underlie the changes we find, and whether some are more likely to change than others. In the past, Move has been argued to be “less marked”

than Merge (Roberts & Roussou 2003). Roberts and Roussou (2003) argued that in the absence of evidence for Move (in the terms of this dissertation: when the input is ambiguous with respect to Merge or Move), the learner is conservative and would always opt for the unmarked option: Merge. According to Roberts & Roussou (2003), this is what leads to grammaticalization. For example, rather than assuming that a lexical verb moves to T, a learner could hypothesize that it is directly merged in T (and has become a functional item). At some point, Chomsky also argued that Merge is a simpler operation than Move, because Merge is a subpart of Move (see for example Chomsky 2000). As language is supposed to be as economical as possible, Merge is to be preferred over Move.

What would this mean in terms of the types of parameters that have been defined here? From an I-language perspective, we would expect Move strategies then to be more vulnerable (and therefore more prone to change) than Merge strategies.⁷ This leads me to propose the following hypothesis:

- (25) “Move before Merge”-hypothesis :
Move parameters are more prone to change than Merge parameters.

In this hypothesis “more prone to change” is an informal way to word that these parameters are more likely to change than others. While this is what we expect from an I-language perspective, this is not an experimental hypothesis we can easily test, as there are too many complicating factors: the format of I-language is by far not the only factor influencing language change. However, in Chapter 3 and 4, which concern case studies involving Move and Merge parameters, I will discuss whether the results of the data collection were expected, according to this hypothesis.

The third type of parameter I distinguished in this chapter are Spell-out parameters. I expect them to be more prone to change than Merge and Move parameters. The reasoning behind this is the following. For a parameter to change (i.e., a speaker to have a different parameter setting than speakers of the previous generation), the input needs to be ambiguous. I would like to

⁷ Note that when I speak of parametric changes, I am speaking about changes over generations. For a single speaker, there is no “change”, just one parameter setting as he is learning the language, and this parameter setting might be different than the one from other speakers in the community (following Aboh 2009, 2015, 2016 and others).

argue that for Spell-out parameters, the input is ambiguous most often. Sounds may not always be easily identifiable, as they might be dropped for phonological or discourse reasons. In Chapter 3, we will see an example of a very minimal, not always easily hearable phonological difference representing a syntactic difference. Moreover, one sound can represent more than one syntactic position. In short, I would like to propose that Spell-out parameters might not always be very easy to induce from the input, because this input can be unclear or ambiguous. For Move and Merge parameters, this is a little different. Recall that Merge parameters are similar to the traditional “c-selection”, for example: item X selects for an N. To change such a parameter setting, a learner should receive input which suggests that item X selects for something different than an N. This could happen if the speaker providing the input starts to use items in this context which have an ambiguous syntactic status: they might be an N, but they might also be a V (for example infinitival verbs which are used in a nominal position). One can imagine that this kind of ambiguous input is definitely present, but not as common as ambiguous input on the level of Spell-out. For Move parameters, I would also like to argue that ambiguous input is not as common as for Spell-out parameters. For a learner to detect whether a certain linguistic item has moved, it has to be at a different position in the sentence than its base position. In a linear string of speech, this is only detectable if there are items interfering between these two positions. So if there are no intervening items, it is unclear whether an item has moved or not. One can imagine that this scenario happens on a regular basis, but not as often as ambiguous input related to Spell-out parameters. The reasoning in this paragraph leads to the hypothesis presented in (26):

- (26) “Spell-out before Move and Merge”-hypothesis:
 Spell-out parameters are more prone to change than Move parameters and Merge parameters.

Again, this hypothesis is formulated from an I-language perspective. Whether this hypothesis is true is hard to test as there are many other factors which influence language change. However, in Chapter 3, where I discuss a case study involving a Spell-Out parameter, I will discuss whether the results from the data collection were expected, based on this hypothesis.

I have now formulated two hypotheses based on the format of the parameters. Biberauer & Roberts (2017) already proposed that looking at the size of a parameter can also help to understand language change: a

nanoparameter is easier to change than a macroparameter, because it involves only one or a few specific lexical items. We saw earlier that ambiguity of the input is a necessary condition for language change. It is, of course, a lot more complicated to have ambiguous input on a macroscale than on the level of one item. Based on this, I formulate the following hypothesis:

- (27) “Small before big”-hypothesis:
Smaller parameters are more prone to change than bigger ones

Again, it is important to realize that while this may be a theoretical expectation, I do not necessarily believe that small parameters are always changing more easily; there are too many other factors involved in language contact. However, I will compare the sizes of the parameters I discuss in each chapter and reflect further on this in Chapter 6.

Chapter 3

Infinitival suffixes

3.0 Introduction

This chapter provides a case study on variation and change in Spell-out parameters. The case concerns the variation we find in infinitival suffixes in Dutch and Frisian. Originally, in Frisian, there was an audible alternation between [ə] (written as *-e*) and [ən] (written as *-en*), as illustrated in (1):⁸

- (1) Ik sil moarn nei skoalle rinne.
I will tomorrow to school walk.INF-ə
“I will walk to school tomorrow.”
- (2) It iten fan appels is sân.
The eat.INF-ən of apples is healthy
“The eating of apples is healthy.”

The distribution of these suffixes is determined by the syntactic context they occur in, as presented in Tables 1 and 2 (for examples, see section 3.1.2 and 3.2.2).

⁸ See footnote 3 in Chapter 1 for an explanation on what I consider to be “original Frisian”.

[ə] (-e)	Infinitive is complement of modal verb
	Infinitive is complement of <i>litte</i> ("let")
	Infinitive is bare in an argument position (used as a subject or object)
	Infinitive is topicalized
	Infinitive is a purposive adjunct

Table 1: The syntactic contexts for the [ə]-suffix

[ən] (-en)	Infinitive is preceded by determiner
	Infinitive is bare in an argument position (used as a subject or object)
	Infinitive is preceded by <i>te</i> ("to") or a preposition
	Infinitive is complement of some specific verbs

Table 2: The syntactic contexts for the [ən]-suffix

Nowadays, many speakers of Frisian do not make a distinction between these suffixes anymore. This might be influenced by language contact with Dutch, as in Dutch, there is only one infinitival suffix: [ə] (written as *-en*).

In this chapter I will propose that both Dutch and Frisian have two types of infinitives: a verbal infinitive and a nominal infinitive. In Frisian, this difference is phonologically marked.

In section 3.1, I will show that the [ən] (-en) suffix is found on nominal infinitives. Therefore, I will analyze it as a spell-out of the categorial head n^0 , as in (3).⁹ Here, the infinitive starts out as a root, but after it has been categorized as a verb, with optional functional projections, it is nominalized

⁹ Following Alexiadou (2013:134) I assume that the DP has a richer functional structure including ClassP and NumP, as in (I):

(I)

However, for reader’s convenience, I included only the most relevant projections at this point.

by n^0 , and the [ən]-suffix attaches by means of a lowering process (see section 3.1.4). The structure would then maximally be as in (3) (but can be smaller as well, as nominalization can occur at different heights (see section 3.1)).

In section 3.2, I will show that we find the [ə] (-e) suffix on verbal infinitives, and that this suffix can be analyzed as a verbal element v^0 , as in (4). Here, the infinitival verb starts out as a root and becomes verbal by moving into v^0 , where the [ə] suffix is attached to it.

I will propose that Dutch has the same structural difference between a nominal and verbal infinitive (see a.o. Broekhuis & Keizer 2015), even though it is not marked phonologically. I will argue that the variation between Dutch and Frisian is therefore not structural, and that it can be captured in terms of a Spell-out parameter. While the parameter settings for the verbal infinitive are the same (see (5), there is only a difference in orthography), the parameter setting for the nominal infinitive is different, as illustrated in (6):

- (5) Verbal infinitive
V[inf]:	[ə] (-e)	Frisian
V[inf]:	[ə] (-en)	Dutch
- (6) Nominal infinitive
Π[nominalizing]:	[ən] (-en)	Frisian
Π[nominalizing]:	[ə] (-en)	Dutch

In the final part of the chapter, I will discuss questionnaire data which show that Frisian is in the process of losing the phonological distinction between these different structures and that this means that both the parameters in (5) and (6) have changed, even though (5) did not display variation with Dutch in the first place. The changed parameters are now as in (7) and (8):

- (7) Verbal infinitive
V[inf]: [ə]/ [ən] (-e /-en) Innovated Frisian
- (8) Nominal infinitive
N[nominalizing]: [ən]/ [ə] (-en / -e) Innovated Frisian

In this innovated Frisian, both the verbal and nominal infinitive can have either the [ə] or the [ən] suffix.

In the next sections, I will first discuss the nominal infinitive. After that, I will discuss the verbal infinitive.

3.1 The nominal infinitive

3.1.0 Introduction

Although the Frisian language is (to my knowledge) the only Germanic language with a phonological distinction between two types of infinitives,¹⁰ it is certainly not the only language in which infinitives show a mix of nominal and verbal properties. Alexiadou, Iordăchioaia & Schäfer (2011) show that both in Germanic and Romance languages, infinitive(-like) items can have nominal behavior to different extents. For example in German, the infinitive *beobachten* (“observe”) behaves as a verb in (9a), since it assigns accusative case to the object, whereas it behaves as a noun in (9b), as the object is in genitive case and the infinitive is modified by an attributive adjective.

- (9) a. [Häufig die Sterne Beobachten] macht Spass.
frequently the.ACC stars observe.INF makes fun
“Frequently observing the stars is fun.”

¹⁰ The morphological distinction between two kinds of infinitives is found in all varieties of Frisian (J. Hoekstra, 1997). In this thesis I only focus on West-Frisian, the variety spoken in the Netherlands, but since the contextual distribution seems to be quite similar among the varieties of Frisian, the analysis might be extended to these other varieties.

- b. [Das häufige Beobachten der Sterne] macht Spass.
the frequent observe.INF the.GEN stars makes fun
 "The frequent observing of the stars is fun."

As already illustrated in (2), repeated here as (10), infinitives in Frisian can also be used as nouns:

- (10) It **iten** fan appels is sûn.
The eat. INF-ən of apples is healthy
 "The eating of apples is healthy."

Nominalized verbs have been a topic of much discussion in the linguistic literature since Chomsky (1970), as they are hard to classify within traditional categories such as V and N (see for example Abney 1987, Grimshaw 1990, Emonds 2015). This has led to the idea that such forms might involve mixed structures: structures including both verbal and nominal projections, as in (11).

- (11)
-
- ```

graph TD
 nP --> n
 nP --> vP1[vP]
 vP1 --> v
 vP1 --> vP2[vP]
 vP2 --> root1[√]
 vP2 --> vP3[vP]
 vP3 --> root2[√]

```

The reasoning behind this is that the amount of verbal material underneath the nominal part can explain the verbal characteristics that the nominalization displays. For example, certain nominalizations might be modified by adverbials. This is also possible in Frisian, as illustrated in (12):

- (12) It almar iten fan appels is sûn.  
*The constantly eat.INF-ən of apples is healthy*  
 "The constant eating of apples is healthy."

Similarly, the amount of nominal structure can explain the nominal characteristics that the nominalized verb displays. For example, certain nominalizations might be preceded by a determiner (see (10)), which suggests that their structure includes a DP. In this chapter, I will follow the idea of a



mixed structure for a nominalized infinitive. Based on Alexiadou et al. (2011) and Alexiadou (2013), I propose the following structure for nominal infinitives:

Following Alexiadou et al. (2011) and others, I assume that this is the *maximal* structure of a nominal infinitive: layers such as the DP and AspP are optional, which will be illustrated in the next section. I propose that the common factor in the structure of all nominalized verbs is the nP which is merged above a v, nominalizing the verb.

I will argue that this analysis applies to Frisian infinitives with an [ən] suffix, such as the one in (10), as well as Dutch nominal infinitives. It has been proposed before that [ə] (-e) is a verbal suffix, while [ən] (-en) is a nominal suffix (cf. Visser 1989, J. Hoekstra 1997, De Haan 2010). I propose that what this means is that [ən] is an n<sup>0</sup> element.

In the next section, I will first provide evidence for the structure in (13). In section 3.1.2, I will discuss the contexts in which [ən] occurs, and show that these are indeed all nominal. In section 3.1.3, I will present independent evidence for [ən] as n<sup>0</sup>. In section 3.1.4 I will explain how the [ən] suffix is attached to the verb by a process of affix lowering. In 3.1.5, I will present some alternative analyses. In section 3.1.6, I will show that in Dutch we also find a nominal infinitive, with the same structure, but a different phonological spellout ([ə]). Finally in 3.1.7 I will discuss the parametric difference between Dutch and Frisian nominal infinitives.

### 3.1.1 A mixed structure

In this section I will provide evidence for the structure in (13). I will use the diagnostics provided by Alexiadou (2013), who worked out a detailed syntactic structure for the English verbal and nominal gerund, as presented in (14) and (15):

(14) Verbal gerund: [DP [AspectP [VoiceP <sup>+transitive</sup> [vP]]]]

(15) Nominal gerund: [DP [nP [VoiceP<sup>-transitive</sup> [vP]]]]

The diagnostics she uses to determine which syntactic projections are part of the gerund are presented in (16) (Alexiadou 2013:135):

|      |                         |                             |
|------|-------------------------|-----------------------------|
| (16) | <u>Possibility of</u>   | <u>Presence of</u>          |
|      | Determiner              | DP                          |
|      | Adjectival modification | nP layer                    |
|      | Adverbial modification  | AspectP layer               |
|      | Accusative object       | VoiceP layer [+ transitive] |

I will now show that the Frisian nominal infinitive always involves a verbal part (vP) and a nominal part (nP). That is, there is always an  $n^0$  element (phonologically present as [ən]) which nominalizes the verb. I will also illustrate that a VoiceP, AspectP and DP layer can be part of the structure, but they do not have to be.

Let's first consider the most nominal structure possible:  $n^0$  nominalizes the verb immediately above vP. In the sentence in (17), the infinitive is preceded by a determiner, which signals the presence of a DP (see (16)). The infinitive is also modified by the attributive adjective *konstante* ("constant"), which signals the presence of an nP. There is no adverbial modification, nor an accusative object, so there is no reason to assume the presence of an AspectP or VoiceP.<sup>11</sup> The structure for *roppen* ("calling") in (17) would then be as in (18):

---

<sup>11</sup> Following Kratzer (1996), I assume that the presence of an accusative object is related to the presence of a VoiceP. That is, if nominalization occurs before a VoiceP is merged, as in (18), the internal argument surfaces as an *of*-PP. If, on the other hand, nominalization occurs above VoiceP, accusative case can be assigned by Voice and the internal argument surfaces as an accusative object in spec,VoiceP.

- (17) It    konstante    roppen    fan    ús    is    ferfelend.  
The constant    call.INF-ən    of    us    is    annoying  
“The constant calling of us is annoying.”<sup>12</sup>

On the other end of the spectrum, the most verbal type of nominalized infinitive would include all verbal projections: an AspectP and VoiceP, but no DP. An example would be (19), with its corresponding structure in (20):

- (19) Almar    ús    roppen    is    ferfelend.  
Constantly us    call.INF-ən    is    annoying  
“Constantly calling us is annoying.”

<sup>12</sup> This example also has a reading in which *ús* (“us”) is not interpreted as the patient, but as the agent (“calling by us”). The reading presented above is more relevant here, as we can compare it to (19) where *ús* is an accusative object.

Here, there is no DP present: there is no determiner. A VoiceP is present since there is an accusative object (*ús*). An AspectP is present, since we find adverbial modification (*almar*).<sup>13</sup>

In between the more nominal type of nominal infinitive in (17) and the more verbal type of nominal infinitive in (19), there could be intermediate cases, such as (21), with the corresponding structure in (22), which lacks an AspectP (no adverbial modification) and DP (no determiner) but does have a VoiceP (accusative object):

- (21)    *Ús roppen is ferfelend.*  
          *Us call.INF-ən is annoying*  
          “Calling us is annoying.”

---

<sup>13</sup> Note that it is difficult to prove the presence of an nP in these cases. Without a determiner, Dutch attributive adjectives have the same form as Dutch adverbials. In a sentence such as (II), we cannot know whether *konstant* (“constant(ly)”) is an adjective or an adverb. Since infinitives describe events, it is also not possible to test this with a typical adjective that cannot be adverbial such as *tall*.

- (II)    *Konstant ús roppen is ferfelend.*  
          *Constant us call.INF-ən is annoying*  
          “The constant calling of us is annoying.”

However, even though it is hard to find evidence in the form of an adjective, the fact that the infinitive is in an argument (subject) position in these examples suggests that the infinitive has nominal properties (i.e. an nP present). I will return to this issue in section 3.2.2.3.

This section aimed to clarify the structure proposed in (13), repeated here as (23). I discussed the proposal that nominal infinitives in Frisian include an  $n^0$  (phonologically realized as [ən], and lowered onto the verb post-syntactically (see section 3.1.4)) while the height of nominalization can vary (i.e. the structure can have different sizes).

In the next section, I will discuss the contexts in which [ən] occurs on the infinitive, and show that they confirm the nominal status of [ən]. I will argue that  $n^0$  is the most logical position for this suffix. Next, I will present independent evidence for [ən] as an  $n^0$ .

3.1.2 Nominal contexts for the [ən]-infinitive

In this section I will discuss the contexts in which [ən] occurs in the Frisian infinitive. The contexts are listed in Table 2, repeated here as Table 3. I will explain for each context why we would expect a nominal here. Moreover, I will explain why it is likely that [ən] is an n<sup>0</sup>.

|            |                                                                          |
|------------|--------------------------------------------------------------------------|
| [ən] (-en) | Infinitive is preceded by determiner                                     |
|            | Infinitive is bare in an argument position (used as a subject or object) |
|            | Infinitive is preceded by <i>te</i> ("to") or a preposition              |
|            | Infinitive is complement of some specific verbs                          |

Table 3: Contexts in which [ən] occurs on the infinitive

3.1.2.1 The determiner context

The first context which I will discuss, which is most clearly nominal, is the context in which the infinitive is preceded by a determiner, as in (24) and (25):

- (24)

It

iten / \*ite

fan appels

is sùn.

*The*

*eat.INF*

*of apples*

*is healthy*

*"The eating of apples is healthy."*
- (25)

It lêzen / \*lêze

fan boeken

is learsum.

*The read.INF*

*of books*

*is educational*

*"The reading of books is educational."*

In these contexts, the [ən] suffix is obligatory. Since determiners in Frisian usually take nominal complements, we expect an infinitive with nominal structure here.

Following Alexiadou (2013:134) I assume throughout this dissertation that the structure of a DP is as in (26):

Here, the  $n^0$  categorizes a root as nominal, the classifier head makes a noun countable and the number head encodes whether it is plural or singular. Now the question is, which nominal head in this structure does [ən] spell out? One might be inclined to think of  $\text{Num}^0$ , as [ən] is also the plural suffix in Frisian:

- (27)    **katten**,    **hûnen**  
         *cat.pl*,    *dog.pl*

Nominalized infinitives are however not plurals, evidenced by the use of the determiner *it* (“the”) rather than *de* (“the”), which is used for plurals.

- (28)    \*De        iten        fan    appels    is sûn.  
         *The    eat.INFən of    apples    is healthy*  
         “The eating of apples is healthy.”

In fact, infinitives do not seem to be countable at all, as pluralizing them is impossible:

- (29)    \*Itens,            \*silens,            \*rinnens  
         *eat.INF.PL    sail.INF.PL    walk.INF.PL*

Therefore, [ən] cannot be a classifier either. The most logical option would be that it is an  $n^0$  element, as in (30):

(30)

In section 3.1.3, I will provide independent evidence for this claim. First, I will discuss the other contexts in which the [ən]-suffix occurs in the Frisian infinitive, and show that these are all nominal, too.

3.1.2.2 The bare context

As shown above, the infinitive ending in [ən] can occur with a determiner in an argument position. However, it can also appear in argument positions without a determiner: as a subject in (31) and as an object in (32).<sup>14</sup>

<sup>14</sup> It must be noted that the [ən]-suffix is not obligatory in the contexts of (31) and (32). In fact, the argument position context is the only context in which there is an alternation between [ə] and [ən]. Alongside (31), (III) is also grammatical:

- (III) Rinne is sîn.  
walk.INF is healthy  
“Walking is healthy.”

In section 3.2.2.3, I will discuss this further and propose that the structure of the [ə]-infinitive in this context is different from that of the [ən]-infinitive.



- (31) **Rinnen** is sûn.  
*Walk.INF-ən is healthy*  
 “Walking is healthy.”
- (32) Ik fyn sigaren smoken net sa lekker  
*I find cigars smoke.INFən not so nice*  
 “I find smoking cigars not so nice.”

What is the structure of the infinitive in these contexts? In argument position, we usually expect a DP (see Longobardi 1994). There is plenty of evidence that bare nouns can be arguments too (see Chiercha 1997, or De Swart & Zwarts 2009 on Dutch bare nouns). Two Frisian examples, in which the noun *skoalle* (“school”) is not preceded by an overt determiner, are presented below:

- (33) Hy giet nei skoalle.  
*He goes to school*  
 “He goes to school.”
- (34) Skoalle is saai.  
*School is boring*  
 “School is boring.”

Here, the noun *skoalle* is bare, as there is no determiner, but it is in a position where we would normally see a DP: after the preposition *nei* (“to”) in (33) and as a subject in (34).<sup>15</sup> Therefore, this is another example of a nominal context in which the [ən]-suffix occurs in the infinitive.

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<sup>15</sup> There has been discussion whether these bare nominals lack a DP completely (cf. De Swart & Zwarts 2009) or whether there is a DP present with a silent D (cf. Longobardi 1994). As this is not directly relevant to the current chapter (in any case, these bare items are nominals), I set this matter aside for now.

### 3.1.2.3 *To*-infinitives and prepositions

A very common context for the infinitive is to be preceded by the infinitival marker *te* ("to"), as shown below:

- (35) Hy probearjet appels te iten.  
*He tries apples to eat.INF-ən*  
 "He tries to eat apples."
- (36) Hy is te silen.  
*He is to sail.INF-ən*  
 "He is off sailing."

I will argue that *te* is a preposition in Frisian. As prepositions usually take nominal complements, this is then another example of a nominal context in which [ən] occurs on the infinitive.

The status of *te* in Frisian has not been analyzed in detail. Like in Dutch, the status of *te* is unclear. While English *to* is analyzed as T/Infl (Chomsky 1986), Zwart (1993a) shows that this is not plausible for Dutch and *te* is probably more like a preposition or a complementizer.<sup>16</sup>

We know that *te* was originally a preposition in Frisian (Tiersma 1985) (and in Dutch, too (Zwart 1993a)). Nowadays, it is no longer productive, although it is still used with place names (37) and in some fixed expressions (38):

- (37) Hy wurket te Amsterdam.  
*He works to Amsterdam*  
 "He works in Amsterdam."
- (38) It skip giet te wetter.  
*The ship goes to water*  
 "The ship is launched."

---

<sup>16</sup> Zwart's (1993) main argument for this is that *te* is not present in all infinitival contexts. It is excluded in many of them, such as when the infinitive is used as an imperative or as the complement of an auxiliary verb. In other contexts *te* is required, such as when the infinitive is the complement of a raising or control verb. Zwart (1993a:102) argues that if *te* expressed a tense relation, we would expect it to be present in all infinitival contexts. Rather, it seems to express a syntactic relation, which makes it look "more like a complementizer or a preposition, than like an inflectional element" (Zwart 1993a:102).

J. Hoekstra (1997) argues that *te* is still a preposition in Frisian, at least in some contexts. He discusses the absentive, illustrated in (39):

- (39) Hy is te silen.  
*He is to sail.INF-ən*  
 "He is off sailing."

The absentive is a grammatical construction expressing someone's absence. It is the topic of Chapter 5, where its characteristics will be discussed in more detail. For now, it is only relevant to know that the absentive in Frisian consists of a finite form of *wêze* ("be"), followed by a *te*-infinitive. Hoekstra argues that *te* in this context is a preposition. Besides the fact that this aligns with the absentive semantics of the construction, he provides some syntactic evidence. The main argument to consider *te* to be a preposition in these cases is the fact that unlike other *te*-infinitives, the absentive occurs to the left of the main verb in embedded contexts, as in (40). In (40a), we find *te silen* to the left of the main verb *is*. In (40b), on the other hand, we find *te silen* to the right of the main verb *probearjet*.

- (40) a. ... dat Jan <te silen> is <\*te silen>.  
           *that Jan to sail.INF-ən is*  
           "...that Jan is off sailing."  
       b. ... dat Jan <\*te silen> probearjet <te silen>.  
           *that Jan to sail.INF-ən tries*  
           "...that Jan tries to sail."

The position of (40a) is the same as that of regular PPs in Frisian, as is shown in (41).

- (41) ... dat Jan <nei Amsterdam> is <\*nei Amsterdam>.  
           *that Jan to Amsterdam is*  
           "... that Jan is off to Amsterdam."

A second argument to believe that *te* in the Frisian absentive is a preposition is the fact that it precedes particles (as in (42)), rather than following them. This is not a direct argument for the prepositional status of *te*, but it does set

the absentive apart from other *to*-infinitives, in which *te* follows the particle (as in (43)).

- (42) Jan is <te> op <\*te> rêden.  
*Jan is to up to tidy.INF-ən*  
 “Jan is off tidying up.”

- (43) Jan beslút <\*te> út <te> gean.  
*Jan decides to out to go.INF*  
 “Jan decides to go out.”

In short, it is plausible that *te* in contexts like (39) is a preposition. Prepositions require nominal complements, and these can be bare nouns, as shown below:

- (44) on top, at lunch, by train, in jail

- (45) Hy giet nei skoalle.  
*He goes to school*  
 “He goes to school.”

As expected, other prepositions in Frisian also require [ən] (*-en*) on the infinitive:

- (46) Mei skellen lose jo neat op.  
*With namecall.INF-ən fix you nothing PRT*  
 “With namecalling, you fix nothing.”

This leads to the conclusion that the (absentive) *te*-infinitive context is yet another example of a nominal environment in which we find the [ən] infinitive.

Unfortunately, it is unclear why the infinitive also requires the [ən]-suffix in other types of *te*-infinitives, such as (47).

- (47) Hy probearjet appels te iten.  
*He tries apples to eat.INF-ən*  
 “He tries to eat apples.”

As was shown above in (40) it is not likely that *te* is a preposition in these

contexts, at least not anymore. The [ən]-suffix could just be a historical residue from times when *te* was consistently a preposition. I leave this matter open for further research.

### 3.1.2.4 Complement of verbs

We also find the [ən] on infinitives in Frisian when the infinitive is the complement of a restricted set of verbs, illustrated below:

(48) Aspectual verbs *gean* ("go"), *bliuwe* ("stay"), *komme* ("come")

- a. Ik *gean* sitten  
*I go sit.INF-ən*  
*"I'm going to sit down."*
- b. Ik *bliuw* sitten.  
*I stay sit.INF-ən*  
*"I'm staying seated."*
- c. Ik *kom* (\*op bed) sitten.  
*I come on bed sit.INF-ən*  
*"I'm sitting down on the bed."*

(49) *Hawwe* ("have") and *fine* ("find") with an a.c.i. construction

- a. Ik *ha* noch *bôle* yn de friezer *lizzen*.  
*I have still bread in the freezer lie.INF-ən*  
*"I still have some bread in the freezer."*
- b. Hy *fûn* har op 'e flier *sitten*.  
*He found her on the floor sit.INF-ən*  
*"He found her sitting on the floor."*

(50) Perception verbs (such as *sjen* ("see"), *hearre* ("hear"))

- a. Wy *sjogge* him *appels* *iten*.  
*We see him apples eat.INF-ən*  
*"We see him eat apples."*

- b. Wy hearre de bern boartsjen.  
*We hear the children play.*INF-ən  
 "We hear the children play."

These verbs have some interesting similarities. Although they might seem like auxiliaries in these examples, all of them have a lexical variant which takes a non-verbal complement, as illustrated below:

- (51) *gean* ("go"), *bliuwe* ("stay"), *komme* ("come") with a PP complement

- a. Ik gean nei Amsterdam.  
*I go to Amsterdam*  
 "I'm going to Amsterdam."
- b. Ik bliuw yn Amsterdam.  
*I stay in Amsterdam*  
 "I'm staying in Amsterdam."
- c. Ik kom nei Amsterdam.  
*I come to Amsterdam*  
 "I'm coming to Amsterdam."

- (52) *Hawwe* ("have") and *fine* ("find") with a DP complement

- a. Ik ha in bôle.  
*I have a bread*  
 "I have a bread."
- b. Hy fûn har.  
*He found her*  
 "He found her."

- (53) Perception verbs (such as *sjen* (“see”), *hearre* (“hear”)) with a DP complement

- a. Wy sjogge him.  
 We see him  
 “We see him.”
- b. Wy hearre de bern  
 We hear the children  
 “We hear the children.”

While this is no direct evidence that the infinitive must also be nominal in these cases, it shows that these verbs have something in common with respect to their types of complements.

The aspectual verbs and *hawwe* (“have”) and *fine* (“find”) have something else in common: they only take a particular type of verb as their complement, namely posture verbs. This means that *gean*, for example, can only be combined with the verbs *sitte* (“sit”), *lizze* (“lie”), *steane* (“stand”) and *hingje* (“hang”). A future interpretation of *gean* with other verbs (like we find in Dutch) is impossible, as illustrated below:<sup>17</sup>

- (54) Ik gean sitten/\*ferhúzjen.  
 I go sit.INF-ən/\*move.INF-ən  
 “I’m going to sit down/move.”

For *bliuwe* (“stay”) and *komme* (“come”) the set is a little bigger, as they both allow *rinne* (“walk”) and *bliuwe* allows *stykje* (“stick”) and *wenje* (“reside”). All verbs in this set express position/location (e.g. going to a sitting position or remaining in a standing position). While this is not direct evidence that the infinitive is nominal in these contexts, it is clear that these verbs, which require [ən] on their complement, all share the option for a non-verbal complement.

<sup>17</sup> It should be noted that many speakers of Frisian nowadays do allow *gean* to be used as a future marker, therefore allowing it to have other types of infinitival verbs as a complement. This issue will be discussed in more detail in Chapter 5 on the absentive (section 5.5.2), as this will turn out to be a change with consequences for the absentive. It is currently unknown whether these non-posture verb complements of *gean* always end up with an [ən] suffix, or if they can (also) get an [ə] suffix.

### 3.1.2.5 Interim summary

In this section, I have shown that the [ən] infinitive occurs in nominal contexts. I have shown that [ən] is likely to be an  $n^0$  element, which nominalizes a verb, thereby creating a nominal infinitive. In the next section, I will present some independent evidence which shows that [ən] can be an  $n^0$ .

### 3.1.3 Independent evidence for [ən] as an $n^0$

There is some independent evidence of [ən] being an  $n^0$ . Corver & van Koppen (2011) show that [ən] is an  $n^0$  in Frisian NP ellipsis contexts.<sup>18</sup> They look at contexts as in (55):

- (55) a. Jan hie in witte auto en Geart in swarte.  
*Jan has a white-e car and Geart a black-e*  
 “Jan has a white car and Geart a black one.”
- b. Jan hie in witte auto en Geart in swarten/\*swarte  
*Jan has a white-e car and Geart a black-en/black-e*  
*ien.*  
*one*
- c. Jan hie in witte auto en Geart in swarten.  
*Jan has a white-e car and Geart a black-en*

In these examples, the noun *auto* (“car”) is elided in the second part of the sentence. (55a) and (55c) represent an elision strategy, while (55b) looks like a pronominalization strategy: here the noun is replaced by the pro-form *ien* (“one”), which seems equivalent to pronominalization with English *one*, as in (56):

- (56) John has white car and Peter a black **one**.

The crucial question for the data in (55) is what the role of the element *-en* ([ən]) on *swarten* is. Corver & van Koppen (2011) argue that while the *-e* is adjectival inflection, *-en* must be something different: an  $n^0$  head. They propose that the structure of *in swarten ien* (“a black one”) is then as in (57)

<sup>18</sup> Corver & van Koppen (2011) represent the suffix as *-en*, following its orthography. According to native speakers of Frisian, the *-en* suffix in this context is pronounced as [ən], similar to the *-en* suffix in infinitival verbs.



(Corver & van Koppen 2011:396)

- (57) [DP in [nP swart [nP n<sup>0</sup> (= -en) ] ien ]]]

Here, *ien* is the root and the suffix *-en* is an n<sup>0</sup>. Their main argument for saying that *-en* is n<sup>0</sup>, rather than adjectival inflection, is that *-en* on two consecutive adjectives is ungrammatical in Frisian. This is illustrated in (58):

- (58) Jan hie in grutte witte auto kocht en Geart hie in  
*Jan has a big white car bought and Geart has a*  
*grutte/\*grutten swarten ien kocht.*  
*big-e/big-en black-en one bought*  
 “Jan bought a big white notebook and Geart bought a big black one.”

This is not something we would expect for adjectival inflection: two consecutive inflected adjectives are fine, as *grutte witte* in (58) shows. In ellipsis contexts, this is fine:

- (59) Jan hie in grutte witte auto en Geart hie in grutte swarte  
*Jan has a big white car and Geart has a big-e black-e*  
 “Jan has a big white car and Geart has a big black one.”

An n<sup>0</sup> element, on the other hand, would be expected to occur only once per root. To conclude, while *ien* (“one”) is a substitute for the root in ellipsis contexts, *-en* is a spell-out of the n<sup>0</sup> node.<sup>19</sup> These Frisian NP ellipsis contexts thereby show that [ən] can be an n<sup>0</sup> element.

### 3.1.4 Lowering of [ən]

So far, I have discussed evidence that *-en* must be a nominal element, namely a spell-out of n<sup>0</sup>. I have not yet discussed how this suffix attaches to the verb. Recall that I proposed the following (maximal) syntactic structure for the nominal infinitive:

<sup>19</sup> To account for (55c), Corver & van Koppen (2011) argue, in line with Kayne (2005), that *ien* can be unpronounced when it moves to spec, nP. That is, the edge position of a phasal nP can remain unpronounced.

(60)

How does the suffix get attached to the verb? The simplest way to derive this would be head movement of the verb to  $n^0$ . However, if the infinitive were in  $n^0$ , this would predict that adverbial modifiers (in spec,Asp) would follow the infinitive. In fact, they precede them, as shown in (61):

- (61) It **almar** iten fan appels is sūn.  
*The constantly eat.INF-ən of apples is healthy*  
 “The constant eating of apples is healthy.”

If the verb cannot move upwards, we have to assume that the affix [ən] moves downwards. Traditionally, problems like this have been analyzed in terms of affix hopping (see for example Looyenga (1992) who proposes affix hopping of a silent nominalizing affix in Dutch). A contemporary version of this idea, which fits within the framework of Distributed Morphology, is the process of Lowering as described by Embick & Noyer (2001). Lowering is a post-syntactic process which “unites syntactic terminals that are phonologically spelled together but not joined in overt syntax (by raising)” (Embick & Noyer 2001:561). They illustrate this by means of T-affix lowering to v in English:

- (62) Mary [<sub>TP</sub> <sub>t</sub><sub>1</sub> [<sub>VP</sub> loudly play-ed<sub>1</sub> the trumpet]]

Here, the past tense affix *-ed* is lowered from T to v. Since the adverb *loudly*, which is a manner adverb, cannot be above T, we know that the verb is in v rather than in T. Adverbs are invisible for lowering, according to Embick &

Noyer, as they are in specifier position and do therefore not interfere with the movement of heads.

I propose that the same thing happens with nominal infinitives:

(63) [nP t<sub>1</sub> [AspP *almar* (t<sub>1</sub>) [VoiceP (t<sub>1</sub>) [vP it-en<sub>1</sub>]]]

Here, the nominal affix [ən] (-en) is lowered from n<sup>0</sup> onto v<sup>0</sup>, with possible intermediate steps in Aspect and Voice, two projections that are not assumed by Embick & Noyer. The adverb *almar* is invisible for lowering but, being in spec,Asp, shows that the infinitive cannot be above the Aspect projection.

An alternative approach to [ən]-affixation on the verb without resulting in the wrong word order would be to stipulate that the nP in Frisian is head-final. If this were the case, we could assume that the verb head-moves to n<sup>0</sup> without creating problems for the word order.

However, this seems unlikely as nPs are assumed to be head-initial in Frisian. An argument follows, rather than precedes the noun:

- (65) it iten fan appels  
*the eat.INF-en of apples*  
 "The eating of apples."

- (66) \*it fan appels iten  
*it of apples eat.inf*

Therefore, I conclude that affix lowering must be the right explanation for how the nominalizing *-en* affix ends up on the verb.

### 3.1.5 Possible problems and alternative analyses

In the previous sections, I have presented an analysis for the Frisian nominal infinitive. I argued that its syntactic structure consists of a mixed structure with nominal layers on top of verbal layers, and that [ən] has to be an  $n^0$  element.

While most data confirm this, there is one syntactic context which presents a problem. Consider (67) and (68):

- (67) It is moai wenjen op 'e Lemmer.  
*It is nice live.INF-en in De Lemmer*  
 "It's nice to live in De Lemmer."

- (68) It is noflik sliepen op in wetterbêd.  
*It is pleasant(ly) sleep.INF-en on a water bed*  
 "It's pleasant to sleep on a water bed."

J. Hoekstra (1998) claims that the infinitives are verbs here, and that they are adjuncts to the adjectives, as in the structure in (69):

- (69) ... dat it<sub>i</sub> [<sub>SC</sub> t<sub>i</sub> [<sub>AP</sub> [<sub>AP</sub> moai] [<sub>VP</sub> wenjen]] is op 'e Lemmer

He argues that the sentence in (67) is semantically very similar to the middle construction in (70), where *wenjen* is a verb rather than a noun:

- (70) It wernet moai op 'e Lemmer  
*It lives nice in De Lemmer*  
 "It's nice to live in De Lemmer."

However, in principle one could analyze the sentence in (67) in a different way. I propose that its structure could be as in (71):

- (71) ... [nP -en [AspP moai [vP wenj ]]]

Here, the verb is modified by the adverb *moai* and subsequently nominalized. In this case, *wenjen* would be a nominal infinitive, as expected within the theory developed here.

Hoekstra provides another argument for the verbal status of *wenjen* ("live"), namely that in a similar example, the infinitive *wurkjen* ("work") cannot be replaced by a(n other) noun:

- (72) a. It is hurd wurkjen op in boareilân  
*It is hard work.INF-en on a drilling platform*  
 "Working on a drilling platform is hard."  
 b. \*It is hurd wurk op in boareilân  
*It is hard work on a drilling platform*

This is unexpected if *wurkjen* is a noun in (72a). However, a possible counterexample which Hoekstra discusses is (73):

- (73) ?It is trije dagen **wurk** om dy kables oan te lizzen  
*It is three days work for those cables PRT to install*  
 "It is three days work to install those cables."

He states that the grammaticality of the sentence is questionable: this means that replacing an infinitive with another noun might be impossible in other cases as well, and (72b) would not present a problem for an analysis in which we consider *wenjen* to be nominal.

Following this discussion of a possible problem for the analysis, I will now turn to possible alternatives. There are, in fact, not many alternative analyses for the syntactic structure of the nominal infinitive in Frisian. While both J. Hoekstra (1997) and De Haan (2010) claim that the *-en* infinitive must be nominal, they do not provide a syntactic structure. Visser (1989) proposes that

the *-en* infinitive is an element which is [+V] and [+N] at the same time. This is also what I claim, but with a different implementation: a root is first categorized as a  $v^0$ , and later nominalized when  $n^0$  is merged on top of this verbal structure (even though the actual suffix only lowers to the verb with a post-syntactic process of affix lowering, see section 3.1.4), which is why it displays both verbal and nominal characteristics.

For Dutch, there are some analyses that claim that the nominalizing affix is silent and that the infinitival suffix *-en* (pronounced as [ən] in Dutch) is directly on V (Looyenga 1992, Ackema & Neeleman 2004), as in (74) for *lopen* (“walk”):

$$(74) \quad [_{NP} \emptyset [_{VP} \text{lop-en}]]$$

For Dutch, I will discuss these further in section 3.1.6.2. For Frisian, this idea does not make much sense. If [ən] would be in the  $vP$ , and nominalization would be silent, it is unclear why the suffix would be [ən] in nominal contexts and [ə] in verbal contexts.

In section 3.2, I will discuss the Frisian [ə]-suffix and show that it is an  $v^0$  element. First, I will discuss the nominal infinitive in Dutch and show how it is structurally similar to Frisian, but exhibits variation with respect to a Spell-out parameter.

### 3.1.6 *The nominal infinitive in Dutch*

In this section I will discuss the nominal infinitive in Dutch. It has been argued before that the Dutch infinitive has a nominal and a verbal variant, and that the nominal variant includes a mixed structure (cf. Looyenga 1992, Schoorlemmer 2001, Ackema & Neeleman 2004, Broekhuis & Keizer 2015). I will show that its structure is the same as that of the nominal infinitive in Frisian. The only difference is a Spell-out difference. While in Frisian, the  $n^0$  element [ən] is phonologically different from the suffix we find on the verbal infinitive [ə], in Dutch we find [ə] (written as *-en*) in all contexts.

Recall the structure I proposed for the Frisian nominal infinitive, based on Alexiadou et al. (2011), Alexiadou (2013), presented again below:

Recall from section 3.1.1 that I assume that this is the maximal structure that a nominal infinitive can have and that the DP, AspP and VoiceP are optional. Unlike Frisian, Dutch does not phonologically distinguish between a nominal and a verbal infinitive. Therefore, following the literature (Looyenga 1992, Schoorlemmer 2001, Ackema & Neeleman 2004, Broekhuis & Keizer 2015, among others), I will focus on infinitives which are in an argument position, as these are most clearly nominal contexts. I will show that in these cases, all projections in the structure in (75) could be present, based on the diagnostics from Alexiadou (2013:135), presented in (16), and repeated here as (76):

|      |                         |                             |
|------|-------------------------|-----------------------------|
| (76) | <u>Possibility of</u>   | <u>Presence of</u>          |
|      | Determiner              | DP                          |
|      | Adjectival modification | nP layer                    |
|      | Adverbial modification  | AspectP layer               |
|      | Accusative object       | VoiceP layer [+ transitive] |

Similarly to Frisian, the most nominal variant of the nominalized infinitive would include a vP, nP and DP, but no VoiceP to assign accusative case (following Kratzer 1996) and no AspectP. In (77), the determiner *het* (“the”) signals the presence of a DP, the adjective *constante* (“constant”) signals the presence of the nP, and there is no adverbial modification.

- (77) Het constante eten van fastfood is ongezond.  
*The constant eat.INF-en of fastfood is unhealthy*  
 “The constant eating of fastfood is unhealthy.”

The most verbal variant on the other hand would include an AspectP and VoiceP, but no DP, as illustrated in (79) and (80). The pronoun *ons* (“us”) shows accusative case and the adverb *steeds* (“constantly”) signals the presence of an AspectP:

- (79) Steeds ons roepen is vervelend.  
*Constantly us call.INF-en is annoying*  
 “Constantly calling us is annoying.”

As argued for Frisian in section 3.1.1, there could also be intermediate cases, with both nominal and verbal projections.

Above I have argued that the  $n^0$  in Frisian is spelled out by *-en* ([ən]). I



propose that in Dutch, it is spelled out by *-en* ([ə]), and that it is attached to the infinitive by the process of Lowering, as discussed in 3.1.4.

As the [ə] (*-en*) suffix is also found on verbal infinitives in Dutch, its occurrence in nominal contexts cannot be taken as evidence for its nominal status. However, the next section will present some independent evidence for [ə] as an  $n^0$ . The logically possible alternative, in which  $n^0$  is silent in Dutch and [ə] (*-en*) is the same item in nominal and verbal infinitives will be discussed in section 3.1.6.2 which concerns alternative analyses.

### 3.1.6.1 Evidence for [ə] as an $n^0$

In section 3.1.3 we saw evidence that [ən] in Frisian must be an  $n^0$  in NP ellipsis contexts (Corver & van Koppen 2011). Corver & van Koppen (2011) also discuss NP ellipsis contexts in Dutch, and show that in Dutch, it is *-e* [ə] which spells out  $n^0$ . The relevant example is presented in (81):

- (81) Jan heeft [een **wit** konijn] gekocht en Marie heeft  
*Jan has a white rabbit bought and Marie has*  
 [een zwarte] gekocht.  
*a black-e bought*  
 “Jan bought a white rabbit and Marie bought a black one.”

As one can see, the adjective *wit* (“white”) is not inflected, as in Dutch, the neuter singular indefinite normally does not have adjectival inflection:

- (82) een wit huis  
*a white house.neut*

In (81), the adjective *zwart* (“black”) does have a schwa attached to it. This is usually taken as evidence that adjectives receives default inflection in NP ellipsis contexts in Dutch. Corver & van Koppen (2011) argue, however, that this schwa is not adjectival inflection, but rather a phonologically weak pro-form, analogous to Frisian [ən]. They present two arguments for this. Consider (83):

- (83) Ik heb gisteren [een groot/grote pianist] horen spelen.  
*I have yesterday a big/big-e pianist hear play*  
 “I have heard a great / big pianist yesterday.”

Here, the attributive adjective can appear with or without the *e*-affix, depending on the meaning of the adjective. *Grote* with the *e*-affix means “big”, but *groot* without the *-e* means “great”. In ellipsis contexts, however, the *-e* needs to be present, irrespective of its meaning:

- (84) Ik heb gisteren [een echt grote] horen spelen.  
*I have yesterday a real big-e hear play*  
 “I have heard a truly big/great one yesterday.”

This difference between the ellipsis context and the regular context suggests that the *-e* is not adjectival inflection in the ellipsis context.

The second argument Corver & van Koppen (2011) present concerns past participles ending in *-en*. These participles usually cannot show inflection, as illustrated in (85):

- (85) het doorbakken(\*e) konijn  
*the well-baked(e) rabbit*

However, in ellipsis contexts, the *-e* is suddenly obligatory:

- (86) het doorbakken\*(-e)  
*the well-baked(e)*  
 “the well-baked one”

Again this suggests that the *e*-affix is not adjectival inflection. Corver & van Koppen (2011) conclude that like Frisian *-en*, the Dutch *-e* [ə] is a spell-out of  $n^0$ , and they propose the structure in (87) for the example in (81):

- (87) [DP een [NP zwart [NP e ]]]

To summarize, this section presented some independent evidence for the schwa being the spell-out of  $n^0$  in Dutch.<sup>20</sup>

<sup>20</sup> One potential problem if we take this as evidence for schwa being an  $n^0$  in infinitival contexts is the fact that not all speakers of Dutch pronounce the infinitival ending *-en* as [ə].

### 3.1.6.2 Alternative analyses

In this section I discuss two alternative analyses that have been proposed in the literature for Dutch nominal infinitives.<sup>21</sup> The infinitival suffix *-en* in Dutch is sometimes analyzed as attached to V (Looyenga 1992, Ackema & Neeleman 2004). Ackema & Neeleman (2004) propose that nominalization can occur at different syntactic positions, an approach which I follow as well. In the most “nominal” type of infinitive, where the internal argument of the infinitive is expressed by means of a PP, Ackema & Neeleman (2004) propose that nominalization occurs directly above the verb. This type of infinitive is illustrated in (88), with its corresponding structure in (89) (Ackema & Neeleman 2004:175). A difference with the current analysis is that they argue that there is a silent nominalizing suffix in Dutch nominal infinitives.<sup>22</sup>

- (88) Deze zanger is vervolgd voor dat stiekeme jatten van  
*this singer is prosecuted for that sneaky pinch.INF of*  
 succesvolle liedjes  
*successful songs*  
 “This singer has been prosecuted for sneakily pinching successful songs.”

---

For some speakers, to my knowledge mostly in the eastern part of the country, the *-n* is clearly pronounced. In those cases, the argument that schwa is an  $n^0$  in other contexts (see the previous sections) is not valid. However, it is possible that for these speakers,  $n^0$  is not pronounced as schwa in these other contexts either, but as [ən]. I leave this as a matter for future research.

<sup>21</sup> This section is focused on nominalized infinitives in Dutch. Other notable studies of this topic, but with a different focus than the current study, include Schoorlemmer (2001) and Broekhuis & Keizer (2015). For more discussion on nominalizations in general, I refer the reader to Chomsky (1970), Abney (1987), Grimshaw (1990) and Borer (2005), among others.

<sup>22</sup> Example (88), taken from Ackema & Neeleman (2004), includes demonstrative *dat* (“that”) rather than the determiner *het* (“the”). As Schoorlemmer (2001) showed, *dat* behaves differently from the regular definite neuter determiner (*het*) with infinitives, as it makes an infinitive “expressive”; it has an emotional judgment attached to it. According to her, this corresponds to a different structure. This complicating factor is left aside for now, as it is not relevant for the main differences between Ackema & Neeleman’s and my account which I discuss here.

(89)

Ackema & Neeleman identify a slightly less nominal infinitive, where the internal argument is expressed by an accusative, pre-infinitival object and the infinitive is modified by an adjective. For this type of infinitive, illustrated in (90), they propose the structure in (91) (Ackema & Neeleman 2004:175):

- (90)    Deze zanger is vervolgd    voor dat    stiekeme succesvolle  
         *this singer is prosecuted for that sneaky successful*  
         liedjes jatten.  
         *songs pinch.INF*  
         “This singer has been prosecuted for sneakily pinching  
         successful songs.”

(91)

Finally, they identify a relatively verbal variant of the infinitive, where the internal argument is again an accusative object but the infinitive is also modified by an adverb, rather than an adjective. This type is illustrated in (92), and the corresponding structure is shown in (93) (Ackema & Neeleman 2004:175):

- (92) Deze zanger is vervolgd voor dat stiekem succesvolle  
*This singer is prosecuted for that sneakily successful*  
 liedjes jatten.  
*songs pinch.INF*  
 "This singer has been prosecuted for sneakily pinching  
 successful songs."

The main difference between Ackema & Neeleman's analysis and the present one is that they assume that nominalization happens by means of a silent affix, while I assume that the nominalizing head  $n^0$  is spelled out by [ə] (-en). Ackema & Neeleman base this on the idea that there is no evidence that -en is ever a nominalizing element in contexts other than nominal infinitives. However, in the previous section, I showed that [ə] (which is the way this infinitival suffix is pronounced), is actually an  $n^0$  in NP ellipsis contexts. Moreover, they do not provide any independent evidence for the silent affix that they assume.

Looyenga (1992) also claims that there is a silent affix and tries to provide evidence for it. He assumes the structure in (94) for Dutch nominal infinitives (Looyenga 1992:178):

- (94)  $[DP [D' D [NP [N' [N [IP PRO [I' [VP V + en] I]] + affix ]]]]]$

Looyenga claims that the -en suffix is always verbal, being attached to V in the root position and entering into an agreement relation with T. The difference between a nominal and a verbal infinitive is then the silent nominal affix. According to Looyenga, we cannot see the affix in present-day Dutch, but it surfaces in German. In German, we find the nominal suffix -s on the infinitive if it is in genitive case, as in (95). Looyenga (1992) states that this is

an instantiation of the affix in (94).

- (95)
- die Bestätigung

des

Empfangens

dieses
- The affirmation*

*the.GEN*

*receive.INF.GEN*

*this.GEN*
- Briefes
- letter.GEN*
- “The affirmation of the receiving of this letter.”

This example suggests that -s, rather than -en, is the nominalizing affix in German infinitives. However, it is unclear whether this is direct evidence that this would be the same for Dutch (except that the  $n^0$  would not overtly be expressed). In my analysis, I follow the alternative idea that [ə] (-en) is the nominalizing suffix.

3.1.7 The parametric differences

In the previous section I have presented my analyses for the Frisian and Dutch nominal infinitive. I showed that they both have the same syntactic structure, illustrated again below:

In both languages, the root is verbalized by  $v^0$ . Optionally, a VoiceP and AspectP can be included. Then, the verb is nominalized by merging  $n^0$  above it. (Post-syntactically,  $n^0$  lowers to the verb, as discussed in section 3.1.4.) Optionally, there is a DP projected.

The only difference between Dutch and Frisian here concerns the spell-out of  $n^0$ . As presented in Chapter 2, a spell-out parameter is one of three types of parameters. It specifies the spell-out of a head and whether it can license a zero specifier. In this case, in both Frisian and Dutch,  $n^0$  has to be spelled out by a specific morpheme:

(97) Frisian  
 $n_{[nominalizing]}$ : [ən] (-en)

Dutch  
 $n_{[nominalizing]}$ : [ə] (-en)

While in Dutch, this spell-out is homophonous with the verbal infinitival suffix (both [ə]), in Frisian this is not the case. This leads to the empirical observation that while Frisian phonologically distinguishes the nominal infinitive from the verbal infinitive, Dutch does not.

In fact, many speakers of Frisian also no longer make this distinction. They use the verbal suffix [ə] on the nominal infinitive, the nominal suffix [ən] on the verbal infinitive or they mix both. The question is how this relates to the parameter presented in (97) and how widespread this change is. This will be the topic of section 3.3. First, I will discuss the verbal infinitive in Dutch and Frisian.

## 3.2 The verbal infinitive

### 3.2.0 Introduction

Infinitives are, as their name suggests, verbs without any finite features. They can be the complement of an auxiliary, which bears the finite features of the clause, as in (98):

- (98) a. Ik zal morgen naar school lopen. Dutch  
b. Ik sil moarn nei skoalle rinne. Frisian  
*I will tomorrow to school walk.INF*  
*"I will walk to school tomorrow."*

In these contexts, the infinitive is traditionally analyzed as being in  $v$  or  $V$ ;

that is, it does not raise to T (see for example Wurmbrand 2004).<sup>23</sup> This is illustrated in (99):

I will argue that the [ə]-suffix which we find in these types of contexts is a  $v^0$  element, since it only occurs in contexts where the infinitive is a verb. Furthermore, I will argue that the Dutch verbal infinitive has the same syntactic structure and that  $v^0$  is spelled out by [ə] in Dutch as well.

### 3.2.1 *The structure of the verbal infinitive*

Following Wurmbrand (1998), I assume that auxiliaries such as modals occur in the same clause as the infinitive. That is, they are not lexical verbs in a vP, but rather, they are merged in the extended functional projection of the main (infinitival) verb. Wurmbrand (1998) refers to this as *restructuring*. I follow the idea that auxiliaries are merged in functional projections such as ModalP. The structure that I propose for the verbal infinitive is as follows:

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<sup>23</sup> In the literature, the term *verbal infinitive* is often used to refer to a variant of the infinitive which is used in argument position, but does not have many nominal properties (for example the more verbal variant that Ackema & Neeleman (2004) distinguished, see section 3.1.6.2). However, I take verbal infinitive to refer to infinitives in verbal contexts, of which the example in (98) is prototypical: an infinitive which is the complement of a finite verb.

In this structure, the infinitival verb starts out as a root and is then verbalized by the  $v^0$  element [ə]. I assume that this is a default verbal marker which is only spelled out if there is no other suffix on the verb.<sup>24</sup> Evidence for this is the fact that it appears in all verbal infinitival contexts (see section 3.2.2), but that it is not visible on finite verbs, for example when the verb carries the 3<sup>rd</sup> person singular present tense suffix *-t*:

- (101) Jan rint.  
Jan walks  
“Jan walks.”

Above the  $vP$ , we find the typical verbal extended projection: the  $VoiceP$ , which introduces the agent and the  $AspectP$ , which hosts any adverbials that occur in an infinitival sentence:

- (102) Jan wil **alsmaar** eten.  
Jan wants constantly eat  
“Jan wants to eat constantly.”

Above  $AspectP$ , we find  $ModalP$ , where modal auxiliaries are merged,

---

<sup>24</sup> This means that it is also there in nominal infinitives, but it is not spelled out. For ease of representation, I have not included it in my discussion on nominal infinitives in the previous sections.

following Cinque (1999) and Wurmbrand (1998), who claim that these are functional verbs rather than lexical verbs and do not have their own vP domain. Finally, a T is merged, to which the auxiliaries must move to get their finite features.

I have now proposed a structure for the verbal infinitive. In the next section, I will show that this accounts for all the contexts in which we find the [ə]-suffix on the infinitive in Frisian.

3.2.2 Verbal contexts for the [ə]-infinitive

In this section I will discuss the contexts in which [ə] occurs on the Frisian infinitive. The contexts are listed in Table 4, repeated here from Table 1. I will explain for each context why we would expect a verbal infinitive here.

|          |                                                                          |
|----------|--------------------------------------------------------------------------|
| [ə] (-e) | Infinitive is complement of modal verb                                   |
|          | Infinitive is complement of <i>litte</i> (“let”)                         |
|          | Infinitive is bare in an argument position (used as a subject or object) |
|          | Infinitive is topicalized                                                |
|          | Infinitive is a purposive adjunct                                        |

Table 4: Syntactic contexts for the [ə]-suffix

3.2.2.1 Modal verbs

In Frisian, modal verbs take bare infinitival complements. These infinitives get an [ə]-suffix, as illustrated in (103).<sup>25,26</sup>

- (103)
- Ik

kin

appels

ite.
- I*

*can*

*apples*

*eat.INF-ə*
- “I can eat apples.”

<sup>25</sup> For all the examples in this section, one should note that the order of verbs does not influence the suffix. In embedded clauses, where the finite verb is sentence-final in Frisian, the distribution of the suffixes is the same as in main clauses.

<sup>26</sup> One could argue that modals can also take nominal complements, which would actually make them similar to the nominal contexts discussed in section 3.1.2. However, following van Riemsdijk (2002), I assume that in these cases, there is a covert verb present and the modal does take a verbal complement. This will be discussed further in section 5.2.1.

According to J. Hoekstra (1997), this holds for the full class of modal verbs: *kinne* (“can”), *meie* (“may”), *moatte* (“must”), *sille* (shall/will) and *wolle* (“want”). As illustrated in 3.2.0 and 3.2.1, in these contexts the infinitive is in v.

#### 3.2.2.2 *Litte* (“let”)

In the complement of the verb *litte* ("let"), we find the *-e* suffix as well.

- (104) Wy litte him appels ite  
 We let hem apples eat. INF- $\partial$   
 "We let the children eat apples."

According to J. Hoekstra (1997) this holds for both causative (“to cause to eat”) and permissive (“to allow to eat”) variants of *litte*. Most examples provided in the literature are ambiguous between the two readings.

I assume that in both cases, *litte* can be analyzed as a functional verb. Similar to the modal verbs, it would then be in the functional extended projection of the main verb, as follows:

- (105)
- 
- The syntax tree for the word "little" is as follows:
- TP branches into T and FP.
  - FP branches into F ("litte") and AspP.
  - AspP branches into Asp and VoiceP.
  - VoiceP branches into Voice and vP.
  - vP branches into v<sup>0</sup> ([ə]) and √P.
- An upward-pointing arrow is located below the [ə] node.

### 3.2.2.3 Bare in argument position

An [ə]-infinitive also seems to occur in argument position in Frisian. In fact, this is the only context in which both suffixes are possible: as we saw in section 3.1.2.2, [ən]-infinitives could occur here as well. In an example such as (106), both forms are possible:

- (106) Rinne/Rinnen                      is    sûn.  
           *Walk.INF-ə/Walk.INF-ən*    is    *healthy*  
           “Walking is healthy.”

In section 3.1.1, I suggested that being in an argument position suggests that the infinitive has nominal properties. If that is true, we would not expect the [ə]-infinitive to occur here. Studies have shown, however, that the infinitives are not completely interchangeable here (see below), so perhaps they are not exactly in the same position. Perhaps the nominal infinitive is in argument position, whereas the [ə]-infinitive is actually topicalized or left-dislocated. To find this out, we could look at embedded clauses: if the [ə]-infinitive is topicalized in sentences such as (106), we would expect it to be ungrammatical in embedded clauses. However, it turns out that native speakers are quite unsure about these kinds of examples. Linguists De Haan, J. Hoekstra and E. Hoekstra (who are also native speakers), for example, disagree on the grammaticality of adding an object. While De Haan (2010) and J. Hoekstra (1997) suggest that an [ən]-infinitive cannot have a direct object (cf. (107), E. Hoekstra (2018a) suggests that it can (cf. (108)):

- (107) Sigaren \*smoken/smoke                      is    net sûn.  
           *Cigars smoke.INF-ən/smoke.INF-ə*    is    *not healthy*  
           “Smoking cigars is not healthy.”
- (108) Ik    fyn    sigaren smoken/smoke                      net sa lekker.  
           *I find cigars smoke.INF-ən/smoke.INF-ə*    *not so nice*  
           “I find smoking cigars not so nice.”

Moreover, he provides the example in (109), in which he states that both suffixes are questionable, but [ən] is preferred:

- (109) Sy tinkt oan sigaren ?\*smoke/?smoken.  
*She thinks of cigars smoke.INF-ə/smoke.INF-ən*  
 “She thinks of smoking cigars.”

In short, even for native speakers, it is not really clear which suffix to use in these contexts and it is unclear whether both are really grammatical in examples such as (108). Therefore, it is hard to find out whether the [ə]-infinitive is truly in argument position in examples like (106), or whether it is topicalized. I leave this matter for future research.

There is a difference between the [ə]-infinitive and the [ən]-infinitive in examples like (106), though: modifiers can more easily be added to the [ə]-variant (De Haan 2010d). This suggests that the structure of the [ə]-infinitive is different from that of the [ən]-infinitive in these contexts. In these cases, the infinitive is often clause-like (De Haan 2010d:155):

- (110) [Dizzewedstriid mei ien-nul winne] wie slimmer as  
*This game with one-zero win.INF-ə was worse than*  
*ferlieze.*  
*lose.INF*  
 “It was worse to win this game with one-zero than to lose it.”

Given this clausal status, one could wonder whether there is also a CP projected. Compare the English variant with complementizer *for*:

- (111) [<sub>CP</sub> For him to win this game with one-zero] was worse than [<sub>CP</sub>  
 (for him) to lose it]

However, an overt C with non-finite features such as *om* (“for”) in Frisian always requires the presence of infinitival marker *te* (“to”), and we have seen in section 3.1.2 that *te* leads to the nominal suffix on the infinitive. Therefore, I assume that there is no CP layer in the structure of the Frisian verbal infinitive. Alternatively, one could assume that there is an empty C which has different features than overt *om*, but so far I have not found any evidence for this.

The proposal that an infinitive can be a TP when it is used as the subject of a sentence follows what Looyenga (1992:184) proposed for Dutch: the structure of a verbal infinitive in an argument position is as follows:

- (112) [IP [I Ø] [VP (NP) V + en ] ]

That is, the infinitive projects a IP (TP in my terms), but I is empty and the infinitive remains low in V with its infinitival suffix. This, according to him, is the structure of the infinitive in sentences like (113):

- (113) [IP Sigaren roken] is ongezond. Dutch  
*cigars smoke.INF is unhealthy*  
 "Smoking cigars is unhealthy."

In short, this subsection has shown we find the verbal suffix in what seem to be nominal contexts (argument positions), but that their exact location is unclear, and I proposed that the infinitive has the structure of a TP in these cases.

#### 3.2.2.4 Topicalization

J. Hoekstra (1997) shows that in topicalized contexts, we find the [ə]-suffix:

- (114) [Appels ite] docht se komselden.  
*Apples eat.INF-ə does she rarely*  
 "Eating apples, she rarely does."

As *docht* ("does") is an auxiliary which requires a sentential complement, *appels ite* cannot be a DP here. Evidence from English also shows that non-finite TPs can be topicalized:

- (115) [TP To be lonely] is what she did not want.

Therefore, it is possible to analyze [*appels ite*] in (114) as a TP as well. Even though this topicalization context is not typically verbal, my analysis of the [ə]-infinitive as a TP can account for this type of context.

#### 3.2.2.5 Purposive adjunct

The [ə]-suffix also appears on the infinitive when the infinitive is a purposive adjunct (J. Hoekstra 1997):

- (116) Ik gean efkes                    nei    de winkel, [sigaretten helje].  
*I go    just a minute to    the store, cigarettes get.INF-ə*  
 “I’ll go to the store for just a minute, to get cigarettes.”

According to J. Hoekstra (1997), there is always a comma intonation involved in examples like these. Although the example can be paraphrased as (117), (116) cannot be an elliptic version of (117), as the infinitive in (117) has an [ən]-suffix because of *te* (“to”).

- (117) Ik gean efkes                    nei    de winkel [om sigaretten te  
*I go    just a minute to    the store, for cigarettes to*  
*heljen].*  
*get.inf*  
 “I’ll go to the store for just a minute, to get cigarettes.”

Therefore, we do not expect there to be a CP-layer with an empty *om*. Instead, the purposive interpretation seems to be a result of the discourse context and the infinitive in (116) is again a TP. Following J. Hoekstra (1997), I assume that it is attached to the clause as an adjunct (as the comma intonation suggests it is external to the sentence). I propose that the structure is then as in (118):<sup>27</sup>

---

<sup>27</sup> Some projections which are irrelevant for this example (such as VoiceP) are left out of the structure.

(118)

This context is again not clearly verbal but it can be accounted for by the analysis of the [ə]-infinitive as a TP.

3.2.3 The verbal infinitive in Dutch

Dutch, like Frisian, has multiple types of infinitives. Besides the nominal infinitive, discussed in 3.1.6, the infinitive also occurs in clearly verbal contexts, such as in the complement of a modal auxiliary:

- (119) Ik kan appels eten.  
I can apples eat.inf  
"I can eat apples."

Unlike in Frisian, this infinitive is not morphologically distinct from the nominal infinitive. Instead, both infinitives have the suffix [ə] (written as *-en*). I propose that there are two types of [ə] (following for example Borer (2013), who proposed two types of *-ing* for English gerunds). While the nominal [ə]-



suffix is an  $n^0$  element, as discussed in section 3.1.6, I propose that the verbal [ə]-suffix is a  $v^0$  element, like the Frisian [ə]-suffix. The syntactic structure of the verbal infinitive is then as in (120), identical to the Frisian verbal infinitive.

(120)

There is one context which could serve as independent evidence for the verbal nature of [ə].<sup>28</sup> This is the case of root infinitives, as illustrated in (121):

<sup>28</sup> Note that I do not want to claim that all [ə]'s are  $v^0$  elements (as argued in section 3.1.6, it could also be  $n^0$ , and possibly something else). Rather, I want to claim the opposite: the [ə] suffix is the default spellout of  $v^0$  in Dutch, like I argued in section 3.2.1 for Frisian.

- (121) “Jan boeken lezen? Ik geloof er niks van.”  
*Jan books read.INF I believe there nothing of*  
 “Jan reading books? I don’t believe it.”

In this sentence, the clause with the infinitive *lezen* (“read”) does not have tense inflection anywhere. Root infinitives, also common in the production of young (around the age of 2) language learners, can be analyzed as “truncated clausal structures, starting from a categorial layer lower than TP” (Rizzi 1993:390). This shows that [ə] here is not a T-element; rather, it is something deeper in the structure, which, I propose, shows the verbal nature of the infinitive. Moreover, as [ə] does not contribute any meaning (just like English *-ing* according to Borer (2013)) to the verb (except maybe non-finiteness), it makes sense to assume that it is a default verbal marker: an instantiation of  $v^0$ .

### 3.2.4 *Alternative analyses*

In the previous sections, I have discussed my analyses of the verbal infinitive in Frisian and Dutch. I proposed that they have the same structure and that the infinitival suffix [ə] is a spell-out of  $v^0$ . In this section, I will briefly discuss alternative approaches.

The [ə]-infinitive has previously been claimed to be verbal (see a.o. J. Hoekstra 1997, De Haan 2010), but to my knowledge, there is no proposal on its syntactic structure. An alternative idea one might consider is that [ə] is a T element which expresses non-finiteness, as opposed to finiteness. However, recall the examples with the modal verbs from section 3.2.2.1:

- (122) Ik kin appels ite.  
*I can apples eat.INF-ə*  
 “I can eat apples.”

In the structure of this sentence, the T node hosts the finite features of the modal verb *kinne* (“can”). That means that it would be impossible for T to be non-finite and host the [ə]-suffix at the same time. The [ə]-suffix can only be a T element if the infinitive and the modal verb are not in the same TP domain, as in (123):

- (123) [TP<sub>1</sub> [Mod<sub>alP</sub> kin [vP [CP [TP<sub>2</sub> ite [Mod<sub>alP</sub> [vP ]]]]]]]]

However, I have assumed, following the restructuring approaches of Wurmbrand (1998) and Cinque (1999), that functional verbs like modals are generated in the extended projection of a lexical verb. That means that in an example like this, the auxiliary *kin* is in ModalP and the infinitive is in the vP of the same clause:

- (124) [TP [ModalP *kin* [vP *ite* ]]]

With regard to the Dutch infinitive, there are a few ideas on the nature of the [ə]-suffix (*-en*). Looyenga (1992:184) for example proposes the following structure for verbal infinitives:

- (125) [IP [I Ø] [VP (NP) V + en ] ]

According to him, the suffix is part of the verb. That means that it does not have any independent syntactic status. Ackema & Neeleman (2004) also propose that the verb and *-en* form a unit in V. As I am working in a Distributed Morphology-based framework, I assume that all structure building happens in syntax (supplemented by post-syntactic phonological processes such as Lowering). I do however agree that the verbal infinitival suffixes do not contribute meaning. Therefore, my analysis is closely related to theirs; the suffix is indeed in the verbal position. I assume that they are v-elements: they turn the root into a verb.

One thing that should be noted here is that the analyses by Looyenga and Ackema & Neeleman focus on the verbal infinitive as compared to the nominal infinitive when in argument position, so in sentences as in (126).

- (126) Deze zanger is vervolgd voor dat stiekem succesvolle  
*This singer is prosecuted for that sneakily successful*  
*liedjes jatten.*  
*songs pinch.INF*  
*"This singer has been prosecuted for sneakily pinching successful*  
*songs."*

To my knowledge, these accounts do not say if and how their analyses relate to verbal infinitives in other types of contexts, such as the modal verb context. In this chapter, I tried to discuss the most common contexts of infinitives, based on J. Hoekstra (1997) and De Haan (2010d) on Frisian infinitives.

3.2.5 *The parametric differences*

In the previous sections I presented my analysis for the verbal infinitive in Dutch and Frisian. I proposed that they have the same syntactic structure, repeated here in (127):

It turns out that there is no difference at all between Frisian and Dutch in the verbal infinitive. In both languages,  $v^0$  is spelled out by [ə]. The apparent difference is a matter of spelling (the Dutch verbal infinitival suffix is spelled as *-en*, the Frisian one as *-e*), but the parameter setting is the same for both languages:

- (128) Frisian  
           $v_{[inf]}$ : [ə] (*-e*)
- Dutch  
           $v_{[inf]}$ : [ə] (*-en*)

Recall from section 3.1.7 that we found a spell-out difference in the nominal infinitive: in Frisian  $n^0$  is spelled out by [ən], while in Dutch it is spelled out by [ə]. I proposed that this could be represented by the following spell-out parameters:

- (129) Frisian  
 $\Pi_{[\text{nominalizing}]}$ : [ən] (-en)
- Dutch  
 $\Pi_{[\text{nominalizing}]}$ : [ə] (-en)

As one can see, in Dutch the verbal and nominal infinitival suffixes are homophonous. That is, both  $v^0$  and  $n^0$  are spelled out by [ə] (spelled as -en). In Frisian, this is not the case:  $v^0$  is spelled out as [ə] but  $n^0$  as [ən].

The difference between Dutch and Frisian that we can observe is the fact that Frisian phonologically distinguishes the nominal infinitive from the verbal infinitive while Dutch does not. This is an empirical observation at the level of E-language, and in the course of this chapter I have argued that this is a result of the parameter in (129) at the level of I-language.

Recent data have shown that many speakers of Frisian do no longer make a phonological distinction between the nominal and verbal infinitive. They use the verbal suffix [ə] on the nominal infinitive, the nominal suffix [ən] on the verbal infinitive, or they mix both. The question is how this language change relates to the parameter presented in (129) and how widespread it is. In the next section, I will discuss questionnaire data and show that a parametric change in the Spell-out parameter in (129) has led to language change in Frisian. I will show that the change is not (yet) stable or the same for all speakers, nor is it the case that Frisian is becoming the same as Dutch.

### 3.3 Changes in Frisian infinitives

#### 3.3.0 Introduction

So far, I have focused on the traditional distribution of the suffixes [ən] and [ə].<sup>29</sup> However, the distribution is shifting for some speakers. In fact, as the data in this section will show, for some speakers of Frisian the suffixes have become interchangeable. The aim of this section is to investigate this language change at two levels. At the descriptive level, I will look at how widespread

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<sup>29</sup> See section 1.1, footnote 3 for an explanation on what I considered to be “original Frisian” in the context of this study.

the change is and in which contexts we mostly find it. At the explanatory level I will investigate how this change can be accounted for in terms of parametric theory and theories on language change. I will argue that there are two changes taking place here. For some speakers, the parameter in (129) now has two settings in Frisian; in addition to [ən],  $n^0$  can also be spelled out as [ə].

- (130) Frisian  
 $n_{[\text{nominalizing}]}$ : [ən] (-en)  
                               [ə] (-e)

For some speakers, there is (also) another change: the parameter in (128) has an extra possible setting, as in (131).

- (131) Frisian  
 $v_{[\text{inf}]}$ : [ə] (-e), [ən] (-en)

This says that in addition to [ə],  $v^0$  can also be spelled out as [ən].

In section 3.4.3, I will argue that this change is influenced by Dutch. Interestingly, the language may be more similar to Dutch on the surface (a speaker makes no phonological distinction between verbal and nominal infinitive), but the new parameter settings (i.e. the I-language) are as in (130) and (131) are not the same as for Dutch (cf. (128) and (129)).

### 3.3.1 *The items*

The data that is discussed in this section was collected by means of two digital written questionnaires. The details on these questionnaires and the participants can be found in Chapter 1. For now, I will focus on the items concerning infinitives.

The first questionnaire included 12 items on infinitival suffixes. These items consisted of 6 different syntactic contexts, with one [ən] (-en) item and one [ə] (-e) item for each.<sup>30</sup> Two contexts were excluded from the analysis because of an error in the items. The four remaining contexts are illustrated below:

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<sup>30</sup> In the rest of this section I will use the orthographic notions *-e* and *-en* rather than the phonological notions [ə] and [ən], as this is how they were presented to the participants.

i. Determiner context

- (132) It lezen fan boeken fyn ik fantastysk.  
*The read.INF of books find I fantastic*  
 "Reading books I find fantastic."

ii. *te* ("to") context

- (133) Hy besiket de bal te fangen.  
*He tries the ball to catch.INF*  
 "He tries to catch the ball."

iii. Preposition context

- (134) Mei skellen lose jo neat op.  
*With namecall.INF fix you nothing PRT*  
 "With namecalling, you fix nothing."

iv. Modal verb context

- (135) Hy kin hiel moai tekenje.  
*He can very nicely draw.INF*  
 "He can draw very nicely."

The second questionnaire included 6 other syntactic contexts with a total of 30 items, which are illustrated below. Again, each syntactic context was presented in two ways: with an *-en* suffix and with an *-e* suffix. The total number of items is specified below per context and an overview of all items can be found in the Appendix.

i. Perception verbs (4 items: 2 transitive embedded infinitives + 2 intransitive embedded infinitives)

- (136) Ik sjoch him dûnsjen.  
*I saw him dance.INF*  
 "I saw him dance."

ii. Adjunct (2 items)

- (137) It is moai wenjen yn Ljouwert.  
*It is nice live.INF in Leeuwarden*  
 "It's nice to live in Leeuwarden."

iii. Purposive adjunct (4 items: 2 main clauses + 2 with embedded clauses)

- (138) Ik gean nei de winkel, sigaretten heljen.  
*I go to the store, cigarettes get.INF*  
 "I'll go to the store, to get cigarettes."

iv. *Hawwe* ("have") / *fine* ("find") context (4 items: 2 *hawwe* + 2 *fine*)

- (139) Ik ha in bôle yn de friezer lizzen.  
*I have a bread in the freezer lie.INF*  
 "I have a bread in the freezer"

v. Infinitive used as a subject (8 items: 2 main clause with intransitive infinitive + 2 main clause with transitive infinitive + 2 embedded clause with intransitive infinitive + 2 embedded clause with transitive infinitive)

- (140) Fytsen is sûn.  
*Cycle.INF is healthy*  
 "Cycling is healthy."

vi. Infinitive used as an object (8 items: 2 main clause with intransitive infinitive + 2 main clause with transitive infinitive + 2 embedded clause with intransitive infinitive + 2 embedded clause with transitive infinitive)

- (141) Wy fine tekenjen fantastysk.  
*We find draw.INF fantastic*  
 "We find drawing fantastic."



3.3.2 Results

3.3.2.1 General results

I will now discuss the results of the questionnaire and look at what they mean in terms of language change. Table 5 provides the main results of questionnaire 1: the means and standard deviations of all contexts of all participants as a group. Table 6 provides the main results of questionnaire 2. For all items, answers ranged from 1 (unacceptable) to 5 (acceptable).

|                                                | -en infinitive                | -e infinitive                 |
|------------------------------------------------|-------------------------------|-------------------------------|
| Determiner<br>(example (132))<br>Expected: -en | <b>Mean: 4.37</b><br>SD: .95  | <b>Mean: 3.17</b><br>SD: 1.59 |
| Te ("to") (133)<br>Expected: -en               | <b>Mean: 4.52</b><br>SD: .97  | <b>Mean: 2.94</b><br>SD: 1.61 |
| Preposition (134)<br>Expected: -en             | <b>Mean: 4.39</b><br>SD: 1.08 | <b>Mean: 3.32</b><br>SD: 1.54 |
| Modal (135)<br>Expected: -e                    | <b>Mean: 3.69</b><br>SD: 1.60 | <b>Mean: 4.43</b><br>SD: 1.01 |

Table 5: Overview of ratings for all participants for questionnaire 1 (n = 537)

|                                                           | -en infinitive                | -e infinitive                 |
|-----------------------------------------------------------|-------------------------------|-------------------------------|
| Perception verbs (136)<br>Expected: -en                   | <b>Mean: 4.31</b><br>SD: .78  | <b>Mean: 3.01</b><br>SD: 1.43 |
| Adjunct (137) Expected:<br>-en                            | <b>Mean: 4.74</b><br>SD: .97  | <b>Mean: 3.45</b><br>SD: 1.51 |
| Purposive adjunct (138)<br>Expected: -e                   | <b>Mean: 3.60</b><br>SD: 1.35 | <b>Mean: 4.32</b><br>SD: .92  |
| Hawwe & fine (139)<br>Expected: -en                       | <b>Mean: 3.51</b><br>SD: 1.03 | <b>Mean: 2.01</b><br>SD: 1.23 |
| Infinitive as subject<br>(140)<br>Expected: both -en & -e | <b>Mean: 4.09</b><br>SD: .83  | <b>Mean: 3.60</b><br>SD: .63  |
| Infinitive as object (141)<br>Expected: both -en & -e     | <b>Mean: 4.06</b><br>SD: .82  | <b>Mean: 3.69</b><br>SD: .84  |

Table 6: Overview of ratings for all participants for questionnaire 2 (n = 350)

Paired sample t-tests show that for all contexts the difference in ratings between the *-en* and *-e* infinitive is significant ( $p < .001$ ). The *-e* infinitive has higher ratings in the context of modals and purposive adjuncts. In all other contexts, the *-en* infinitive has higher ratings. For the “infinitive as subject” and “infinitive as object”, the difference in ratings between the two suffixes are the smallest, and this is exactly the context in which both suffixes are allowed, according to the literature.

At first glance, these results suggest that the participants behave exactly as expected and follow the distribution reported in the literature. However, if we look closer at this table, it is clear that no option is judged as completely ungrammatical: most of the means are above 3, which is the middle point of the 5-point scale. The high standard deviations suggest that there is a lot of variation between speakers. In the next section I will therefore take a closer look at individual patterns.

The percentage of participants who accept an *-e* suffix in a nominal context (which is unexpected) is actually quite high, as presented in Table 7. The same holds for the reverse situation of accepting the *-en* suffix in a verbal context:

|                                                | Questionnaire 1 | Questionnaire 2 |
|------------------------------------------------|-----------------|-----------------|
| <i>-e</i> in <i>-en</i> contexts <sup>31</sup> | 48%             | 43%             |
| <i>-en</i> in <i>-e</i> contexts <sup>32</sup> | 70%             | 55%             |

Table 7: Percentage of participants accepting these items (i.e. rating 4 or 5 on a 5 point scale)

It turns out that almost half (48% and 43%) of the participants accept an *-e* suffix in cases where we would expect the *-en* suffix. Many more accepted the *-en* suffix in cases where we would expect the *-e* suffix (70% and 55%). This shows that for many speakers, their grammar is not the same as that of original Frisian; there has been language change.

Of course, the fact that the acceptance rates are high in general might be the result of second language learners who did not fully acquire Frisian, and who are an important group for language contact. Looking at the results of L1 speakers of Frisian separately, we do find slightly different numbers (see Table 8 and Table 9). For example, the perception verbs are rated on average

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<sup>31</sup> These include the following contexts: determiners, prepositions, *te* (“to”), perception verbs, adjuncts and *hawwe*. I excluded the results for the *fine* context here since they are very low; even the “expected” use of *-en* is not considered grammatical by 77% of the participants.

<sup>32</sup> These include the following contexts: modals and purposive adjuncts.

4.38 for an *-en* suffix (compare 4.37 for all speakers, see Table 5) and 3.09 for an *-e* suffix (compare 3.17 for all speakers, see Table 5). Comparing Table 8 and 9 further to 5 and 6, we see that the pattern of results is still exactly the same, and the differences between ratings on *-e* and *-en* are not generally larger.

|                  | <i>-en</i> infinitive | <i>-e</i> infinitive |
|------------------|-----------------------|----------------------|
| Determiner       | 4.38                  | 3.09                 |
| <i>Te</i> ("to") | 4.51                  | 2.86                 |
| Preposition      | 4.39                  | 3.18                 |
| Modal            | 3.57                  | 4.39                 |

Table 8: Mean ratings questionnaire 1 of L1 speakers of Frisian only (*n* = 447)

|                         | <i>-en</i> infinitive | <i>-e</i> infinitive |
|-------------------------|-----------------------|----------------------|
| Perception verbs        | 4.36                  | 2.91                 |
| Adjunct                 | 4.81                  | 3.33                 |
| Purposive adjunct       | 3.53                  | 3.34                 |
| <i>Hawwe &amp; fine</i> | 3.53                  | 1,94                 |
| Infinitive as subject   | 4.05                  | 3.62                 |
| Infinitive as object    | 4.04                  | 3.63                 |

Table 9: Mean ratings questionnaire 2 of L1 speakers of Frisian only (*n* = 277)

Since the results of L1 speakers only are comparable to those of all participants, we can conclude that the change that we see is not only due to L2 speakers that did not fully acquire the language. In the remainder of the chapter, I will therefore include all speakers in the analysis.

A second question that one could ask is whether the high ratings are due to younger speakers of Frisian. Table 10 shows the mean ratings for different age groups for questionnaire 1 and Table 11 shows them for questionnaire 2.<sup>33</sup>

<sup>33</sup> These three age groups are divided in this way because it was the best compromise for

|                  | 16-34<br>years<br><i>n</i> = 137 |           | 35-49<br>years<br><i>n</i> = 168 |           | 50+<br>years<br><i>n</i> = 232 |           |
|------------------|----------------------------------|-----------|----------------------------------|-----------|--------------------------------|-----------|
|                  | <i>-en</i>                       | <i>-e</i> | <i>-en</i>                       | <i>-e</i> | <i>-en</i>                     | <i>-e</i> |
| Determiner       | 4.44                             | 3.45      | 4.45                             | 3.26      | 4.27                           | 2.94      |
| <i>Te</i> ("to") | 4.26                             | 3.14      | 4.56                             | 3.07      | 4.65                           | 2.72      |
| Preposition      | 4.26                             | 3.45      | 4.28                             | 3.49      | 4.54                           | 3.12      |
| Modal            | 3.87                             | 4.28      | 3.60                             | 4.51      | 3.64                           | 4.46      |

Table 10: Mean ratings per age group for questionnaire 1

|                            | 16-34<br>years<br><i>n</i> = 73 |           | 35-49<br>years<br><i>n</i> = 92 |           | 50+<br>years<br><i>n</i> = 181 |           |
|----------------------------|---------------------------------|-----------|---------------------------------|-----------|--------------------------------|-----------|
|                            | <i>-en</i>                      | <i>-e</i> | <i>-en</i>                      | <i>-e</i> | <i>-en</i>                     | <i>-e</i> |
| Perception verbs           | 4.37                            | 3.26      | 4.35                            | 3.18      | 4.26                           | 2.80      |
| Adjunct                    | 4.77                            | 3.70      | 4.73                            | 3.64      | 4.72                           | 3.23      |
| Purposive adjunct          | 4.09                            | 4.25      | 3.61                            | 4.41      | 3.38                           | 4.31      |
| <i>Hawwe</i> & <i>fine</i> | 3.39                            | 2.19      | 3.38                            | 1.89      | 3.61                           | 1.99      |
| Infinitive as subject      | 3.97                            | 3.71      | 3.91                            | 3.60      | 4.23                           | 3.55      |
| Infinitive as object       | 4.11                            | 3.64      | 4.11                            | 3.82      | 4.01                           | 3.63      |

Table 11: Mean ratings per age group for questionnaire 2

These analyses show that for some categories, the ratings from the older speakers are a little lower than those of the younger speakers. This is clear, for example, from the perception verbs and the adjuncts, in which the 50+ group rates the *-e* infinitive clearly lower than the other two groups. That is, these speakers still have the original distribution in which the *-e* infinitive is ungrammatical in these contexts. However, as language change is often found in younger speakers first, it is not unexpected that the younger speaker show more acceptance of “unexpected uses” (i.e. *-e* in nominal contexts and *-en* after modals). Moreover, even for the older speakers the ratings for these

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not having very different sized age ranges while still having a comparable number of participants per group. For 4 participants, the age was missing, so they were not included in these calculations.

“unexpected uses” are not below 3. Therefore, even though there is an age effect, we can conclude that language change is happening in all groups. In all groups, there are speakers that find both options grammatical, and therefore do not distinguish between *-e* and *-en*. But what do the results of these individual speakers look like? In the next section, I will show that speakers show different patterns. While there are speakers who only allow the original distribution of the suffixes, there are also speakers who accept both suffixes in all contexts, as well as speakers who show mixed results.

### 3.3.2.2 Individual patterns

When looking at the results in the previous sections, the question comes to mind what these means exactly mean for individual speakers. While the general results show that there is language change, we need to look at individual results to find out what this change looks like, as parameters are part of I-language, and language change therefore happens within the individual.<sup>34</sup> To investigate individual patterns, I randomly selected 5 participants and analyzed their ratings. Their ratings per context are presented below in Table 12, (where “*P<sub>n</sub>*” refers to the *n*th randomly selected participant):<sup>35</sup>

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<sup>34</sup> For a discussion of language change and I-language vs. E-language, see Chapter 2.

<sup>35</sup> For some contexts, such as the *hawwe/fine* context, there was more than one item. In those cases, the number in the table represents the mean of these items.

|                          |            | P 1<br>M, 74 | P2<br>F, 63 | P3<br>F, 48 | P4<br>F, 82 | P5<br>F, 51 |
|--------------------------|------------|--------------|-------------|-------------|-------------|-------------|
| 1. Determiner            | <i>-en</i> | 5            | 5           | 5           | 4           | 5           |
| (expected <i>-en</i> )   | <i>-e</i>  | 5            | 1           | 5           | 2           | 4           |
| 2. <i>Te</i>             | <i>-en</i> | 4            | 5           | 5           | 5           | 5           |
| (expected <i>-en</i> )   | <i>-e</i>  | 2            | 1           | 5           | 3           | 5           |
| 3. Preposition           | <i>-en</i> | 5            | 5           | 5           | 5           | 5           |
| (expected <i>-en</i> )   | <i>-e</i>  | 5            | 1           | 5           | 4           | 5           |
| 4. Perception            | <i>-en</i> | 5            | 5           | 5           | 3.5         | 4           |
| (expected <i>-en</i> )   | <i>-e</i>  | 2            | 1           | 5           | 1.5         | 5           |
| 5. <i>Hawwe / fine</i>   | <i>-en</i> | 4.5          | 4           | 4.5         | 2.5         | 3           |
| (expected <i>-en</i> )   | <i>-e</i>  | 2.5          | 1           | 4           | 2           | 3           |
| 6. Adjunct               | <i>-en</i> | 2            | 5           | 4.5         | 5           | 5           |
| (expected <i>-en</i> )   | <i>-e</i>  | 1            | 1           | 5           | 1           | 5           |
| 7. Infinitive as subject | <i>-en</i> | 4.5          | 5           | 4.5         | 2.5         | 4.75        |
| (expected <i>both</i> )  | <i>-e</i>  | 2            | 3.75        | 5           | 2.75        | 1.5         |
| 8. Infinitive as object  | <i>-en</i> | 2.5          | 5           | 4.25        | 3           | 5           |
| (expected <i>both</i> )  | <i>-e</i>  | 3.25         | 3           | 4.75        | 2.75        | 4.25        |
| 9. Modal verb            | <i>-en</i> | 5            | 5           | 5           | 5           | 5           |
| (expected <i>-e</i> )    | <i>-e</i>  | 5            | 5           | 5           | 4           | 5           |
| 10. Purposive adjunct    | <i>-en</i> | 1            | 1           | 5           | 2           | 2.5         |
| (expected <i>-e</i> )    | <i>-e</i>  | 1.5          | 4.5         | 3           | 3           | 3           |

Table 12: Results, per context, for 5 randomly selected participants

Let us consider each speaker separately. Participant 1 is a 74-year-old man, whose native language is Frisian and who speaks Frisian 98% of the time. He does not follow the original distribution of the suffixes, as both options are judged grammatical ( $> 3$ , in these cases all 5's) in the context of a determiner (row 1), preposition (2) and modal verb (9).<sup>36</sup> On the other hand, in some contexts, the *-en* suffix is rated much higher than *-e*: after *te*, with perception verbs and in the *hawwefine* context (rows 4 and 5). For the infinitive as a subject, *-en* was preferred (row 7), but for the infinitive as an object, the data is a bit unclear: not very grammatical nor very ungrammatical. Finally, there

<sup>36</sup> A possible complication is the fact that the difference between *-e* and *-en* is just one letter, and participants might have interpreted an “ungrammatical use” of a suffix as a spelling mistake. However, although this might have happened in some occasions, I do not find this a plausible explanation for all variation in the data.

are some contexts in which neither option is judged to be grammatical (< 2), namely the adjunct contexts (rows 6 and 10). Why neither of these items was considered grammatical is unclear; perhaps it is because the adjunct examples were not very common syntactic structures and therefore felt a bit unnatural. In short, participant 1 shows some change compared to the traditional distribution, but not in all contexts. What would this mean in terms of parameter settings? Earlier in this chapter we saw that the variation between Dutch and Frisian infinitival suffixes could be explained by the following parametric difference:

- (142) Frisian  
 $n_{[nominalizing]}$ : [ən] (-en)
- Dutch  
 $n_{[nominalizing]}$ : [ə] (-en)

To allow for the *-e* suffix in the nominal infinitives, the parameter must look a little bit different for this person's Frisian grammar. For this person,  $n^0$  can be spelled out by either [ən] or [ə]:

- (143) Frisian  
 $n_{[nominalizing]}$ : [ən] (-en)  
[ə] (-e)

The results of this speaker do show restrictions: the speaker does not allow the *-e* suffix in all contexts. Perhaps this speaker has multiple grammars, following the idea of Roeper (1999) (see also Chapter 2, section 2.3). In that way, he would have both (142) and (143) in his grammar for Frisian, and it depends on the context which setting is used.

Participant 1 also allowed the *-en* suffix in a context where we expected the *-e* suffix: the modal verb context. Earlier in this chapter we saw that for the verbal infinitive, there is actually no difference between Dutch and Frisian speakers. For both, the relevant parameter looks like this:

(144) Frisian

$v_{[inf]}$ : [ə] (-e)

Dutch

$v_{[inf]}$ : [ə] (-en)

There is only a spelling difference. However, this person now allows [ən] (-en) in this position, too. The parameter must then have a different setting than the original Frisian setting and look as follows for this speaker:

(145) Frisian

$v_{[inf]}$ : [ə] (-e)

[ən] (-en)

This changed parameter is a bit paradoxical. While on the superficial level, in E-language, the language now seems more similar to Dutch (in both languages there is, for this person, no morphological distinction between verbal and nominal infinitives, and in both languages the infinitival suffix can be spelled as -en), we see that at the level of I-language, this parameter actually makes Frisian different from Dutch: it has the option of spelling out  $v^0$  as [ən], whereas this is not possible in Dutch. In the next section, I will go deeper into the relation between the change and the Dutch pattern. For now, we can conclude that this speaker shows changes (compared to the earlier situation in Frisian), even though he is already 74.

Let's now turn to participant 2. This participant is a 63-year-old woman whose native language is Frisian and who speaks Frisian 90% of the time. She allows a traditional distribution of the suffixes; in contexts where -en is expected, this is rated grammatical and -e is rated ungrammatical, and vice versa for the purposive adjunct contexts where -e is expected. The only exception is the modal context: here both options are judged grammatical. For this participant the -en suffix is capable of spelling out  $v^0$ . That means that she has the parameter setting in (144), rather than the original one in (143).

Participant 3 is a 48-year-old woman, whose native language is Frisian but who speaks it only 20% of the time. She judges all options as grammatical (> 3). For this speaker, the language change has completely taken place: the suffixes are interchangeable, and there is no morphological distinction between the verbal and nominal infinitive anymore in Frisian. The parameter settings of this speaker must then be as follows, similar to Participant 1:



- (146) Frisian  
 $n_{[\text{nominalizing}]}$ : [ə $n$ ] (-*en*)  
[ə] (-*e*)
- (147) Frisian  
 $v_{[\text{inf}]}$ : [ə] (-*e*)  
[ə $n$ ] (-*en*)

Participant 4 is an 82-year-old woman whose native language is Frisian, but who speaks this only 10% of the time. For this participant, we find mixed results. In some cases, we find the distribution of original Frisian: for example, in the determiner context *-en* is considered grammatical (rated 4) but *-e* is not (rated -*e*). In other cases, for example the preposition context, both suffixes are considered grammatical (rated 5 (-*en*) and 4 (-*e*)). Like participant 1, this speaker probably has multiple grammars, and their use depends on the context.

Participant 5, finally, is a 51-year-old woman who learned Frisian as an adult and now speaks it 40% of the time. This speaker judges every option as grammatical (except, for unknown reasons, an *-e* suffix when the infinitive is used as a subject).<sup>37</sup> For this speaker, the suffixes are interchangeable and the parameter settings must look as in (143) and (144). This might be due to the fact that she is a second language learner of Frisian. However, the results of the previous section showed that second language learners and native speakers do not show significantly different results.

### 3.3.2.3 Discussion

The previous section discussed the results from the questionnaires. We can conclude from the data in this chapter that there is a change taking place: many speakers do not follow the original distribution of the suffixes anymore. We already looked into how this change works in terms of changed parameters: it is the result of changed settings in two Spell-out parameters. In

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<sup>37</sup> It is not the case that the speakers who find all options grammatical simply accept any item, since in other parts of the questionnaire not everything was rated grammatical. Therefore, we can assume that these speakers did seriously consider the items.

Chapter 2, I discussed three hypotheses regarding what aspects of I-language are more prone to change than others. One of these concerned Spell-out parameters:

- (148) “Spell-out before Move and Merge”-hypothesis:  
 Spell-out parameters are more prone to change than Move parameters and Merge parameters.

This hypothesis says that Spell-out parameters are likely to change, compared to Move and Merge parameters. In this chapter, we find that these Spell-out parameters indeed showed changes; in the next chapters, I will compare this to Move and Merge parameters.

Based on work by Biberauer & Roberts (2017), another hypothesis I proposed in Chapter 2 concerned the size of parameters:

- (149) “Small before big”-hypothesis:  
 Smaller parameters are more prone to change than bigger ones

This hypothesis says that parameters which relate to a small class of items (for example one specific item or a subclass of functional items, such as modal verbs) are more likely to change than a big class of items (for example all verbs). Recall that the different parameter sizes that Biberauer & Roberts (2017) distinguish are the following:

- (150) a. Macroparameters: parameters relating to all functional heads of the relevant type  
 b. Mesoparameters: parameters relating to all functional heads of a given naturally definable class (e.g. [+V])  
 c. Microparameters: parameters relating to a small subclass of functional heads (e.g. modal auxiliaries)  
 d. Nanoparameters: parameters relating to one or more individual lexical items

The parameters discussed in this chapter concerned nominalizing  $n^0$  elements and infinitival  $v^0$  elements, which are subclasses of functional categories, so we could classify them as microparameters. The hypothesis in (149) suggests that these are more prone to change than mesoparameters or

marcoparameters. In the next chapters, I will consider the sizes of other parameters and reflect on this in relation to the changes that we find.

### 3.3.3 *Influence from Dutch*

So far, we have discussed what changes we found and how they work. Another question is *why* this change is happening. I would like to argue that the main reason for this change is language contact with Dutch. As discussed before, the Dutch infinitive always ends in [ə] (written as *-en*). A learner of Frisian might not be aware of the syntactic relevance of the different suffixes in Frisian. For second language learners of Frisian, whose frame of reference is Dutch, in which there is just one suffixal form (*-en*, [ə]), it might be difficult to pick up on this pattern. Moreover, the language input for the learner is complex: the distinction is a difference of only one phoneme and there is also a context in which there is optionality (both suffixes are correct when the infinitive is used as a bare subject or object). The learner might not ever hypothesize a morphological distinction between the two types of infinitives.

The results of the questionnaire suggest that Dutch influence is indeed related to this change. The participants were asked to indicate how much Dutch and Frisian they spoke on an average day (in %). Interestingly, these results correlate with their judgments on the infinitival items, as is illustrated in Table 13 for questionnaire 1 and in Table 14 for questionnaire 2. I excluded the context in which the infinitive is used as a bare subject or object, as both suffixes are expected to be accepted here.

|                         | % of Dutch spoken on average day | % of Frisian spoken on average day |
|-------------------------|----------------------------------|------------------------------------|
| <i>Expected uses</i>    |                                  |                                    |
| Determiner: <i>-en</i>  | $r = -.125^{**}$                 | $r = .120^{**}$                    |
| Preposition: <i>-en</i> | $r = -.133^{**}$                 | $r = .129^{**}$                    |
| <i>te</i> : <i>-en</i>  | $r = -.199^{**}$                 | $r = .219^{**}$                    |
| Modal: <i>-e</i>        | $r = .029$                       | $r = .029$                         |
| <i>Unexpected uses</i>  |                                  |                                    |
| Determiner: <i>-e</i>   | $r = .143^{**}$                  | $r = -.182^{**}$                   |
| Preposition: <i>-e</i>  | $r = .136^{**}$                  | $r = -.149^{**}$                   |
| <i>te</i> : <i>-e</i>   | $r = .072$                       | $r = -.088^{*}$                    |
| Modal: <i>-en</i>       | $r = .073$                       | $r = -.091^{*}$                    |

Table 13: Correlations acceptability ratings and language use for questionnaire 1. Significant correlations with  $p < 0.05$  are starred \*, significant correlations with  $p < 0.01$  are double starred \*\*.

|                                      | % of Dutch spoken on average day | % of Frisian spoken on average day |
|--------------------------------------|----------------------------------|------------------------------------|
| <i>Expected uses</i>                 |                                  |                                    |
| Perception verbs: <i>-en</i>         | $r = .016$                       | $r = .012$                         |
| <i>hawwe &amp; fine</i> : <i>-en</i> | $r = .123$                       | $r = -.123$                        |
| Adjunct: <i>-en</i>                  | $r = -.057$                      | $r = .089$                         |
| Purposive adjunct: <i>-e</i>         | $r = .065$                       | $r = -.016$                        |
| <i>Unexpected uses</i>               |                                  |                                    |
| Perception verbs: <i>-e</i>          | $r = .176^{**}$                  | $r = -.174^{**}$                   |
| <i>hawwe &amp; fine</i> : <i>-e</i>  | $r = .104$                       | $r = -.131$                        |
| Adjunct: <i>-e</i>                   | $r = .160^{**}$                  | $r = -.130^{*}$                    |
| Purposive adjunct: <i>-en</i>        | $r = .164^{**}$                  | $r = -.169^{**}$                   |

Table 14: Correlations acceptability ratings and language use for questionnaire 2. Significant correlations with  $p < 0.05$  are starred \*, significant correlations with  $p < 0.01$  are double starred \*\*.

The r-values in these tables reflect the amount of variation (on a scale of 0-1) which can be explained by this relation. That is, the r-value of .016 on the first row shows that the amount of Dutch that a participant speaks could explain 1,6% of the variation we find in the ratings of *-en* suffixes on perception verbs. If we focus on the significant correlations only, we can see a clear pattern. Looking at the “unexpected uses” (based on the distribution presented in

section 3.1), there is a positive correlation with Dutch, but a negative correlation with Frisian. This means that participants who speak more Dutch were more likely to accept the use of suffixes that were not originally viewed as grammatical. Participants who speak more Frisian on the other hand were less likely to accept the use of suffixes that were not originally viewed as grammatical. For questionnaire 1, we can also see some significant correlations for the expected uses. Here, the correlations go exactly in the opposite direction: there is a negative correlation with Dutch, and a positive correlation with Frisian. So, participants who speak less Dutch and more Frisian are more likely to follow the original distribution of the suffixes.

It is important to note that all correlations reported here are very small ( $r < 0.2$  in all cases) and do not explain a large part (less than 20%) of the variation. They cannot be taken as proof that language contact in Dutch is the main cause of the change. However, the way they pattern clearly indicates that there is some relation with the amount of Dutch that is spoken.

There are some other factors which might influence or perhaps even cause change. To investigate this, the questionnaire included background questions about the participants, as presented in Chapter 1. Since the place of birth and place of residence of the participants are extremely varied, and there is no *a priori* reason to expect a regional effect, I did not investigate these further. There was no significant effect of education level on the ratings. The factors education in Frisian, language of the parents and situations in which Frisian and Dutch is spoken did have significant effects on some but not all of the items (without a clear visible pattern). However, all these factors are connected to each other; for example, the language of the parents is closely related to the native language of the participant. Furthermore, the situations in which they speak Frisian and Dutch are closely related to the amount of Dutch and Frisian the participants speak. As this questionnaire was not intended to be large-scale sociolinguistic research, I will leave the exact impact of these other background factors for future research.

### 3.4 Conclusion

In this chapter, I discussed the changes that we find in the infinitival suffixes in Frisian. I have shown that while Dutch infinitives always have an [ə] (-en) suffix, Frisian shows syntactic variation between an [ə] (-e) and [ən] (-en) suffix. While the distribution of these suffixes is not completely

straightforward, syntactic analysis shows that [ən] (-en) is found on nominal infinitives and that it is a nominalizing  $n^0$ . The [ə] (-e) suffix, on the other hand, is found on verbal infinitives and spells out a  $v^0$ . While the Dutch nominal and verbal infinitive have the same syntactic structures as the Frisian ones, there is no phonological distinction: both  $n^0$  and  $v^0$  are spelled out by [ə] (-en). The variation between Dutch and Frisian involves a Spell-out parameter: the nominalizing head is spelled out as [ən] (-en) in Frisian, but as [ə] (-en) in Dutch. Data from questionnaires, presented in section 3.3, show that many speakers of Frisian accept both [ə] (-en) and [ən] (-en) in all contexts. This signals a language change; for these speakers, the parameter setting is different;  $n^0$  and  $v^0$  can now be spelled out in two ways.

# Chapter 4

## Noun incorporation

### 4.0 Introduction

This chapter presents a case study on variation in Frisian and Dutch Move parameters and the changes we find in Frisian. The case I discuss is the phenomenon of noun incorporation. Noun incorporation (NI) can be informally defined as the process in which a noun combines with a verb to form a complex verb. In Frisian, we find examples of NI, like in (1). In Dutch, we find a superficially similar but structurally different pattern, which I will call pseudo-noun incorporation (PNI), as in (2).<sup>38</sup>

- |      |                                                                                                                               |         |
|------|-------------------------------------------------------------------------------------------------------------------------------|---------|
| (1)  | Hy is oan't messeslypje.<br><i>He is at the knife-<math>\partial</math>-sharpen.INF</i><br>"He is sharpening a knife/knives." | Frisian |
| <br> |                                                                                                                               |         |
| (2)  | Hij is aan het muizen vangen.<br><i>He is at the mice catch.INF</i><br>"He is catching mice."                                 | Dutch   |

In this chapter, I will discuss the similarities and differences between these two patterns. I will argue that what these incorporation strategies have in common is that they both license arguments which are smaller than a DP and

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<sup>38</sup> In both Frisian and Dutch, there is another type of incorporation which involves fixed noun + verb combinations such as *pianospelen* ("piano-play"). I will briefly discuss these types of incorporation in section 4.3, but they will not be the main focus of this chapter.

which can therefore not receive Case in their base position (cf. Massam 2001, Iordăchioaia, Alexiadou & Pairamidis 2017). I will argue that the variation between Frisian and Dutch lies in the way they license these arguments: one strategy is noun incorporation by head movement (which we find in Frisian), another strategy is phrasal movement to a spec,vP position (which we find in Dutch).<sup>39</sup> A second point of variation is the size of the arguments which are licensed: while in Frisian we are dealing with Classifier-sized objects, in Dutch these instances involve NumP-sized objects.

The structures I propose for the incorporation examples in (1) and (2) are presented below in (3) and (4), respectively. These structures will be discussed in more detail in sections 4.1 and 4.2.

(3)

<sup>39</sup> It must be noted that the reverse is not possible; the noun incorporation strategy is ungrammatical in Dutch, and the pseudo-noun incorporation strategy is ungrammatical in Frisian.

The variation between the Frisian and Dutch incorporation strategies is another interesting case study for micro-variation and language change in the Dutch-Frisian language area. I will argue that the variation we find here is variation in Move parameters.<sup>40</sup> More specifically, I will claim that the grammar of Frisian speakers involves the parameter in (5), which states that a Classifier (or an  $n^0$ , which will be explained in section 4.1.1.3) incorporates into a verb, the grammar of Dutch speakers involves the parameter in (6), which states that NumP-sized arguments can move to the specifier of infinitives.

- (5) Frisian noun incorporation
- |    |                     |              |
|----|---------------------|--------------|
| v: | $F_{\text{search}}$ | Class, $n^0$ |
|    | $F_{\text{IM}}$     | Class, $n^0$ |
- (6) Dutch pseudo-noun incorporation
- |                      |                     |                |
|----------------------|---------------------|----------------|
| $v_{[\text{inf}]}$ : | $F_{\text{search}}$ | NumP           |
|                      | $F_{\text{IM}}$     | NumP (to Spec) |

<sup>40</sup> In Chapter 2, I proposed that all syntactic variation is parametric and that there are only three types of parameters: Merge parameters, Move parameters and Spell-out parameters (following Rizzi 2017).

My questionnaire data shows that some speakers of Frisian do not accept the original Frisian NI examples anymore. Moreover, some speakers of Frisian do accept Dutch-like PNI structures in Frisian. In the final part of the chapter, I will discuss these data and show that this latter group of speakers now has the parameter setting in (6) as well. Noun incorporation therefore gives us another interesting opportunity to look into syntactic changes in a language contact situation: it shows that superficially similar patterns (Frisian NI vs. Dutch PNI) can lead to language change, even though the underlying syntactic structures of these patterns are different (see section 4.5).

This chapter is organized as follows: in section 4.1, I discuss the Frisian noun incorporation strategies and provide an analysis in terms of head movement. In section 4.2, I discuss the Dutch pseudo-noun incorporation patterns and provide an analysis in terms of phrasal movement. In section 4.3 I will briefly discuss verbs like *pianospelen* (“piano-play”) which also seem to involve a type of incorporation, which occurs in both Frisian and Dutch. In section 4.4, I discuss how this crosslinguistic variation can be captured in Move parameters. Section 4.5 concerns the changes that are taking place for some speakers of Frisian who accept Dutch-like pseudo-noun incorporation patterns in Frisian. Finally, section 4.6 concludes the chapter.

## 4.1 Frisian noun incorporation

### 4.1.0 Introduction

As shown in the introduction, internal arguments can incorporate into the verb in Frisian. This was illustrated in (1), repeated here as (7a). While (7b) shows a regular verb with a DP object, (7a) provides an example of the incorporated version of this sentence: the bare noun *mes* (“knife”) is attached to the verb (with a linking suffix *e*) and there is no determiner.

- (7) a. Hy is oan’t messeslypje.  
       *He is at the knife-ə-sharpen.INF*  
       “He is sharpening the knife/knives”  
       b. Hy is it mes / (de) messen oan’t slypje.  
       *He is the knife / the knives at the sharpen.INF*  
       “He is sharpening the knife / (the) knives.”

According to Dyk (1997), there are two main characteristics of Frisian noun incorporation. First, it always involves a complex verb of the type [N V]<sub>v</sub>: *messeslyppe* is one word which consists of a noun (*mes*, “knife”) and a verb (*slyppe*, “sharpen”), and the unit behaves as a verb.<sup>41,42</sup> Second, there is a parallel construction in which the N is part of a DP which is the internal argument of the verb (for example, (7b) is the parallel construction to (7a)).

The Frisian noun incorporation pattern is productive. New noun + verb combinations can be made. Moreover, they can occur in several contexts. NI patterns are most common in infinitives (see (7a)), but can also occur in finite verbs (cf. (8)) and participles (cf. (9)) (examples from Hoekstra 2018c).

- (8)     Heit   ierappeldolt   de hiele dei.  
          *Father potato-digs   the whole day*  
           “Father has been digging potatoes the whole day.”

- (9)     Ik ha     noch net messeslipe.  
           *I have yet not knife-3-sharpened*  
           “I have not yet sharpened any knives/a knife.”

A finite example in (8) is less frequent and less acceptable for Frisian speakers than non-finite examples (Dyk 1997). This might be due to the fact that verbs in incorporation patterns are always durative (Dyk 1997) and that finite verbs are generally not used to express durative activities in Frisian. Instead, the *oan* ‘t (“at the”) progressive construction is preferred in this case, as in (7a).<sup>43</sup> In section 4.1.1, I will argue that the durativity in Frisian NI patterns is related to the size of the object (a Classifier rather than a full DP).

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<sup>41</sup> The notion “word” will be further discussed in the course of this chapter. The arguments for the idea that incorporation structures like *messeslyppe* are really one word will be discussed in section 4.1.2.

<sup>42</sup> In between the noun and verb we find a schwa (see example (7a)), which links the noun and the verb. In the next section, I will discuss this linking element further.

<sup>43</sup> This is actually similar to English, in which the progressive has to be used for ongoing activities, rather than the present simple.

There is one context in which incorporation patterns cannot occur, namely in *te*-infinitives:<sup>44</sup>

- (10) \*Hy skynt te messeslypjen.  
*He seems to knife- $\partial$ -sharpen.INF*  
 “He seems to be sharpening knives / a knife.”

One characteristic of the Frisian NI pattern is that the object is never referential. Although the non-incorporated (7b) is closely related to the incorporated (7a), the interpretation of (7a) is slightly different. This is due to the fact that whereas the object in (7b), *it mes/(de) messen* (“the knife/the knives”), is referential, the object in (7a), *messe* (“knife”), is not. In (7a) it is undetermined whether only one knife will be sharpened, or more than one. The incorporated verb is interpreted as referring to a generic process of knife-sharpening, rather than the sharpening of one or more specific knives. In (7b), on the other hand, *it mes* refers to a single knife and *(de) messen* to specific multiple knives. This point is confirmed by the fact that (7b) can be referred back to by a pronoun (cf. (11b)), but (7a) cannot be (cf. (11a)).

- (11) a. Hy is oan’t messeslypje.                   ?Sy binne / ?It is bot.  
*He is at the knife- $\partial$ -sharpen.INF. They are / it is blunt*  
 “He is sharpening a knife / knives. They are / it is blunt.”  
 b. Hy is messen oan’t slypje.                   Sy binne bot.  
*He is knives at the sharpen.INF They are blunt.*  
 “He is sharpening knives. They are blunt.”

In this chapter, I will argue that this lack of referentiality is due to the fact that the object is not a DP, but rather a Classifier Phrase, which is the functional layer where diminutives are merged (following Wiltschko 2006, De Belder 2008, 2011).

Frisian NI is similar to NI in certain non-European languages discussed in

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<sup>44</sup> There is one exception to this, which is the absentive construction, as in (I). This construction and its differences from other *te*-infinitives will be the topic of Chapter 5.

(I) Jan is te briefskriuwen.  
*Jan is to letter-write.inf*  
 Jan is off writing letters.”

the literature, such as Mohawk (Baker 1988). In Mohawk, we find examples where the object is part of the verb, as in (12a), where *nuhs* ("house") is part of the verb (Baker 1988:97). This is different from (12b), where the object is a separate word (Baker 1988:98).

- (12) a. watesyvtš    hra-nuhs-nuhweʔ-s                      Mohawk  
          doctor        3MS.house-like.perf  
          "The doctor likes the house."  
       b. watesyvtš    hra-nuhweʔ-s ne    ka-nuhs-aʔ  
          doctor        3MS.like.perf        pre.house.suf  
          "The doctor likes the house."

Baker analyzes examples such as (12a) as head movement of an N into a V. I will follow Baker in assuming that NI involves head movement, but I will propose that in Frisian it is head movement of a Classifier. This is based on the linking suffix which we find in Frisian NI patterns. In addition to the form *messeslypje* (as in (7a)), in which we find a schwa linking suffix, Frisian also allows for incorporation patterns with no linking suffix (13a) or with a diminutive morpheme as a linking suffix (13b):<sup>45</sup>

- (13) a. Hy is    oan't    messlypje.  
          He is    at the    knife -sharpen.INF  
          "He is sharpening the knife/knives"  
       b. Hy is    oan't    meskeslypje.  
          He is    at the    knife.DIM-sharpen.INF  
          "He is sharpening the knife/knives"

The presence of this diminutive suffix, which I analyze as a Classifier (following Wiltschko 2006, De Belder 2008,2011), leads me to propose that Frisian does not involve incorporation of a noun into a verb, but rather of a Classifier (Class) into a verb. The structure which I propose for Frisian noun incorporation patterns is illustrated in (14):

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<sup>45</sup> In section 4.1.1.1, I will discuss these linking suffixes in more detail.

Here, a classifier object incorporates into *v* (taking along the root  $\sqrt{\text{SLYP}}$ )<sup>46</sup>, which results in a verb containing the internal argument, in this case *messeslypje* (“knife-sharpen”). The main arguments for this analysis will be presented in the next two sections and they are twofold. In section 4.1.1, I will argue that a Classifier-sized object can explain both the form of the linking suffix and the semantics of Frisian NI’s. In section 4.1.2, I will then argue that a head movement-analysis can explain the syntactic behavior of Frisian NI’s.

### 4.1.1 Incorporation of a classifier

In this section I will discuss the size of the object that incorporates into the verb in Frisian. I will argue that the object is a Classifier, based on the linking suffix (which, I will argue in this section, is a Classifier element) and the fact that it is undetermined for number (and therefore cannot include a NumberP).

Recall from the previous section that the object in NI patterns is not referential, as repeated here in example (15):

- (15) Hy is oan’t messeslypje.      ?Sy binne / ?It is bot.  
*He is at the knife-sharpen.INF. They are / it is blunt*  
 “He is sharpening a knife / knives. They are / it is blunt.”

<sup>46</sup> Alternatively, one could assume that *v* attracts the root and Class in parallel (see Chomsky 2008). If these movements happen simultaneously, the attraction of Class by *v* might be more clearly visible than in (14).

Referentiality is usually assumed to be added in the DP layer, since D is the position for determiners. Non-referential objects are therefore expected to be smaller than a DP. Alexiadou (2017) further claims that objects smaller than a DP are not quantized (i.e., they are not constrained to specific elements or individuals, see Borer 2005 for more on the notion *quantization*), and therefore not referential. We can thus conclude that the nominal part in Frisian NI is smaller than a DP.

Recall from Chapter 3 that I assume the following structure for nominal elements (following Alexiadou 2013:134):

We have seen that the object in Frisian NI patterns is smaller than a DP. I now propose that it is a Classifier. This is based on two two pieces of empirical evidence: the linking suffix and the fact that it is undetermined for number.

4.1.1.1 The linking suffix

In Frisian, there are three different forms for noun incorporation patterns: no linking suffix, a schwa linking suffix, and a diminutive linking suffix. This is illustrated below:

- (17)
- a. messlypje  
*knife-/ø/-sharp.inf*
  - b. messeslypje  
*knife-/ə/-sharp.inf*
  - c. meskeslypje  
*knife-DIM-sharp.inf*

These three variants are interchangeable (Dyk 1997). The addition of a linking suffix is optional and does not result in extra meaning. Even in the case of the diminutive linking suffix, there is no additional meaning: *meskeslypje* does not refer to the sharpening of little knives (Dyk 1997).

Even though these variants are in principle interchangeable, there are some restrictions on the addition of the schwa. A schwa linking suffix is ungrammatical for nouns with plurals in *-s* rather than *-en* (18a) and for mass nouns (18b):

- (18)    a.    *appel(\*e)ite*            (“apple-eat”)  
              *finster(\*e)fervje*    (“window-paint”)  
              b.    *wyn(\*e)drinke*    (“wine-drink”)<sup>47</sup>

Although this might suggest that the *-e* suffix is a plural suffix, I argue that it is not. First of all, the plural suffix is *-en* rather than *-e* in Frisian. According to several native speakers, this is a hearable difference. Secondly, the addition of this suffix does not make the noun plural; both *messlypje* and *messeslypje* could describe the sharpening of one single knife.

As the first part of a noun incorporation pattern can put restrictions on the linking suffix, I will assume that it is a functional element attached to this first (nominal) root ([ $\sqrt{\text{MES}}$ ] in (17)). Since we have seen that there is no meaning difference between the variants in (17), I propose that the linking suffix is the same functional elements in all variants. To be precise, I argue that the linking suffix is a Classifier element, based on Wiltschko (2006) and De Belder (2008, 2011) who show that for Dutch and German, diminutives behave as Classifiers (or Size-heads in De Belder’s terminology). Similar to numeral Classifiers (i.e. elements which describe an amount, such as “piece”), diminutives determine the gender of a noun (making it neuter in both languages), and make a noun countable, as illustrated below:

- (19)    *de sleutel*                      *het sleuteltje*                      Dutch  
              *the.COMM key*                *the.NEUT key.DIM*

---

<sup>47</sup> The fact that mass nouns can incorporate suggest that elements other than Classifiers can incorporate. I will discuss the incorporation of mass nouns in detail in section 4.1.1.3.



- |      |                                    |                                                  |
|------|------------------------------------|--------------------------------------------------|
| (20) | het bier<br><i>the beer</i> (mass) | het biertje<br><i>the beer.DIM</i> (one portion) |
|------|------------------------------------|--------------------------------------------------|

Moreover, they are in complementary distribution with numeral classifiers such as “glass” or “piece”, as (21) shows:

- |      |                                             |        |
|------|---------------------------------------------|--------|
| (21) | *2 glass Schnaps-erl<br>2-glass-Schnaps-DIM | German |
|      | *1 glas biertje<br>1 glass beer.DIM         | Dutch  |

As these show, it is not possible to have both a numeral classifier and a diminutive. Wiltschko (2006) therefore argues that the diminutive is a classifier, which I will assume to occupy Class<sup>0</sup>.

As diminutives are bound suffixes in Dutch and German, they need to attach to something. They can attach either to a light noun inserted into this Classifier position or to the main noun moved into it. Wiltschko (2006) argues that diminutive suffixes can have different functions across languages. In Frisian, they behave the same as in Dutch and German. They determine the gender of the noun (by turning common gender to neuter, cf. (22)), make a noun countable (23), and are in complementary distribution with numeral Classifiers (24).

- |      |                                    |                                                |
|------|------------------------------------|------------------------------------------------|
| (22) | de kaai<br><i>the.COMM key</i>     | it kaaike<br><i>the.NEUT key.DIM</i>           |
| (23) | it bier<br><i>the beer</i> (mass)  | it bierke<br><i>the beer.DIM</i> (one portion) |
| (24) | *1 glas bierke<br>1 glass beer.DIM |                                                |

These examples show that like Dutch and German diminutives, Frisian diminutives can also be analyzed as Classifiers. The structure that I propose for [meske] is therefore as follows:

(25)

[√MES] starts out as a root. It is then categorized as a noun by merging with  $n^0$ . Subsequently, [<sub>n</sub> mes] merges with Class. As -ke is a bound morpheme, [<sub>n</sub> mes] has to head-move to this position, becoming [Class meske].

We have now seen that [meske] in *meskeslyppe* minimally includes a ClassP. As there are no meaning differences between it and either *messeslyppe* or *messlyppe*, I assume that [messe] (with a schwa linking suffix) and [mes] (without a linking suffix) are also ClassP-sized. Alternatively, one could assume that the latter two are nPs, and that the object of a Frisian noun incorporation pattern does not have to be a classifier, but that it is *maximally* the size of a Classifier. I will discuss this further in section 4.1.1.3.

#### 4.1.1.2 The lack of a NumP

The second argument why the object in Frisian NI patterns is a ClassP is the fact that it is undetermined for number. Even though [mes] does not have plural marking in both sentences, the context suggests that the example in (26a) refers to one knife and (26b) to multiple knives.

- (26) a. Syn messensamling is grut. Hy is lang oan't  
*His knife-collection is big. He is long at the*  
*messlyppe.*  
*knife-sharpen.INF*  
 “His knife collection is big. He has been sharpening knives for  
 a long time.”

- b. Dat mes is tige bot. Hy is lang oan't  
*That knife is very blunt. He is long at the*  
*messlypje.*  
*knife-sharpen.INF*  
 "That knife is very blunt. He has been sharpening knives for a  
 long time."

To sum up, the form of the linking suffix and the fact that it is undetermined for number suggest that the object in Frisian NI is a ClassP, rather than a DP.

#### 4.1.1.3 Incorporation of mass nouns

Above, I have argued that the object which incorporates into a verb in Frisian is Classifier-sized. This falsely predicts that mass nouns cannot be incorporated. That is, the analysis suggests that all incorporated nouns have the size of a Classifier projection, while mass nouns are usually assumed to be smaller than that (see for example Borer 2013). Mass nouns are able to incorporate in Frisian, as illustrated in (27):

- (27) Heit is oan't wyndrinken.  
*Father is at the wine-drink.INF*  
 "Father is drinking wine."

Here, the mass noun *wine* is incorporated into the verb *drinken*. To account for this, the analysis needs to be slightly adjusted. Instead of proposing that it is always a classifier which incorporates, I propose that the element which incorporates is at most the size of a Classifier. That is, if there is no classifier present in the structure, a smaller element can incorporate, too. This is illustrated below in (28):

This means that the element  $v^0$  in Frisian can attract a Classifier or an  $n^0$ . Following this line of reasoning, it is possible that the form *messlyppe*, in which there is no visible linking suffix present, also involves incorporation of an  $n^0$ , rather than a Classifier.

### 4.1.2 Head movement

In the previous section, I proposed that the object in Frisian noun incorporation patterns is (at most) a Classifier. I analyze Frisian NI as head movement of this classifier (or nP) into a verb, as illustrated in (3) (repeated here as (29)).

Following Harley (2009) I assume that roots can take internal complements;

that is, a root merges with its internal argument before the root is classified as a verb. In this case, the internal argument is a ClassP. I propose that in Frisian, classifiers can incorporate into v. Since heads cannot skip intervening heads (see Travis's Head Movement Constraint, Travis 1984), the Classifier moves via the root  $\sqrt{\text{SLYP}}$  and takes it along when moving further.<sup>48</sup> The whole unit [meskeslyp] then turns into a verb.

The arguments for a head movement analysis are both empirical and theoretical. First, let's turn to the theoretical argumentation. Following Baker (1988), Massam (2001) and Harley (2009) among others, I assume that arguments which are not DP-sized do not receive accusative case in the regular way. Noun incorporation is therefore often viewed as a way to obey Case requirements (see for example Harley 2009). Following Baker (1988), I propose that it is not Case per se, but rather the need to obey the "Condition of Morphological Identification" which drives noun incorporation:

- (30)     The Condition of Morphological Identification (Baker 1988:156)  
           If B is the NP position at the head of a chain, B bears a theta index at LF only if it bears a morphological index.

This condition states that an object B can only receive a theta role if it bears a "morphological index". A morphological index relates the argument to the theta-assigning predicate. For example, a morphological index can be a Case feature. If an argument B bears accusative case, this Case feature signals a relation with the nearest accusative-assigning predicate X. In this way, the theta-assignment of X to B is visible at the LF interface, and therefore interpretable.

According to Baker (1988:149-159), there are four ways to be "visible", as presented in (31):

- (31)     I.        Case  
           II.       Rich agreement on the verb  
           III.       Adjacency  
           IV.       Incorporation

The first way to be visible is to be Case marked. This does not only hold for accusative Case, but also for inherent cases like genitive, as in (32):

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<sup>48</sup> See, however, footnote 46 for an alternative to this pied-piping of the root.

## (32) The city's destruction

In this example, *the city* is assigned genitive case by the nominalization *destruction* (Baker 1998: 152). This genitive case makes *the city* visible at LF and signals that a thetarole must be assigned by the nearest genitive-assigning nP.

The second way to be visible at LF is to have rich agreement on the verb, as illustrated by the Tuscarora (an Iroquian language spoken in the United States) example in (33) (Baker 1988:154, from: Williams 1976):

- (33)    *wi:rv:n*    *wa-hra-kv-ʔ*                      *tsi:r.*                      Tuscarora  
           *William*    *aor.3MS/NO-see-PUNCT*    *dog*  
           "William saw a dog."

In Iroquian languages the word order is free. As there is no morphological marking (Case) on the DPs, the only way to know which DP is the subject and which is the object here is via the morphological marking on the verb. The prefix *hra*, which is found on the verb *wa-hra-kv-ʔ* ("saw") in this example, only occurs when there is a 3<sup>rd</sup> person masculine subject (in this instance: *wi:rv:n* "William") and a 3<sup>rd</sup> person non-human object (in this instance: *tsi:r* "dog"). Therefore, this morphological marking on the verb makes the theta relations visible: it shows which DP is the subject (the 3<sup>rd</sup> person masculine one) and which DP is the object (the 3<sup>rd</sup> person non-human one).

A third way to be visible is adjacency. Baker (1988) states that in languages like English, adjacency is the main way to signal semantic relationships between two items. Consider in this respect (34):

- (34)    a. William saw the dog.  
           b. The dog saw William.

Word order determines the meaning of these sentences; the item to the right of the verb is interpreted as the patient, i.e. *the dog* in (32a) and *William* in (32b).

Baker's (1988) fourth and last way to be "visible" is noun incorporation. By NI Baker (1988) refers to head movement of a noun into a verb. For instance, he analyzes (12a), repeated here as (35), as movement of the noun *nuhs* ("house") to the verb *nuhweʔ* ("like") as in (36) (Baker 1988:103):

- (35) watesyvts hra-nuhs-nuhwe?-s                      Mohawk  
*doctor      3MS.house-like.perf*  
 "The doctor likes the house."

According to Baker (1988), the relation between the verb and the DP to which it assigns the theta role is clear here, as part of the DP appears inside the verb itself.

There are, thus, four ways to satisfy the Condition of Morphological Identification, according to Baker. Since regular Case assignment is not possible for objects smaller than a DP (following Massam 2001 among others), the condition must be satisfied in a different way for these objects. In Frisian we see no signs of strategy II (rich agreement on the verb). Therefore, this theory suggests that the Frisian NI examples have to involve either head movement or adjacency. In section 4.2, I will argue that Dutch opts for an adjacency strategy. Empirical evidence shows that Frisian NI patterns must involve head movement, as will be presented below.

As mentioned earlier, nouns can incorporate into finite verbs in Frisian, as in (37):

- (37) Heit ierappeldolt de hiele dei.  
*Father potato-digs the whole day*  
 "Father has been digging potatoes the whole day."

The verb *ierappel-dolt* ("potato-digs") is a finite verb. Since Frisian is a Verb Second language (Tiersma 1985), this verb is located in C; it moved there from *v* via T. Since the nominal part *ierappel* ("potato") has been pied-piped to the C position, it must be a part of the head in *v*. Therefore, I conclude that the derivation is as in (38); the Classifier moves into *v* (the NI process) and this *v* moves further up to T and then to C.





can also be applied to incorporated verbs. This fact also supports the claim made in section 4.1.1 that the incorporated nouns cannot be as big as DP's. One example is the process of vowel shortening. Frisian, long vowels may undergo shortening when a suffix or a member of a compound is added to the stem. This process does not cross word boundaries; the fact that it can be found in noun incorporation (see (39)) therefore suggests that NI's are indeed one word.<sup>50</sup>

- (39) *aai* [a:j] ("egg") becomes [aj] in *aisykje* ("egg-seek")

Other phonological cues that noun incorporations behave as single words are the presence of the "breaking" process<sup>51</sup> and particular stress patterns. However, since these are not directly relevant for my analysis and only serve as further evidence for the fact that the nominal and verbal part in Frisian NI patterns form one word, I will not explain them here and instead refer the interested reader to Dyk (1997), section 2.3.

To summarize, in this section and the previous one I presented my analysis of Frisian noun incorporation patterns. I argued that this is a way for arguments smaller than a DP to be "visible", in order to obey the Condition of Morphological Identification (Baker 1988). I have argued that the nominal part in Frisian NI patterns must be (at most) a Classifier, based on the fact that it is undetermined for number and the fact that the linking suffix can be a diminutive. Furthermore, I have argued that this classifier incorporates (i.e. head moves) into the verb, as evidenced by the fact that this complex head moves further in the structure (to T and C) and the fact that this complex head behaves as one word phonologically.

### 4.1.3 *A Move parameter*

In the two preceding sections I presented my analysis of Frisian noun incorporation. I have shown that noun incorporation is a strategy to make an

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<sup>50</sup> In this chapter, I use both the notion *compound* and *noun incorporation*. As noun incorporation patterns are, as argued in this section, also one word (contrary to pseudo incorporations, discussed in section 4.2), I consider them to be a subtype of compounding.

<sup>51</sup> Breaking is the phonological process in which diphthongs such as /iə, yə, uə, ɪə, ɔə/ in simplex words may alternate with the glide + vowel sequences [jɪ, jø, wo, jɛ, wa] in complex words such as plurals, diminutives, and compounds (Dyk 1997).

argument which is smaller than a DP “visible” at the LF interface, in order to obey the Condition of Morphological Identification (Baker 1988). While there are more languages in the world which allow for noun incorporation via head movement (for example Mohawk (Baker 1988) and Greek (Iordăchioaia et al. 2017)), not all do: this is a point of crosslinguistic variation. Since all syntactic variation can be expressed in parameters (see Chapter 2), the possibility for noun incorporation must, therefore, be encoded in a parameter too. Recall that the structure for Frisian NI’s which I propose is as follows (see also example (14)):

As discussed in section 4.1.1, the incorporation of the root  $\sqrt{\text{MES}}$  into the verb involves a few steps. First, the root is categorized by an nP. This is possible in all languages which have nouns. Next, the noun *mes* is turned into a diminutive: the ClassP projection is merged on top of the nP and *mes* moves to Class, where it attaches to the bound morpheme *-ke*, becoming *meske*. Although not all languages will offer this possibility to make diminutives, this process is not specific to NI: the derivation of any diminutive in Frisian would involve these steps. The next steps, however, are relevant for noun incorporation: the Classifier moves up to the verb, while the root  $\sqrt{\text{SLYP}}$ , which is also attracted by  $v^0$  for categorization, is pied-piped.

The ClassP *meske* is the internal argument of the root. The possibility of NI in Frisian must be encoded on the verb, as this verb triggers the movement of the Classifier. The relevant parameter setting in the Frisian grammar is therefore related to v: v must be able to attract a classifier to head-move to it. In section 4.1.1.3, I showed that mass nouns can also incorporate in Frisian,

and I analyzed this as incorporation of an  $n^0$ . Incorporation in Frisian is thus the possibility of  $v^0$  maximally incorporating an element with Classifier size; a smaller,  $n^0$ -sized element can also incorporate. I propose that this can be represented by means of the following Move parameter:

- (41) Frisian noun incorporation
- |    |                     |              |
|----|---------------------|--------------|
| v: | $F_{\text{search}}$ | Class, $n^0$ |
|    | $F_{\text{IM}}$     | Class, $n^0$ |

In (41), we see the functional element  $v$  which has a search feature for a Classifier or an  $n^0$ ; that is, it looks down in the structure for a Classifier or an  $n^0$  to connect with. There is also an Internal Merge (IM) feature: the classifier or  $n^0$  overtly moves to  $v$ . The (verbal) root, which needs to be categorized by  $v$ , is pied-piped as in (40); *meske* +  $\sqrt{\text{SLYP}}$  moves up to  $v$  and becomes *meskeslypje*.

I have now shown how the Frisian pattern of noun incorporation can be encoded in the grammar by a Move parameter. In section 4.4, I will discuss how this parameter relates to the pseudo-noun incorporation parameter in Dutch (i.e. I will discuss where the language variation is exactly) and in section 4.5, I will discuss how this parameter seems to be changing for some speakers of Frisian.

#### 4.1.4 Challenges for this analysis

In this section I will discuss two characteristics of Frisian noun incorporation which this analysis at this point cannot explain. One of this is the fact that NI patterns cannot occur in *te*-infinitives (E. Hoekstra 2018c).<sup>52</sup> While (42) with a bare infinitive is grammatical, (43) with a *te*-infinitive is out:

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<sup>52</sup> One exception to this is the *te*-infinitive which occurs in the absentive:

- (i) Jan is te fiskjen.  
       *Jan is to fish.inf*  
       ‘Jan is off fishing.’

In Chapter 5, I will discuss the absentive in detail and in section 5.2.2.4 I will return to the issue of noun incorporation in the absentive.

- (42) Hy wol hierknippen.  
*He wants hair-cut.INF*  
 "He wants to cut hair."
- (43) \*Hy skynt te hierknippen.  
*He seems to hair-cut.INF*  
 "He seems to cut hair."

The incorporation in (44) must somehow be blocked by the presence of *te*. We know that *te* and the infinitive are inseparable in other contexts too: *te* cannot precede particles like *út* ("out"):

- (44) Jan beslút <\*te> út <te> gean.  
*Jan decides to out to go.INF*  
 "Jan decides to go out."

*Te* must therefore be so close to the verb that nothing can intervene, not even particles or incorporated objects. The only way in which this would happen is if *te* itself is incorporated into the verb and the [*te*+v] unit does not allow further incorporation. Thus, in order to account for the lack of NIs in *te*-infinitives, we would need to assume that *v* can either incorporate *te* or an internal argument, but not both.

A final issue which the analysis still needs to explain is the fact that there can be no incorporation with unaccusative verbs. Sentences such as (45) are ungrammatical:

- (45) \*Mankomt.  
 Man-comes  
 "A man comes."

This is unexpected, since we assume that incorporation happens with the internal argument of the root, and subjects of unaccusative verbs are assumed to be internal arguments as well. Moreover, Baker (1988) shows that incorporation of unaccusative subjects is possible in some languages, such as Onondaga (an Iroquoian language spoken in the United States and Canada) (Baker 1988:112):

- There is, thus, no structural reason why incorporation of unaccusative subjects should be ruled out. Therefore, there must be some restriction specific to Frisian. I propose that there is a restriction on the class of verbs which can occur in Frisian incorporation patterns: they must be transitive. Following Biberauer & Roberts (2017) I believe that parameters can have different sizes; they can apply to a full class of functional items, to a small subclass or even to a single item. I propose that in this case, instead of applying to all verbs, the parameter relevant for Frisian noun incorporation applies to transitive verbs only. The parameter must then be adjusted as follows:

- Here, we see the same parameter as in (41), except that now it applies to transitive verbs only.

This section has discussed two challenges for the analysis presented above and showed that each can be solved by adopting some additional assumptions. In the next section, I will present three alternative analyses for noun incorporation.

#### 4.1.5 Alternative analyses

In this section, I will discuss three alternative analyses for Frisian noun incorporation. These analyses also account for the data, but have a different theoretical point of view. I will briefly present the main ideas of the analyses, to give the reader an idea of the alternatives to the analysis presented above.

#### 4.1.5.1 Dyk (1997)

The most extensive work on Frisian noun incorporation was done by Dyk (1997). He proposes a lexical analysis rather than a syntactic one. In this section, I will briefly discuss his main claims.

According to Dyk (1997), the key point of noun incorporation is detransivization of the verb. In NI patterns, he argues, there is no direct object. Although the incorporated noun fulfills the role of theme, the argument position in which it would be if it was a regular DP, is not present. That incorporation verbs indeed behave as intransitive verbs is shown by the fact that the addition of a direct object is impossible, as in (48).<sup>53</sup>

- (48) \*Jan autohimmelet syn Volkswagen.  
       Jan car-cleans his Volkswagen  
       “Jan cleans his Volkswagen.”

For Dyk, providing an account for noun incorporation means providing an analysis for how the verb becomes intransitive. The analysis that Dyk provides has the form of a lexical rule, which makes sure that the object is not projected in syntax. For this, he assumes that there are two levels of representation in the lexicon. Following Rappaport & Levin (1998) he distinguishes the Lexical Conceptual Structure (which specifies the semantic properties of the predicate) and the Predicate Argument Structure (which specifies the number of arguments a predicate has and whether they are internal or external). For NI patterns and ditransitive verbs, he argues that the internal argument is present at the level of Lexical Conceptual Structure, but not that of the Predicate Argument Structure. His lexical rule is presented in (49) (Dyk 1997:129):

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<sup>53</sup> There are a few exceptions to this. An extra object is possible in sentences like (II):

- (II) De kapper hierknipt Jan.  
       The hairdresser hair-cuts Jan  
       “The hairdresser cuts Jan’s hair

It turns out that these exceptions are limited to one category: it is only possible when there is inalienable possession of the incorporated noun (for example with bodyparts). I will set these cases aside for reasons of space.

- (49) In Predicate Argument Structure, an empty argument position is licensed, iff:
- (i) The corresponding argument is affected [*i.e. is a patient*], 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

This rule works as follows. Consider a verb like *eat*. At the Lexical Conceptual Structure, there is always an argument present: there is always *something* that is eaten. However, since *eat* is a verb which assigns the roles of patient (requirement (i)) and volitional actor (requirement (ii)), it is possible that the argument is not always projected in syntax. It can either not project at all (option (a)), resulting in the ditransitive sentence (50a), or there can be incorporation of the argument, resulting in a noun incorporation pattern as in (50b).

- (50) a. Jan is oan't iten.  
           *Jan is at the eat.INF*  
           "Jan is eating."
- b. Jan is oan't appeliten.  
           *Jan is at the appel-eat.INF*  
           "Jan is eating apples/an apple."

With his approach, Dyk unifies the processes of incorporation and detransivization, which indeed show a lot of similar restrictions. However, his account is highly dependent on the existence of these two levels of lexical representation, between which lexical rules should be able to apply. This is not a standard view of the language faculty in current theories and a very different point of view than that of the Distributed Morphology framework, which I follow in this dissertation.

In line with the Distributed Morphology framework (Halle & Marantz 1993), I do not assume the existence of lexical rules, as I assume that both the formation of words and that of phrases occur in syntax. Therefore, my account

for the impossibility of (48) works in a very different way: it follows from the syntactic structure presented in (51).

In this tree, the complement position next to the root is filled by (the trace of) *auto*, so there is no room for an extra direct object; there is no place for *syn Volkswagen* to be inserted.

In brief, Dyk's (1997) account of Frisian noun incorporation is extensive, but a very different approach than the one in this dissertation.

#### 4.1.5.2 Basilico (2016)

Another analysis for Frisian noun incorporation is provided by Basilico (2016). His analysis is based on a Borer-style (2013) approach to compounding. Borer provided an analysis of the fact that compounds like *truck driving* and *truck driver* are grammatical, whereas *\*to truck drive* is not a possible verb in English. According to her, compounds like these need to be licensed by higher functional heads. The suffixes *-ing* and *-er* can perform these roles, but in the N+V combination *\*truck drive*, there is no further affixation and therefore no licensing. Basilico proposes that the reason that Frisian NIs are grammatical is that the combination of nouns and verbs *does* involve further affixation, so there is in fact an additional head to license these compounds. He calls this head  $v_{ACT}$ . This would make the structure of NIs in Frisian look like (52):

$$(52) \quad [_{vP} \ v_{ACT} \ [ \ N \ V \ ] ]$$

There is no overt affix which corresponds to this head; Basilico (2016) proposes that we are dealing with null-affixation. This makes the account a



bit stipulative; we would expect such an affix to be detectable in at least some contexts, but it is not.

Basilico proposes that the role of the  $v_{ACT}$  head is very similar to what Borer (2013) proposes for the *-ing* suffix in English. According to Borer, *-ing* requires atelic aspect and an originator (i.e. an actor). Basilico proposes that, like *-ing*, the Frisian  $v_{ACT}$  head has a requirement regarding the presence of a volitional actor.

Basilico follows Dyk (1997) in providing one analysis for both NI and detransitivization. He suggests that the  $v_{ACT}$  head plays a role in detransitivization as well: it not only attaches to N+V compound verbs, but also to other verbs. The only restriction is that the internal argument of the verb should not be expressed, as  $v_{ACT}$  can only combine with heads, not phrases.

- (53) a. [ [N V<sub>v</sub>]  $v_{ACT}$  ]  
 b. \*[ VP  $v_{ACT}$  ]

In short, Basilico provides a syntactic account for Frisian noun incorporation, by proposing the presence of an additional head which is responsible for the semantic restrictions of syntactic noun incorporation. Basilico's (2016) analysis does not seem to be incompatible with mine; we only take a slightly different approach. While Basilico proposes that incorporation occurs because of properties of a special  $v$ -head, I propose that the possibility for incorporation is encoded on the  $v^0$  head itself. Moreover, I focus on the role of the linking suffix and the size of the object, while this is less relevant for Basilico.

#### 4.1.5.3 Root-root compounds

One other possible analysis of Frisian noun incorporation is to analyze the verbs with the incorporated noun as root-root compounds. That is, a compound consisting of two uncategorized roots which then becomes one verb, as illustrated in (54). Here, the root  $\sqrt{MES}$  combines with the root  $\sqrt{SLYP}$  to form the verb *messlypje*.

- (54) [<sub>v</sub> [ $\sqrt{MES}$ ] [ $\sqrt{SLYP}$ ] -je]

This resembles the analysis that van Geenhoven (2000) provides for West-Greenlandic and that Harley (2009) provides for English nouns like *truck*

*driver*, which according to her has the following form:

$$(55) \quad [_n [\sqrt{\text{TRUCK}}] [\sqrt{\text{DRIVE}}] \text{-er}]$$

Although this analysis might be applicable to some cases of compounds which seem to consist of a noun and a verb, it is not a sufficient explanation for the Frisian NI pattern for two reasons. First, it does not explain why there is a linking suffix and what it means that this linking suffix can be a diminutive. Second, it does not explain why, in Frisian NIs, the incorporated noun is always the internal argument of the (verbal) root and not just any noun in the sentence.

#### 4.1.6 *Interim summary*

So far in this chapter I have focused on Frisian noun incorporation patterns. I have analyzed these as cases of head movement, in which a Classifier head moves into a *v* position and forms a compound with the (verbal root). I have argued that this is a strategy for an argument to be “visible” at the LF interface to obey the Condition of Morphological Identification (Baker 1988:156). The relevant parametric setting which represents the possibility for NI in Frisian is shown in (56):

$$(56) \quad \begin{array}{ll} V_{[\text{trans}]}: & F_{\text{search}} \text{ Class, } n^0 \\ & F_{\text{IM}} \text{ Class, } n^0 \end{array}$$

In the next sections, I will examine Dutch pseudo-noun incorporation and show how this phenomenon differs from Frisian noun incorporation.

## 4.2 Dutch pseudo-noun incorporation

### 4.2.0 *Introduction*

In Dutch, we find a construction which looks similar to noun incorporation. Here, plural nouns precede an infinitival verb, as in (57):

- (57) Hij is aan het muizen vangen.  
*He is at the mice catch.INF*  
 "He is catching mice."

Just like in the Frisian examples, the noun in Dutch pseudo-noun incorporation functions as the internal argument of the verb. Thus, an example with an indirect object is ungrammatical:

- (58) \*Hij is de cadeautjes aan het **kinderen** geven.  
*He is the presents to the children give.INF*  
 "He is giving presents to children."

Another similarity to Frisian is the fact that there is no determiner in these constructions.<sup>54</sup> Moreover, the noun is not non-referential, and can therefore not be referred back to by a pronoun (see also example (11), section 4.1.0):

- (59) Hij is aan het (\*de) muizen vangen. ?Ze rennen hard.  
*He is at the the mice catch.INF. They run fast.*  
 "He is catching mice. They run fast."

This contrasts with regular DP objects, which are referential regardless of the presence of a determiner, as illustrated in (60):

- (60) Hij is (de) muizen aan het vangen. Ze rennen hard.  
*He is (the) mice at the catch.INF. They run fast.*  
 "He is catching mice. They run fast."

There is, therefore, a difference between *muizen* in (59) and *(de) muizen* in (60); while the latter seems to include a DP layer, the former does not.

So far, the situation looks similar to Frisian noun incorporation, but there are a few important differences. First of all, the incorporation cannot occur in finite clauses:

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<sup>54</sup> The neuter determiner *het* ("the") which we see here is part of the progressive construction "*aan het X.INF*" ("at the X.INF"), rather than an actual determiner here. If *muizen* ("mice") would be preceded by a determiner, it would be the common determiner *de* ("the"), which is used for plurals.



In this structure, the infinitival verb looks for a NumP goal and attracts it to its specifier. This is a case of phrasal movement.

In the next section, I will present the reasons why Dutch pseudo-noun incorporation involves phrasal movement rather than head movement and why its argument must be a NumP. In 4.2.2, I will present the Move parameter which is involved here. Finally, I will discuss some challenges for this analysis (4.2.3) and alternative analyses (4.2.4).

#### 4.2.1 *Phrasal movement and the size of the argument*

In the previous section I proposed that sentences like (64) involve phrasal movement of the NumP object *muizen* to the specifier of an infinitival verb.

- (64)   Hij    is   aan   het muizen vangen.  
          He    is   at    the mice   catch.INF  
          “He is catching mice.”

Let’s first turn to the size of the argument. As shown in the previous sections, *muizen* in the example above is not referential:

- (65)   Hij is aan het (\*de) muizen vangen. ?Ze rennen hard.  
          He is at the the mice catch.INF. They run fast.  
          “He is catching mice. They run fast.”

Since referentiality is encoded in the DP-layer, the lack of referentiality in (64) means that *muizen* must be smaller than a DP. Recall from Chapter 3 that I assume the following structure for nominal elements (following Alexiadou 2013:134):

(66)

*Muizen* in (64) has to be a NumP, because it displays plural marking: *-en* for nouns with *-en* plurals (like *muizen*), and *-s* for nouns with plurals in *-s*, as illustrated in (67):

- (67) Ze is aan het euro's tellen.  
*She is at the euros count.inf*  
 "She is counting euros."

Moreover, the interpretation is plural: in (64), one has to be trying to catch more than one mouse. This is different from the NI pattern in Frisian, where the noun was undetermined for number.

As discussed in section 4.1, I assume, following Baker (1988) that all arguments must obey the Condition of Morphological Identification, repeated here as (68):

- (68) The Condition of Morphological Identification (Baker 1988:156)  
 If B is the NP position at the head of a chain, B bears a theta index at LF only if it bears a morphological index.

This condition states that arguments must be morphologically indexed in order to make theta-relations visible (and therefore interpretable) at LF. Recall that there are four ways to be visible (Baker 1988:149-159):

- (69)
- I.

II.

III.

IV.
- Case

Agreement on the verb

Adjacency

Incorporation

Following Baker (1988), Massam (2001) and Harley (2009) among others, I assume that arguments which are not DP-sized do not receive accusative case in the regular way. Therefore these must have another way to be visible. In section 4.2.1, I argued that Frisian opts for an incorporation strategy (i.e. head movement). I propose that Dutch uses adjacency. The NumP object moves to the specifier position of the infinitive, as in (70). By this movement, the NumP becomes adjacent (and therefore visible) to the verb in  $v^0$ , which can then assign its thetarole to the object (see also Chapter 3, in which I assume infinitival verbs to be in  $v^0$ ).

There are a few arguments in favor of analyzing Dutch PNIs as phrasal movement to the specifier position. First, *muizen* in (71) is a phrase rather than a head only, because it is possible to include a modifying AP:

- (71) Hij is aan het grijze muizen vangen.  
*He is at the grey mice catch.INF*  
 “He is catching grey mice.”

Being a phrase, it cannot head-move; there must be phrasal movement. This is confirmed by the fact that Dutch PNI patterns cannot occur with finite verbs, which suggests that *muizen* is not part of the verbal head which moves to C in Dutch main clauses.

- (72) \*Hij muizenvangt de hele dag.  
*He mice-catches the whole day*  
 “He has been catching mice the whole day.”

Second, *muizen* and the infinitive form a tight unit (see De Belder & van Koppen 2016 on compounds involving phrases): no other elements can intervene, as shown in (73):<sup>55</sup>

- (73) \*Hij is aan het muizen met vieze pootjes vangen.  
*He is at the mice with dirty paws catch.INF*  
 “He is catching mice with dirty paws.”

*Muizen* has to be directly adjacent (i.e. without any structural position in between) to the infinitive.

So far, I have spoken about the specifier position of an infinitive. This is because the Dutch PNI pattern only occurs with infinitives. We have already seen that it cannot occur in finite verbs (see (72)). It is also impossible in past participles, as shown by (74):

- (74) \*Hij heeft gemuizenvangen.  
*He has pref.mice.caught*  
 “He has caught mice.”

We only find the PNI pattern with infinitives. These can be either nominalized

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<sup>55</sup> I use the phrase “tight unit” here rather than word because I believe that word is a phonological notion; however, it is clear that phrases can be parts of compounds (see De Belder & van Koppen 2016) and therefore that they can form a tight, word-like unit with another element.



infinitives, as in (75) or verbal infinitives, as in (76).<sup>56</sup>

- (75) Ik hou van muizenvangen.  
*I love of mice-catch.INF*  
 "I love mice catching."

- (76) Hij wil muizen vangen.  
*He wants mice catch.INF*  
 "He wants to catch the mice."

So far, I have presented an analysis which accounts for pseudo-incorporation of NumPs. One issue this analysis has is the fact that it falsely predicts that mass nouns cannot be incorporated (as was the case for the analysis for Frisian NI. That is, the analysis suggests that all incorporated nouns are NumP sized, while mass nouns are usually assumed to be smaller than that (see a.o. Borer 2013, De Belder 2011). In Dutch PNI patterns, mass nouns are in fact able to incorporate, as illustrated in (77):

- (77) Hij is aan het rijst koken.  
*He is at the rice cook.inf*  
 "He is cooking rice."

Here, the mass noun *rijst* is pseudo-incorporated into the verb *koken*. At this point, my analysis cannot account for this. I cannot assume (as I did for the Frisian cases with Class), that NumP is the maximal size of an object which is incorporated, since this would predict that every projection below the NumP could be incorporated, and we know that incorporation of a ClassP is out in Dutch:<sup>57</sup>

- (78) \*Hij is aan het muisjevangen.  
*He is at the mouse.dim-catch.inf*  
 "He is catching mice."

The only way to solve this issue then is to assume that the PNIs with mass

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<sup>56</sup> See Chapter 3 on the distinction between nominal and verbal infinitives.

<sup>57</sup> There are some cases in Dutch where a diminutive seems to be incorporated. These include cases like *cowboytje spelen* ("playing cowboy"). These are, to my knowledge, only lexicalized combinations and therefore not comparable to the productive process in Frisian.



complement of the root  $\sqrt{\text{VANG}}$ .  $\sqrt{\text{VANG}}$  is categorized as an infinitival verb. This  $v^0$  attracts the NumP to its specifier, which results in the pseudo-noun incorporation: *muizen* forms a close unit with the infinitive *vangen*.

I propose that this process of PNI is encoded in the grammar of Dutch speakers by a Move parameter, following Rizzi (2017) who states that this is one of three types of syntactic variation (see also Chapter 2, section 2.4). I propose that the parameter can be represented as follows:

- (81) Dutch pseudo-noun incorporation
- |                      |                     |                |
|----------------------|---------------------|----------------|
| $V_{[\text{inf}]}$ : | $F_{\text{search}}$ | NumP           |
|                      | $F_{\text{IM}}$     | NumP (to Spec) |

This parameter states that the item  $v$  in the functional lexicon possesses a Search Feature which says: “Look for a NumP”. Moreover, it also has an Internal Merge Feature, which says that this NumP has to be moved to the specifier of  $v$ .

Following Biberauer & Roberts (2017), I assume that parameters can have various sizes: they can apply either to all functional heads, or only to subsets of them. Since this process of PNI is specific to infinitives, the parameter is not applicable to all  $v$ -heads, but only to a subset of them: the ones which are infinitival.

In section 4.4.2, I will compare the Frisian and Dutch parameter settings and show how the syntactic variation between these varieties can be explained by these parameters. In the next section, I first discuss alternative analyses for Dutch PNI.

### 4.2.3 *Alternative analyses*

There has been some work done on Dutch PNI, but the term “pseudo-noun incorporation” has also been used to refer to many different constructions. Broekhuis & Corver (2016) provide an overview of various different types of verbal collocations, some of which are combinations of a noun and verb. They classify these verbs on the basis of their behavior in V2 positions and distinguish three types. There are inseparable collocations, such as *bekvechten* (lit: “mouth-fight”, “squabble”), which stay together in V2 position (see (82)). Then there are separable collocations, such as *pianospelen*, “piano-play”, these split up in V2 positions (see (83)). Finally, there are immobile collocations,

such as *touwtjespringen* ("rope-skip"), which cannot occur in V2 position at all (see (84)).

- (82) Jan bekvecht vaak met zijn vriendin.  
*Jan mouth-fights often with his girlfriend*  
 "Jan often squabbles with his girlfriend."
- (83) Jan speelt vaak piano.  
*Jan plays often piano.*  
 "Jan often plays the piano."
- (84) \*Jan touwtjespringt vaak/ \*Jan springt vaak touwtje.  
*Jan rope-skips often / Jan skips often rope*  
 Intended: "Jan often ropeskips."

None of these examples is the same as the *muizen vangen*-pattern discussed in this chapter: while *muizen* is the internal argument of *vangen*, the semi-incorporated nouns in (82) and (84) are not the internal arguments of the relevant verbs. In (83), this seems to be the case, but in section 4.3 I will argue that verbs like *pianospelen* form a restricted, non-productive class which is different from the *muizen vangen*-pattern.

Booij (2009) does discuss the *muizen vangen*-pattern. He analyzes *brieven schrijven* in (85) as a unit of a noun and a verb, as in (86):

- (85) Jan is aan het brieven schrijven.  
*Jan is at the letters write.INF*  
 "Jan is writing letters."
- (86) [<sub>V0</sub> N<sub>0</sub> V<sub>0</sub>]

He bases this analysis on the idea that there are three possible options for a noun and a verb to form a unit. The first is a regular, transitive VP, in which an NP is inserted as the complement of a V, as in (87):

- (87) [<sub>VP</sub> NP V<sub>0</sub>]

Then there is compounding, in which the N + V are joined together in the lexicon, and then inserted as a V, as in (88):

(88) [v N V]

Finally, there is pseudo-noun incorporation (or in his terms “quasi-incorporation”), which is like a regular VP, only the argument is not an NP but only an N, as in (86). Booij (2009) argues that this must be the structure of *brieven schrijven* (“letters write”) in (85). His main arguments for this are first that *brieven* is not a full DP, as it cannot be negated by *geen* (“no”). Instead, we find sentential negation with *niet* (“not”):

(89) \*Jan is aan het geen brieven schrijven.  
*Jan is at the no letters write.INF*  
 Intended: “Jan is writing no letters.”

(90) Jan is niet aan het brieven schrijven.  
*Jan is not at the letters write.INF*  
 “Jan is not writing letters.”

Second, Booij argues that it cannot be a compound either, since the noun and verb cannot be in V2 position together:

(91) \*Jan brieven schrijft vaak.  
*Jan letters-writes often*  
 Intended: “Jan often writes letters.”

Although they appear very different at first sight, it turns out that Booij’s analysis is similar to the one presented in this chapter. Both analyze the incorporated noun as an element which is smaller than a DP, and which forms a tight unit with the verb, but is not a real compound (in Booij’s terms) or a case of head movement (in my terms). The main difference is the theoretical framework which is used. Booij adopts a lexicalist approach, so he does not assume that all morphology is represented in syntax. Therefore, the NumP projection which is important in my analysis, is irrelevant to his account. In short, Booij (2009) provides an analysis which is different in its type of framework, but is quite similar in terms of content.

### 4.3 A note on verbs like *pianospelen* (“piano-play”)

In this chapter, I have focused on two incorporation patterns: the Frisian noun incorporation pattern (92) and the Dutch pseudo-noun incorporation pattern (93).

- (92) Hy is oan’t messeslypje. Frisian  
*He is at the knife-sharpen.INF*  
 “He is sharpening a knife/knives”

- (93) Hij is aan het muizen vangen. Dutch  
*He is at the mice catch.INF*  
 “He is catching mice.”

So far, I have set aside a class of verbs which are often mentioned as typical examples of incorporation in Dutch: verbs such as *pianospelen* (“piano-play”). Other examples in the same category include verbs such as *koffiedrinken* (“coffee-drink”) or *ademhalen* (lit. “breath-take”, i.e. “breathe”). In Frisian, we find these types of verbs as well:

- (94) Hy is oan’t pianospyljen.  
*He is at the piano-play.INF*  
 “He is playing the piano.”

These verbs are often referred to as incorporation verbs, since they involve a noun which forms a tight unit with the verb. This is illustrated in (95), where modifiers cannot intervene between the noun and the verb.

- (95) \*Jan is aan het piano met kapotte toetsen spelen.  
*Jan is at the piano with broken keys play.INF.*  
 Intended: “Jan is playing on the piano with broken keys.”

Moreover, the noun is non-referential, as it cannot be pronominalized:

- (96) Jan is aan het pianospelen. ?Hij is vals.  
*Jan is at the piano-play.INF. It is out-of-tune.*  
 “Jan is playing the piano. It is out of tune.”

These verbs therefore seem to be examples of a type of incorporation.

As these involve a fixed set of verbs, I assume that these compounds are formed by simply combining two concepts without any further syntactic structure. That is, I assume that verbs like *pianospelen* / *pianospylje* are a combination of two roots, as in (97):

The reason that *piano* must be a root is that the noun cannot show plural inflection or diminutive inflection, so it does not have the size of a ClassP or NumP:

- (98) \*Hij is aan het piano's spelen.  
*He is at the pianos play.INF*  
 "He is playing the pianos."
- (99) \*Hij is aan het pianootje spelen.  
*He is at the piano.DIM play.INF*  
 "He is playing the small piano."

In fact, *piano* in these examples must be smaller than an nP, as it also cannot be modified by an adjective, as in (100). In comparison, the noun in the PNI pattern discussed in this chapter can be modified by an adjective:

- (100) Hij is aan het (\*mooie/\*zwarte) piano spelen.  
*He is at the beautiful / black piano play.INF*  
 "He is playing the (beautiful/black) piano."
- (101) Hij is aan het (mooie/zwarte) muizen vangen.  
*He is at the beautiful / black mice catch.INF*  
 "He is catching beautiful/black mice."

This analysis for *pianospelen* which is sketched above needs to be worked out in more detail. However, for the present study, this class of verbs is not of further relevance, as there is no variation in these verbs between Dutch and Frisian, and this study focuses on the differences between these languages.

## 4.4 The parametric difference

The analyses of Frisian noun incorporation and Dutch pseudo-noun incorporation which have been presented in this chapter suggest that arguments can have different sizes and that these sizes can vary both within and across languages. This idea is not new; Iordăchioaia et al. (2017) analyzed deverbal compounds in English and Greek and showed that the size of the nominal argument is different between these languages. They propose that English deverbal compounds involve the movement of an nP argument into the spec,nP (of a nominalization) position, as in (102):

- (102) [nP [nP air traffic] control-er [VoiceP control [vP control [√CONTROL [nP air traffic]]]]

Here, the nP *air traffic* is the complement of the root  $\sqrt{\text{CONTROL}}$ . The root  $\sqrt{\text{CONTROL}}$  becomes a verb and is then nominalized into *controller*, and its internal argument moves to the specifier position of n<sup>0</sup>. This is similar to the analysis presented for Dutch in section 4.2 of this chapter, where we find phrasal movement to the spec of a v<sup>0</sup>.

For Greek deverbal compounds, Iordăchioaia et al. (2017) argue that there is movement of a root into a verb, as in (103):

- (103) *thiriodamastís* (“beast-tamer”), *thiriodamazo* (“to beast-tame”)  
(Iordăchioaia et al. 2017:57)

As this is head movement, this analysis is more similar to the analysis presented for Frisian in section 4.1 of this chapter.

The main arguments for these analyses are that Greek allows productive



N+V compounding, while English only allows N+V compounding in nominalizations (cf. *air traffic controller*, but not *\*to air traffic control*). This is similar to the arguments provided in this chapter for the claims that Frisian allows productive noun incorporation, while for Dutch the pseudo-noun incorporation is restricted to infinitives.

In short, it appears that the size of the nominal part of N+V compounds is a point of language variation. The question is how this is represented in speakers' grammars. In this study, I have worked under the assumption that syntactic variation is represented in the functional lexicon in terms of parameters and that there are only three types of parameters: Merge, Move and Spell-out parameters (see Chapter 2). In section 4.1, I proposed that the relevant parameter setting which represents the possibility for Frisian NI is the one in (104):

(104) Frisian noun incorporation:

V<sub>[trans]</sub>: F<sub>search</sub> Class, n<sup>0</sup>  
               F<sub>IM</sub> Class, n<sup>0</sup>

In section 4.2, I proposed that the relevant parameter setting for Dutch pseudo-noun incorporation is as in (105):

(105) Dutch pseudo-noun incorporation

V<sub>[inf]</sub>: F<sub>search</sub> NumP  
               F<sub>IM</sub> NumP (to Spec)

These parameters are abstract; they do not directly refer to the notion of compounds. This shows again that the variation which we find at the surface, in E-language, can be explained by abstract parameters at the level of I-language, as discussed in Chapter 2. In this case, it is quite complex: a superficially similar pattern actually concerns a different underlying parameter in each language. That is, (104) and (105) are different parameters: one concerns infinitival v's, while the other concerns transitive v's. The parameter in (104) does not have a setting for Dutch, nor does the one in (105) have a setting for Frisian. In the next section, I will look at changes in Frisian concerning noun incorporation, and I will explain what the observed changes in E-language mean for the parameters in I-language. It turns out that even though (104) and (105) are different parameters, the changes in incorporation patterns affect both of them.

## 4.5 Changes in Frisian noun incorporation

### 4.5.1 Introduction

So far in this chapter I have discussed the variation between noun incorporation in Frisian and pseudo-noun incorporation in Dutch. Originally, the Frisian NI pattern did not occur in Dutch, and the Dutch PNI pattern (i.e. incorporated plurals) did not occur in Frisian. However, recently the boundaries seem to have become less strict. Some speakers of Frisian do not use or accept noun incorporation anymore. Moreover, some speakers of Frisian allow for the Dutch PNI pattern: they accept incorporation of plurals, rather than Classifier elements. In this section, I will present questionnaire data which shows that NI in Frisian is changing. I will argue that these are cases of changes in Move parameters.

### 4.5.2 The items

The data were collected by means of two digital questionnaires. In these questionnaires, participants had to judge the acceptability of Frisian sentences on a 5-point Likert scale. For more details on the questionnaires, see Chapter 1, section 1.1.3. For a complete inventory of the items, see the Appendix.

The first questionnaire ( $n = 537$ ) contained eight items on noun incorporation, of which one item had to be excluded from the analysis because of a typing error in the questionnaire. The seven remaining items included the following four conditions (each illustrated with one example):

I. Non-finite main clause (2 items )

- (106) Wy wolle moarn wyndrinke.  
*We want tomorrow wine-drink.INF*  
 "We want to drink wine tomorrow."

II. Finite main clause (2 items)

- (107) Wy wyndrinke gauris.  
*We wine-drink often*  
 "We often drink wine."

## III. Finite embedded clause (1 item)

- (108) Hy seit dat de kapper hiel goed hierknipt.  
*He says that the hairdresser very well hair-cuts*  
 "He says that the hairdresser cuts hair very well."

IV. With extra argument<sup>58</sup> (2 items)

- (109) De kapper hierknipt him.  
*The hairdresser hair-cuts him*  
 "The hairdresser cuts his hair."

The ratings on these items can give a general impression about whether noun incorporation is still accepted by Frisian speakers. In the second questionnaire (n = 350), more detailed issues were addressed (in particular the questions focuses on different types of linking suffixes) and this questionnaire also included items with Dutch pseudo-noun incorporation. These conditions are illustrated below:

## V. Dutch-like pseudo-noun incorporation with plurals (2 items)

- (110) Pake is oan it sigaren smoken.  
*Grandpa is at the cigars smoke.INF*  
 "Grandpa is smoking cigars."

## VI. Finite clauses (4 items: 2 main clauses, 2 embedded clauses)

- (111) Ik wit dat hy hjoed autowasket.  
*I know that he today car-washes*  
 "I know he washes cars/a car/his car today."

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<sup>58</sup> As explained in footnote 53, in some cases of inalienable possession there can be an extra argument added. However, I did not analyze these cases.

- VII. Different types of linking suffixes (18 items: 7 no linking suffix, 7 schwa linking suffix, 2 DIM linking suffix, 2 irregular nouns)

(112) De man is oan it amerleegjen / amereleegjen /  
*the man is at the bucket-empty.INF / bucket.ə -empty.INF /*  
 amerkeleegjen.  
*bucket.DIM-empty.INF*

- VIII. Different types of *te*-infinitives (6 items: *skyne* (“seem”), *om te* (“in order to”) and *sit te* (progressive) with and without incorporated object)

(113) De kapper skynt te hierknippen.  
*the hairdresser seems to hair-cut.INF*  
 “The hairdresser seems to cut hair.”

(114) De kapper skynt it hier te knippen.  
*the hairdresser seems the hair to cut*  
 “The hairdresser seems to cut the hair.”

- IX. Passives (2 items)

(115) Der wurdt appeliten.  
*There becomes apple-eat.INF*  
 “There is eating of apples.”

- X. Other types of arguments (2 items)

Incorporated object is indirect object:

(116) De famkes syn oan it flechtlinghelpen.  
*The girls are at the refugee-help.INF*  
 “The girls are helping refugees.”

Subject is not an agent:

(117) De sinne is de hoarizon oan it readkleurjen.  
*The sun is the horizon at the red-color.INF*  
 “The sun is coloring the horizon red.”

4.5.3 Results

4.5.3.1 General results

Table 1 provides the main results of Questionnaire 1: the means and standard deviations of all contexts of all participants combined. Table 2 provides the main results of Questionnaire 2. For all items, answers ranged from 1 (unacceptable) to 5 (fully acceptable).

Recall that the aim of this data collection was to answer two questions. First, is noun incorporation still considered grammatical by speakers of Frisian? Second, are there speakers of Frisian who accept Dutch-like pseudo-noun incorporations in Frisian? Regarding the first question, we see that noun incorporation is generally accepted. The mean rating of non-finite clauses is 4.05. Finite clauses with incorporation have lower ratings, main clauses show means of 2.26 (Questionnaire 1) and 2.45 (Questionnaire 2) and embedded clauses show means of 3.51 and 3.80. This pattern is the same as what is described in the literature and was presented earlier in this chapter; noun incorporation is acceptable in Frisian, even in finite clauses, but less accepted in V2 contexts (i.e. main clauses).

|                                        | Mean | Standard<br>Deviation |
|----------------------------------------|------|-----------------------|
| Non-finite main clause (example (106)) | 4.05 | 1.01                  |
| Finite main clause (107)               | 2.26 | 1.09                  |
| Finite embedded clause (108)           | 3.51 | 1.37                  |
| Extra argument (109)                   | 2.15 | 1.04                  |

Table 1: Overview of ratings for all participants for questionnaire 1 (  $n = 537$  )

|                                                        | Mean | Standard deviation |
|--------------------------------------------------------|------|--------------------|
| Dutch-like PNI (110)                                   | 3.41 | 1.47               |
| Finite clauses (111)                                   |      |                    |
| Main clause                                            | 2.45 | 1.41               |
| Embedded clause                                        | 3.80 | 1.24               |
| Linking suffixes (112)                                 |      |                    |
| Ø (7)                                                  | 3.23 | .90                |
| <i>Schwa</i> (7)                                       | 2.78 | .76                |
| <i>DIM</i> (2)                                         | 2.98 | 1.16               |
| <i>Special forms (kij "cows", froulju "women")</i> (2) | 3.11 | 1.19               |
| To-infinitives                                         |      |                    |
| <i>Skynt</i> (seems) with NI (113)                     | 3.13 | 1.48               |
| <i>Skynt</i> without NI (114)                          | 4.15 | 1.19               |
| <i>Sit te</i> (sits to, progressive) with NI           | 3.37 | 1.51               |
| <i>Sit te</i> without NI                               | 4.73 | .75                |
| <i>Om te</i> (for to) with NI                          | 2.94 | 1.52               |
| <i>Om te</i> without NI                                | 2.75 | 1.68               |
| Passives (115)                                         | 3.29 | 1.47               |
| Other arguments (116), (117)                           | 2.08 | 1.09               |

Table 2: Overview of ratings for all participants for questionnaire 2 (  $n = 350$  )

Passive sentences with incorporation are considered fairly grammatical (3.29). In certain types of *te*-infinitives, speakers prefer not to have incorporation (*skynt* and *sit te* are better without NI). This pattern is reported in the literature too, as discussed in section 4.1.

One characteristic of the original pattern of Frisian NI was that it can only occur with verbs which include an agent and a patient. This pattern is confirmed: other types of arguments were considered ungrammatical (2.08). The fact that adding an extra argument is also considered ungrammatical (2.15) is not very surprising as this is a very restricted pattern which occurs only in specific contexts (see footnote 53).

Until this point, the grammars of participants seem to be as described in the literature (see a.o. Dyk 1997) and we can draw the preliminary conclusion that noun incorporation is still grammatical in Frisian. However, let's take a more precise look at the linking suffixes. At first sight, incorporations without

linking suffixes seem to be considered most acceptable (3.23), as the linking suffixes have means below 3. However, looking at the items separately it turns out that the low ratings are caused by the items *amere* ("bucket") and *broere* ("brother"). These words have plurals in *-s* instead of *-en* (*amers* and *broers*), and Dyk (1997) already observed that the linking suffix does not occur with these types of words (see example (18) in section 4.1.1.1 of this chapter). When we leave these items and irregular form *kowe* (from *ko*, "cow")<sup>59</sup> out of consideration the mean for schwa-linking suffixes becomes 3.27, a score comparable to the score for the items without a linking suffix. I will therefore assume that overtly spelling out the linking suffix does not have a considerable influence on the acceptability of noun incorporation.

The data also show that the diminutive suffix is less accepted than a schwa linking suffix or no linking suffix: the items *amerke* ("bucket.DIM") and *meske* ("knife.DIM") have a mean score of 2.98. As there are no independent reasons why these forms would not be accepted, this low rating is surprising. We can ask ourselves why this would be the case, if both linking suffixes (schwa and DIM) are variants of the same functional head Class. There are two potential answers to this question. The first is that the diminutive suffix invokes a diminutive interpretation, and that this interpretation is undesirable in the contexts at hand. Although originally in Frisian the diminutive suffix did not add this diminutive meaning to noun incorporations (see section 4.1), this might now be different for some speakers. A second reason is that the pattern with the diminutive suffix is clearly different from the Dutch pattern. A zero linking suffix or schwa is more similar to the plural pseudo-noun incorporation pattern in Dutch. If Frisian is changing in the direction of Dutch, this might explain why a distinctly non-Dutch pattern is less accepted.

The data thus shows that Frisian noun incorporation is in general still quite accepted, although some particular forms are degraded. Another question I aimed to answer with these data was whether speakers of Frisian nowadays also accept the Dutch pseudo-noun incorporation pattern, which was originally ungrammatical in Frisian. Table 2 shows that this PNI pattern has a mean score of 3.41. This suggests that for a fairly large group of Frisian speakers, the Dutch pattern is actually acceptable in their Frisian. An

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<sup>59</sup> *Kowe* is the form of *ko* ("cow") which is used in N+N compounds, such as *kowesturt* ("cow-tail"). There was however no *a priori* reason why we would expect this form to be grammatical for noun incorporation, so it should not be included while analyzing the other items.

interesting question is whether this change is more prominent amongst younger speakers than amongst older speakers. Like in Chapter 3, I divided the participant into three age groups to find out whether there are differences between these groups. Table 3 shows the results of this analysis:

|                | 16-34 years<br><i>n</i> = 73 | 35-49 years<br><i>n</i> = 92 | 50+ years<br><i>n</i> = 181 |
|----------------|------------------------------|------------------------------|-----------------------------|
| Dutch-like PNI | 3.39                         | 3.47                         | 3.39                        |

Table 3: Mean ratings per age group

In this instance, younger speakers did not find the Dutch-like pattern grammatical more often than older speakers; actually the 35-49 year-old group gave, on average, the highest ratings. A one-way ANOVA showed that there were no significant differences between the ratings of the age groups ( $p = .82$ ).

I will now take a look at the results for individual speakers to discuss these changes in more detail.

4.5.3.2 Individual results

So far, I have only presented means and standard deviations. While these give the reader a general idea of the results, it is worthwhile to look into individual results as well. As parameters are part of I-language, and language change therefore happens in the individual, we need to look at individual results to find out what how the change works exactly. Similar to the previous chapter, I randomly selected 5 participants and analyzed their ratings. Their ratings are presented below in Tables 4 and 5, (where “P*n*” refers to the *n*th randomly selected participant):

|                        | P1<br>(F, 51) | P2<br>(F, 63) | P3<br>(F, 41) | P4<br>(M, 51) | P5<br>(M, 57) |
|------------------------|---------------|---------------|---------------|---------------|---------------|
| Non-finite main clause | 5             | 3.5           | 5             | 1.5           | 4             |
| Finite main clause     | 1             | 4             | 1.5           | 1             | 2             |
| Finite embedded clause | 4             | 5             | 4             | 2             | 3             |
| Extra argument         | 1             | 2.5           | 1             | 1.5           | 2             |

Table 4: Results of Questionnaire 1 for individual speakers



|                                              | P1   | P2   | P3   | P4  | P5   |
|----------------------------------------------|------|------|------|-----|------|
| Dutch-like PNI                               | 2.5  | 5    | 1    | 4.5 | 1    |
| Finite clauses                               |      |      |      |     |      |
| Main clause                                  | 3.5  | 3.5  | 1    | 1.5 | 3    |
| Embedded clause                              | 5    | 3.5  | 2    | 3.5 | 5    |
| Linking suffixes                             |      |      |      |     |      |
| Ø (7)                                        | 1.86 | 3.71 | 1.29 | 4   | 3.57 |
| <i>Schwa</i> (7)                             | 2.71 | 3.29 | 1.57 | 4   | 2.57 |
| <i>DIM</i> (2)                               | 2.50 | 2    | 1    | 3   | 1    |
| <i>Special forms (kij, froulju)</i> (2)      | 3    | 3.5  | 1    | 5   | 3    |
| <i>Te</i> -infinitives                       |      |      |      |     |      |
| <i>Skynt</i> (seems) with NI                 | 5    | 5    | 3    | 2   | 5    |
| <i>Skynt</i> without NI                      | 5    | 2    | 1    | 5   | 3    |
| <i>Sit te</i> (sits to, progressive) with NI | 5    | 5    | 4    | 2   | 5    |
| <i>Sit te</i> without NI                     | 2    | 5    | 4    | 5   | 5    |
| <i>Om te</i> (for to) with NI                | 1    | 5    | 4    | 2   | 1    |
| <i>Om te</i> without NI                      | 4    | 2    | 4    | 1   | 3    |
| Passives                                     | 4.5  | 3.5  | 2    | 4.5 | 3    |
| Other arguments                              | 1    | 3.5  | 1    | 3   | 2    |

Table 5: Results of Questionnaire 2 for individual speakers

I will now briefly discuss the results for each of these participants.

Participant 1, a 51-year-old woman who learned Frisian as an adult and speaks it 40% of her time, shows very mixed results. While some of the original Frisian examples are rated with a 5, others are rated much lower (see for example the box “linking suffixes”). It is therefore not very clear to what extent the Frisian NI pattern is still grammatical for this speaker. However, the speaker does not accept Dutch-like patterns: PNI is rated with a 2.5. In brief, this speaker does not seem to show a clear language change yet.

For Participant 2, a 63-year-old woman who also learned Frisian as an adult and speaks it 50% of her time, this is different: she rates PNI with a 5. This means that this speaker must have the pseudo-noun incorporation parameter setting in her Frisian grammar:

## (118) (Dutch-like) pseudo-noun incorporation

|               |              |                |
|---------------|--------------|----------------|
| $V_{[inf]}$ : | $F_{search}$ | NumP           |
|               | $F_{IM}$     | NumP (to Spec) |

The original Frisian NI patterns are rated moderately by this speaker (mostly between 3 and 5). This suggests that the parametric setting of the Frisian NI pattern is also still relevant for this speaker:

## (119) Frisian noun incorporation:

|                 |              |              |
|-----------------|--------------|--------------|
| $V_{[trans]}$ : | $F_{search}$ | Class, $n^0$ |
|                 | $F_{IM}$     | Class, $n^0$ |

Participant 3, a 41-year-old woman who is a native speaker of Frisian, and speaks it 95% of her time, rates most examples quite low. For this speaker, the only clearly grammatical category are the *te*-infinitives. What this means for the parametric setting in (119) is at this point not clear to me, but it suggests that the traditional Frisian NI pattern is not even always represented in the grammars of native speakers who speak a lot of Frisian. However, that does not mean there has to be influence of Dutch: this speaker does not allow for a new Dutch-like pattern and therefore lacks the parametric setting in (118).

Participant 4, a 51-year-old man who learned Frisian during his teenage years, and now speaks it 30% of his time, again shows signs of language change: the Dutch-like pattern is rated grammatical (4.5), so the speaker must have the parametric setting in (118). Many examples with original Frisian patterns are also rated grammatical in Questionnaire 2, but not in Questionnaire 1. This suggests that the Frisian patterns are still possible for this speaker (and the parametric setting in (119) is present) but not always preferred.

Participant 5, a 57-year-old man who learned Frisian during primary school years and speaks it 50% of the time, rates the Dutch-like PNI as ungrammatical (1) and most Frisian patterns grammatical (5) or unclear (3). This suggests that for this speaker, there is no language change.

In brief, we find very different patterns for each individual. While there is a language change taking place for some Frisian speakers (as evidenced by this section and the previous section), the result of this change is a quite messy E-language pattern.

#### 4.5.3.3 Discussion

The previous section discussed the results from the questionnaires. These results show that there are changes taking place in the grammars of Frisian speakers. It seems as if some speakers of Frisian are becoming more Dutch-like: they do no longer accept the original Frisian NI-pattern, but some of them do accept the Dutch-like PNI-pattern. In the next section, I will discuss whether or not this change is influenced by language contact with Dutch. In the remainder of this section, I will return to the hypotheses from Chapter 2 and reflect on whether the changes I discussed in the current chapter were expected. It should be kept in mind that these case studies are not intended to validate or falsify the hypotheses made in Chapter 2, as this would be impossible in the current research design. However, I will reflect on the hypotheses briefly here.

Chapter 2 presented three hypotheses. Two of them concerned Move parameters, as shown below:

- (120) “Spell-out before Move and Merge”-hypothesis:  
Spell-out parameters are more prone to change than Move parameters and Merge parameters.
- (121) “Move before Merge”-hypothesis :  
Move parameters are more prone to change than Merge parameters.

According to hypothesis (120), Spell-out parameters should be more susceptible to change than Move parameters. The data in Chapter 3 and 4 seem to confirm this idea; in Chapter 3, we found a clear, significant change. In this chapter, there seems to be a change for some speakers too, but the ratings on the Dutch-like (i.e. the innovated) patterns are not very high (on average 3.41) and the change is not more prominent for younger speakers.

The hypothesis in (121) suggest that Move parameters are less likely to change than Merge parameters. This will become relevant in Chapter 5 (section 5.5) in which I discuss a Merge parameter.

The third hypothesis in Chapter 2 concerned the size of parameters:

- (122) “Small before big”-hypothesis:  
 Smaller parameters are more prone to change than bigger ones

This hypothesis was based on the work by Roberts & Biberauer (2017) and says that parameters which relate to a smaller class of items (for example one specific item or a subclass of functional items, such as modal verbs) are more likely to change than those which relate to a bigger class of items (for example all verbs). Recall from Chapter 2 that the different parameter sizes that Biberauer & Roberts (2017) distinguish are the following:

- (123) a. Macroparameters: parameters relating to all functional heads of the relevant type  
 b. Mesoparameters: parameters relating to all functional heads of a given naturally definable class (e.g. [+V])  
 c. Microparameters: parameters relating to a small subclass of functional heads (e.g. modal auxiliaries)  
 d. Nanoparameters: parameters relating to one or more individual lexical items

The parameters discussed in this chapter concerned infinitival  $v^0$  elements and transitive  $v^0$  elements, both subclasses of verbs. Similar to the parameters discussed in Chapter 3, these could be classified as microparameters. We therefore expect them to be equally prone to change as parameters of the same size, such as the ones in Chapter 3. However, the results show that there was a bigger change in the data of Chapter 3. As discussed above, this could be due to the nature of the parameter (Spell-out parameters might be more prone to change than Move parameters) or to other, as yet unknown, factors.

In the next chapter, I will reflect on the changes we find in a Merge parameter in relation to the hypothesis above in (121), and relate this to the changes presented here and in Chapter 3.

#### 4.5.4 *Influence from Dutch*

Now that we have established that there is language change taking place in the domain of noun incorporation, the next question is why this change is happening. Of course, this is influenced by multiple factors. In Chapter 2, I

argued that a prerequisite for language change is ambiguous input. One aspect of the input that could have played a role here is that the linking schwa in Frisian could be misinterpreted as a plural suffix. Then, the Frisian NI would become more similar to the PNI.

I expect contact with Dutch to play a role in this change as well, as one result of the change (accepting pseudo-noun incorporation) is similar to what we find in the Dutch language. However, we did not find any significant correlations between the amount of Dutch that the participants speak and their acceptance rates of the pseudo-noun incorporation construction. The non-significant correlations are shown below in Table 6.

|                       | % of Dutch spoken on average day | % of Frisian spoken on average day |
|-----------------------|----------------------------------|------------------------------------|
| Dutch-like PNI item 1 | $r = -.058$                      | $r = .08$                          |
| Dutch-like PNI item 2 | $r = -.057$                      | $r = .092$                         |

Table 6: Correlations between ratings on Dutch-like patterns and the amount of Dutch and Frisian spoken on an average day

The influence of Dutch is therefore not confirmed by these data. This result does not necessarily mean that there cannot be any Dutch influence driving this change. It only shows that there is no direct correlation that between the ratings and the amount of Dutch that a Frisian speaker speaks on an average day. However, Dutch could still have a more indirect influence. Unfortunately, it is unclear at this point in what way, and which other factors trigger this change. I leave this open for further research.

4.6 Conclusion

In this chapter I discussed the variation and change that we find in the domain of noun incorporation in Frisian and Dutch. I showed that while noun incorporation is possible in Frisian, we find pseudo-noun incorporation in Dutch. I argued that these two patterns involve different syntactic derivations: while Frisian NI involves head movement of a noun into a classifier head, followed by further incorporation of this unit into the verb, Dutch PNI consists of phrasal movement of a NumP into the specifier position of an infinitival verb. This variation reflects different Move parameters, as illustrated below:

## (124) Frisian noun incorporation:

$$\begin{array}{lll} V_{[\text{trans}]}: & F_{\text{search}} & \text{Class, } n^0 \\ & F_{\text{IM}} & \text{Class, } n^0 \end{array}$$

## (125) Dutch pseudo-noun incorporation

$$\begin{array}{lll} V_{[\text{inf}]}: & F_{\text{search}} & \text{NumP} \\ & F_{\text{IM}} & \text{NumP (to Spec)} \end{array}$$

Data from questionnaires shows that some present-day speakers of Frisian also allow Dutch-like PNI. This signals language change; these speakers have a parametric setting similar to the Dutch parametric setting, as in (124). As (124) and (125) are not contradicting, these can co-exist within one grammar. Moreover, some Frisian speakers do not accept the original Frisian NI pattern anymore. Their grammars do not include the parametric setting in (124). In short, this chapter presented a case study of variation in Movement parameters which account for quite similar superficial patterns (NI and PNI), and showed how the changes in the superficial patterns (in the E-language) can be explained by the changes in the underlying Move parameters.

# Chapter 5

## The absentive

### 5.0 Introduction

This chapter presents a case study on language variation in a Merge parameter. The case I discuss is the absentive, a syntactic pattern which shows variation between Dutch and Frisian and which shows changes in present-day speakers of Frisian.

The absentive is a grammatical construction used to express someone's absence. It is cross-linguistically not very common, but it occurs in some European languages, among which Dutch and Frisian. In Frisian, it consists of a subject, a finite form of *wêze* ("be"), and a *te*-infinitive, as in (1). In Dutch, it consists of a subject, a finite form of *zijn* ("be") and a bare infinitive, as in (2).

- |     |                                                                          |         |
|-----|--------------------------------------------------------------------------|---------|
| (1) | Jan is te fiskjen.<br><i>Jan is to fish.inf</i><br>"Jan is off fishing." | Frisian |
| (2) | Jan is vissen.<br><i>Jan is fish.inf</i><br>"Jan is off fishing."        | Dutch   |

Nowadays, some speakers of Frisian accept a variant of (2) without *te*, that is, a Dutch-like absentive with a bare infinitive.

Following Abraham (2008) and based on van Riemsdijk (2002), I will analyze the absentive as involving a silent perfective verb *go*, as in (3) and (4).<sup>60</sup>

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<sup>60</sup> Following Kayne (2016) I will present unpronounced material in capitals.

- (3)

Jan is te fiskjen GONGEN.  
*Jan is to fish.inf gone*  
"Jan is off fishing."

Frisian
- (4)

Jan is GAAN vissen.  
*Jan is gone fish.inf*  
"Jan is off fishing."

Dutch

I will claim the corresponding structure of sentence (3) is as in (5), where GONGEN is a motion verb with a PP complement [te fiskjen], and *te* is a preposition:

This structure will be further motivated in section 5.2.

For Dutch, I propose that the absensive involves silent GAAN, with the corresponding structure presented in (6):

Here, we find *gaan* in the Asp head, as an auxiliary verb, taking a vP complement [vissen]. This structure will be further motivated in section 5.2.

As Dutch *gaan* (“go”) and Frisian *gean* (“go”) do not select the same complements, I will show that this analysis explains the similarities and the variation in the Dutch and Frisian absentive. Both verbs can take a PP complement, as in (7), but in the absentive, the Dutch version takes a vP complement.

- (7) a. Ik gean nei Amsterdam. Frisian  
I go to Amsterdam  
“I go to Amsterdam.”
- b. Ik ga naar Amsterdam. Dutch  
I go to Amsterdam  
“I go to Amsterdam.”

I will claim that this variation can be captured in terms of a Merge parameter:

- (8) Merge parameter:
- o *gean*: F<sub>Merge</sub> PP
  - o *gaan*: F<sub>Merge</sub> PP
  - F<sub>Merge</sub> vP

In the final part of the chapter, I will discuss questionnaire data that show that some speakers of Frisian accept a Dutch-like absentive with a bare infinitive. For them, the parameter setting is as follows:

- (9) Merge parameter:  
       *gean*:        $F_{\text{Merge}} \text{ PP}$   
                    $F_{\text{Merge}} \text{ vP}$

This chapter is organized as follows: in section 5.1, I will first give a short background on the semantics of the absentive. In section 5.2, I will present the analysis and the arguments for this analysis. I will show how it accounts for the differences between the Dutch and Frisian absentive. In section 5.3, I will discuss how the variation can be captured in terms of a Merge parameter. In section 5.4, I will discuss alternative analyses for the absentive. In section 5.5 I will present questionnaire data that show that the Frisian absentive is changing for some speakers, under influence of Dutch. Finally, section 5.6 concludes the chapter.

## 5.1 The semantics of the absentive

### 5.1.1 *The semantics of the Dutch and Frisian absentive*

The absentive is a grammatical construction that expresses that the subject of the sentence is absent. The meaning of the absentive consists of two main parts: (i) the absence of the subject, and (ii) the engagement of the subject in an event expressed by an infinitival verb. For example, the sentence in (10) means that (i) Jan is not at the same place as the speaker who utters the sentence, and (ii) Jan is engaged in the event of swimming.

- (10) Jan is zwemmen.<sup>61</sup>  
       *Jan is swim.INF*  
       ‘Jan is off swimming.’

---

<sup>61</sup> Examples in this part of the chapter are mostly provided in Dutch only, to avoid redundancy. The Frisian counterparts of these sentences have similar meanings, unless stated otherwise.

I will now discuss both parts of the absentive semantics in a bit more detail. First, I will consider the actual “absentive” part. The term absentive was used for the first time by De Groot (1995), who studied the absentive in Dutch. It is clear that the subject of the sentence is “off” to some place, but it is not entirely clear from which place the subject is absent. A first hunch would be absence from the speaker’s point of view, but Haslinger (2007) shows that the speaker’s location is not always relevant. With sentence (11) (Haslinger 2007:16), she shows that the subject of the absentive (*Sneep*) is absent with respect to the other participant in the sentence (*Harry*). Whether the speaker is in the same room or not, is irrelevant.

- (11) Toen Harry de kamer binnenkwam was Sneep  
 When Harry the room entered was Snape  
 lunchen.  
*lunch.INF*  
 “When Harry entered the room, Snape was off having lunch.”

The location from which the subject of the absentive is absent is therefore not necessarily the location of the speaker. The location also does not have to be explicit: (12) is grammatical even when the location *de kamer* (“the room”) is left out:

- (12) Toen Harry binnenkwam was Sneep lunchen.  
 When Harry entered was Snape lunch.*INF*  
 “When Harry entered the room, Snape was off having lunch.”

The location from which the subject of the absentive is absent seems to be some kind of implicit or default location. Haslinger (2007) formalizes this by referring to “the subject’s origo”. The origo refers to the default deictic center: *I, here, now*. While this is usually interpreted with respect to the speaker, Haslinger applies it to the subject: it refers to the subject’s default or expected location. This location can be pragmatically inferred; it often coincides with the speaker’s location, but in an example such as (13), one can infer that the subject’s location was expected to be on the other end of the phoneline.

- (13) Ik heb Jan niet gesproken. Toen ik belde, was hij  
*I have Jan not spoken. When I called, was he*  
 wissen.  
*fish.INF*  
 "I didn't speak to Jan. When I called, he was off fishing."

In short, the location from which the subject of the absentive is absent, can be pragmatically inferred. What should be encoded in the syntax somehow is the fact *that* the subject is absent. It is the notion of absence, which makes this construction different from, for example, a progressive construction, such as in (14):

- (14) Jan is aan het wissen.  
*Jan is at the fish.INF*  
 "Jan is fishing."

In this progressive sentence, it is expressed that the subject (*Jan*) is engaged in the event of fishing. However, unlike the absentive construction, one could easily utter this while standing next to *Jan*; the subject does not have to be absent. The absentive therefore needs to encode this absence in the syntax. In my analysis, this is explained by an empty verb GO (which indicated movement away from a reference point) in the syntactic structure of the absentive.

The second aspect of the absentive's semantics concerns the event described by the infinitival verb. The subject of the absentive is engaged in this event. Not all types of verbs are allowed in the absentive. While De Groot (1995, 2000) suggests that this has to do with telicity, Haslinger (2007:30) shows that the restrictions can be modelled by means of the Vendler (1967) verb classes. She shows that activities (15a) and accomplishments (15b) are allowed in the absentive, but achievements (15c) and states (15d) are not.

- (15) a. Piet is de auto duwen. *Activity*  
*Piet is the car push.INF*  
 "Piet is off pushing the car."

- b. Henk is een boterham eten. *Accomplishment*  
 Henk is a sandwich eat.INF  
 "Henk is off eating a sandwich"
- c. \*Jan is het huis bezitten. *State*  
 Jan is the house possess.INF  
 "Jan is off possessing the house."
- d. \*Hans is z'n bril vinden. *Achievement*  
 Hans is his glasses find.INF  
 "Hans is off finding his glasses."

Why do we find these restrictions on the absentive? Both de Groot (2000) and Haslinger (2007) suggest that this has to do with agentivity: only verbs with an agentive subject are allowed. They mention that there seem to be counterexamples to this: Scandinavian languages actually do allow undergoers of an activity. The same holds for Frisian, as is illustrated in (16):

- (16) De masine is te reparearjen.  
 The device is to repair.INF  
 "The device is off being repaired."

In this example, *de masine* ("the device") is the subject of the absentive, but it is not the agent of the event of repairing. Rather, it is the undergoer of the event of being repaired. Haslinger (2007) and de Groot (2000) hypothesize that the agentivity is then not necessarily related to the subject, but that there is "some volitionality"<sup>62</sup> in the absentive; for example in (15), there is an implicit agent who sent the device away to be repaired. This is similar to constructions like (17), where the infinitive is interpreted as passive, and there is an implicit agent "mij".

- (17) de (door mij) te repareren machine *Dutch*  
 the (by me) to repair.INF device  
 "The machine that has to be repaired (by me)."

---

<sup>62</sup> Volitionality means that a participant has control over an action, that is, a participant is animate and can choose to do (or not do) something (this therefore excludes events such as *to fall in love* or *to die*).

It seems, then, as if the absentive always needs to include agentivity, whether the agent is explicit or not. In section 5.2.2.3 I will discuss the example in (16) further and explain why it is possible in Frisian but not in Dutch.

One other property of the infinitival verb in the absentive is that the event does not have to be realized at the moment of the utterance. It is, for example, perfectly fine to say a sentence like (18), when one is actually on the way to the store, or even when one is about to leave.

- (18) Ik ben boodschappen doen.  
*I am groceries do.INF*  
 "I'm off buying groceries."

According to Haslinger, this is not something particular to the absentive, because present tense can in general be interpreted as future tense in Dutch (and this holds for Frisian, too). This is illustrated in (19):

- (19) Ik doe morgen boodschappen.  
*I do tomorrow groceries*  
 "I'll buy groceries tomorrow."

With the analysis presented in this chapter I will provide an account for the absentive semantics discussed in this section.

### 5.1.2 Crosslinguistic variation

Frisian and Dutch are not the only languages that have an absentive construction. De Groot (2000) describes the absentive in a few languages spoken in Europe. He shows that it also occurs in German, Hungarian, Fering (a North-Frisian variety), Norwegian, Swedish, Italian and Finnish. The overview is given below:

- (20) a. Jan ist boxen. *German*  
*Jan is box.INF*  
 "Jan is off boxing."

- |    |                                                                                     |                  |
|----|-------------------------------------------------------------------------------------|------------------|
| b. | János boxolni van.<br><i>Jan box.INF is</i><br>"Jan is off boxing."                 | <i>Hungarian</i> |
| c. | Jan as tu boksin<br><i>Jan is to box.INF</i><br>"Jan is off boxing."                | <i>Fering</i>    |
| d. | Jan er og boksar.<br><i>Jan is and box.prs</i><br>"Jan is off boxing."              | <i>Norwegian</i> |
| e. | Jan är och boxas.<br><i>Jan is and box.prs</i><br>"Jan is off boxing."              | <i>Swedish</i>   |
| f. | Gianni è a boxare.<br><i>Jan is at box.INF</i><br>"Jan is off boxing."              | <i>Italian</i>   |
| g. | Jussi on nykkeile-mä-ssä<br><i>Jan is box.3INF.inessive</i><br>"Jan is off boxing." | <i>Finnish</i>   |

De Groot (2000) groups these languages by the different ways in which they form the absentive. While Dutch, German and Hungarian have a bare infinitive, the Fering absentive shows a *to*-infinitive (similar to the West-Frisian variant I have discussed in this chapter). In Norwegian and Swedish, we find a coordination structure, in Italian we find a prepositional structure and Finnish shows inessive case (a kind of locative case). Although these constructions almost all look different at the surface, De Groot (2000) shows that the interpretation and semantic restrictions are similar for all of these languages, suggesting that we are truly dealing with the same construction. Abraham (2008) suggests that a motion verb deletion-hypothesis is a plausible way to explain the absentive in all languages. In this chapter, this is the approach I will take for Dutch and Frisian.

## 5.2 Silent GO in the absentive

### 5.2.0 Introduction

The previous section provided a background on the semantics and interpretation of the absentive. Now, I will turn to the syntactic analysis. The key of this analysis is two-fold: (i) uniformity: both the Frisian and the Dutch absentive involve a deleted GO, and (ii) diversity: the variation between the Dutch and Frisian absentive can be explained by the different grammatical behavior of the verb *go* in both languages.

Recall from the introduction my claim that the absentive contains a silent perfective verb GO, as in (21) and (22). In this section, I will discuss the syntactic structure that I propose for these sentences.

- |      |                                                                                                           |         |
|------|-----------------------------------------------------------------------------------------------------------|---------|
| (21) | <p>Jan <b>is te fiskjen</b> GONGEN</p> <p><i>Jan is to fish.INF gone</i></p> <p>"Jan is off fishing."</p> | Frisian |
| (22) | <p>Jan <b>is GAAN vissen</b></p> <p><i>Jan is gone fish.INF</i></p> <p>"Jan is off fishing."</p>          | Dutch   |

### 5.2.1 The structure of the Frisian absentive

In this section I will discuss the structure of the Frisian absentive. The relevant structure for (21) is presented below in (23). Here, we find the subject *Jan*, the auxiliary *is* ("is"), the main verb GONGEN ("gone", the past participle of *gean*) and a PP *te fiskjen* ("to fish.INF").

I will now briefly discuss the derivation of this structure. Since *gean* is an unaccusative verb, it does not have an external thetarole, and therefore its subject does not originate in spec,vP. Instead, I propose that *Jan* originates as the subject of a small clause, i.e., a clause with a subject and predicate but without tense (Stowell 1981), as in (24):

- (24) [TP is [vP [SC (=PP) Jan te fiskjen] GONGEN]

An argument for this is the fact that the small clause can also be uttered in isolation, for example when the speaker is surprised:<sup>63</sup>

- (25) A: "Jan is vissen."  
Jan is fish.INF  
"Jan is off fishing."  
B: "Jan vissen!? Maar hij haat stilzitten!"  
Jan fish.inf But he hates still-sit.INF  
"Jan off fishing? But he hates sitting still!"

<sup>63</sup> The examples in (25) are provided in Dutch to prevent unnecessary mistakes in translation. However, the same arguments hold for Frisian.



the main verb, as the contrast between (29) and (30) shows. This is the same position in which regular PPs occur in Frisian, as is shown in (31) (J. Hoekstra 1997:86-87).

- (29) ... dat Jan te silen is <\*te silen>. (absentive)  
           that Jan to sail.INF is to sail  
           "... that Jan is off sailing."
- (30) ... dat Jan <\*te silen> beslút <te silen> (other *te*-infinitive)  
           that Jan to sail.INF decides to sail  
           "... that Jan decides to sail."
- (31) ... dat Jan nei Ljouwert is <\*nei Ljouwert> (directional PP)  
           that Jan to Ljouwert is to Ljouwert  
           "... that Jan is off to Ljouwert."

Hoekstra's second argument for analyzing *te* as a preposition in the Frisian absentive is the fact that it precedes particles (which "belong" to the verb), rather than following them, as (32) shows. This is not a direct argument for the prepositional status of *te*, but it does set the absentive apart from other *te*-infinitives, in which *te* follows the particle (as in (33)) (J. Hoekstra 1997:86-87).

- (32) Jan is <te> op <\*te> rêden.  
       Jan is to up to tidy.INF  
       "Jan is off tidying up."
- (33) Jan beslút <\*te> út <te> gean.  
       Jan decides to out to go.INF  
       "Jan decides to go out."

For these reasons, I analyze [*te fiskjen*] in the structure in (23) as a PP. *Fiskjen* is marked as a DP; as in Chapter 3 (section 3.1.2.4) I argued that infinitives which are the complement of *te* in Frisian are nominal. The *-en* suffix we find on *fiskjen* is an instantiation of *n*<sup>0</sup> (see Chapter 3, section 3.1).

### 5.2.2 The structure of the Dutch absentive

In the previous section I discussed the syntactic structure of the Frisian absentive. Now let's turn to the structure of the Dutch absentive, which I claim to be as in (34):

- (34) "Jan is vissen."

Here, we find the infinitive in  $v^0$ , where the *-en* suffix attaches, as discussed in Chapter 3 (section 3.2.3). The silent GO in this structure is not a main verb, but a functional item. This is based on the fact that unlike Frisian, Dutch has two types of *go*. First, there is motion *gaan*, as in (35):

- (35) Ik ga naar Amsterdam.  
 I go to Amsterdam  
 "I go to Amsterdam."

But there is also a functional *gaan*, which has a future interpretation:

- (36) Ik ga morgen verhuizen.  
 I go tomorrow move-houses.inf  
 "I'm going to move houses tomorrow."

The example in (36) shows that *gaan* can take infinitival complements in Dutch.<sup>66</sup> Following Haeseryn et al. (1999) I assume that this type of *gaan* expresses inchoative aspect. Therefore, I expect it to be in the Aspect head, in the functional extended projection of the main verb. As *gaan* is an auxiliary here, it does not provide theta-roles; the subject of the absentive originates as the subject of the infinitive, in the vP. The subject in the structure in (34) therefore originates as the subject of the vP, presented below, and then raises to the position of spec,TP.

- (37) [TP is [AspP gaan [vP Jan wissen] ] ]

So far, I have discussed the syntactic structures which I propose for the Frisian and Dutch absentive. I argue that both involve a silent GO. In Frisian GO has a PP complement, whereas in Dutch it has an infinitival complement.

In the next section, I will further discuss this analysis. I will provide arguments for assuming a silent GO in the absentive. In section 5.2.2, I will provide a closer look into the differences between Frisian *gean* and Dutch *gaan* and I will demonstrate that this analysis can account for the different behavior of the absentive in the two languages.

### 5.2.3 Arguments for a silent GO

There are several arguments to assume a silent GO in the absentive. First of all, *go* has absentive semantics: it indicates movement away from a reference point. Consider the addition of an overt verb *go* in the absentive in Dutch:

- (38) Jan is gaan vissen.  
*Jan is gone fish.inf*  
 "Jan has gone off fishing."

---

<sup>66</sup> One could wonder why, if Dutch *gaan* also allows for a PP complement, the absentive in Dutch would not include a PP in the structure (or even why it cannot include an overt *te*). At this point I can only speculate: perhaps this is because the structure in (34) allows for more material in the absentive; in section 5.2.2.4, I show that because of this structure, the Dutch absentive is able to include direct objects, whereas the Frisian absentive is not. An other possibility is that *te* in Dutch is grammaticalized much further than in Frisian and its use as a preposition is too limited. I leave this matter for future research.

Although the interpretation might be subtly different here than without overt *go*<sup>67</sup>, the sentence still implies that the subject is absent and that he is involved in some kind of activity. In this case, *Jan* is away and he is fishing. The presence of a silent GO therefore explains how the absentive semantics arises; no extra properties have to be postulated.

A second argument to assume a silent GO in the absentive is that it would explain how *is* appears to have an infinitival complement. Both in Frisian and Dutch, *is* is either a temporal auxiliary selecting a participle, or it is a copula. There are, to my knowledge, no contexts in which it selects an infinitival complement in Dutch or Frisian. Therefore, it is unlikely that it can select an infinitival complement in the absentive. Instead, as a temporal auxiliary in the Dutch absentive it selects GAAN<sup>68</sup>, and GAAN is the verb that selects the infinitive. In Frisian, we find the same: *is* is a temporal auxiliary selecting the participle GONGEN, and GONGEN is the verb that selects the *te*-infinitive (the PP). With this analysis, we do not have to extend the properties of *zijn* ('be', Dutch) or *wêze* ('be', Frisian): the presence of a silent GO explains the acceptability of infinitival complements as the apparent complement of *is*.

Related to this, it was noted by Abraham (2008) that all languages with an absentive use a form of *be* (and not, for example, *have*) (Abraham 2008). *Be* is the typical auxiliary for motion verb *go*. This would be a necessary (but not sufficient) condition for the presence of a silent GO in the absentive.

Another argument in favor of a silent GO-analysis is the fact that silent motion verbs have been proposed before: van Riemsdijk (2002) argued that in sentences where modal verbs in Germanic languages seem to have a non-verbal complement, there is actually a silent GO in the complement position of the modal verb. This is illustrated with a Dutch example in (39):

- (39)    *Zij moet naar huis GAAN.*  
          *She must to house go*  
          "She must go home."

---

<sup>67</sup> Some native speakers report that there is more focus on the act of leaving when there is an overt *go*, while there is more focus on the activity described by the infinitive when there is no overt *go*.

<sup>68</sup> Confusingly, *gaan* is not a participle, but an infinitival form. This does not contradict the just stated fact that *is* normally does not select infinitives, as *gaan* has the form of an infinitive for independent reasons: the IPP effect (Zwart 2007). Once there is a verb cluster, functional verbs in Dutch get the form of an infinitive instead of a participle. It is, however, interpreted as a participle.

The main evidence for this empty motion verb is found in verb doubling patterns in Swiss German (see van Riemsdijk 2002). Van Riemsdijk shows that in Swiss German, the verbs *go* and *come* show an obligatory doubling pattern: in infinitival constructions, the verb is doubled in a reduced form, as in (40) (van Riemsdijk 2002:154):

- (40) Si    gaat    de    zmittag    go                    choche.  
       *She goes the lunch DOUBLING cook*  
       “She is going to cook lunch.”

Interestingly, this doubled element is also found with infinitival complements to modal verbs, even though there does not seem to be a higher motion verb of which the element is supposed to be a copy (van Riemsdijk 2002:158):

- (41) ... wän I mues go                    poscht  
       *when I must DOUBLING shop*  
       “... when I have to go shopping.”

Van Riemsdijk takes this as evidence for the present of a silent *go* in these kinds of structures with modal verbs.

There are also examples of a silent motion verb in Frisian. Consider the example in (42).

- (42) [It is    tiid    [om    fuort    ] ]                    Frisian  
       *It is time to away*  
       “It is time to go away.”

The infinitival clause [om fuort] does not contain any verb, so one would expect there to be a silent verb. E. Hoekstra (2018b) analyzes this as in (43), where again we find a silent verb GO.

- (43) It is    tiid    om fuort ~~to go~~.  
       *It is time to away to go.INF*  
       “It is time to go away.”

These examples hence show that GO can be silent in other contexts, too.

Another indication that a silent GO is part of the absentive is the fact that in Frisian, it is possible to have an overt *gean* (“go”) in the absentive, in addition

to examples with *wêze* ("be"), as in (44):

- (44) Jan giet te fiskjen.  
*Jan goes to fish.inf*  
 "Jan goes off fishing."

In this example, *Jan* is not yet gone, but he will go soon and the fishing activity will be in a different location. Therefore, this example is analyzed as an absentive, too (J. Hoekstra 1997, Dyk 2009). If we assume that GO is always present in the absentive, this example needs no further explanation. (44) is simply the non-perfective version of the absentive example in (45), with an overt GO.

- (45) Jan is te fiskjen GONGEN.  
*Jan is to fish.inf gone*  
 "Jan is gone fishing."

Finally, the main advantage of this analysis as opposed to other analyses, which will be discussed in section 5.4, is the fact that it can explain the differences between the Dutch and Frisian absentive, as I will show in the next section.

## 5.2.4 Variation between the Dutch and Frisian absentive

### 5.4.2.1 A *te*-infinitive vs. a bare infinitive

The most obvious difference between the Frisian and Dutch absentive is its form; while we find a *te*-infinitive in Frisian, we find a bare infinitive in Dutch, as illustrated again below:

- |      |                                                                          |         |
|------|--------------------------------------------------------------------------|---------|
| (46) | Jan is te fiskjen.<br><i>Jan is to fish.inf</i><br>"Jan is off fishing." | Frisian |
| (47) | Jan is vissen.<br><i>Jan is fish.inf</i><br>"Jan is off fishing."        | Dutch   |



This difference follows from my analysis. As discussed in section 5.2.0, the Frisian verb *gean* is a motion verb which selects a PP-complement. In section 5.2.0 I also showed why the *te*-infinitive in (46) can be considered to be a PP.

The Dutch verb *gaan* on the other hand can be either a motion verb, selecting a PP complement, or a functional verb, selecting an infinitival complement, as was illustrated in section 5.2.0. I argued that in the absentive, it selects a verbal infinitive as its complement. The verbs *gean* and *gaan* are therefore different in Dutch and Frisian. Assuming that a silent version of these verbs is present in the absentive, the different forms of the absentive follow from this.

#### 5.4.2.2 Other verbs in the absentive

Another difference between the absentive in Dutch and Frisian is the fact that in Frisian, there can be other finite verbs in the absentive than just *wêze* ("be") (J. Hoekstra 1997, Dyk 2009). The absentive can also include *gean* ("go"), which was already discussed in section 5.2.1, or modal verbs. Both are illustrated below:

- |      |                                                                                                                     |         |
|------|---------------------------------------------------------------------------------------------------------------------|---------|
| (48) | Jan giet te fiskjen.<br><i>Jan goes to fish.inf</i><br>"Jan goes off fishing."                                      | Frisian |
| (49) | Jan sil/wol/moat te fiskjen.<br><i>Jan will/wants/must to fish.inf</i><br>"Jan will / wants / must go off fishing." |         |

In Dutch, this is not possible. The Dutch (surface) equivalents of (48) and (49) are grammatical, as shown in (50) and (51), but do not have an absentive interpretation. Instead, the Dutch verb *gaan* with an infinitival complement is interpreted as a future or aspectual auxiliary, similar to the English *be going to* construction.

- |      |                                                                         |       |
|------|-------------------------------------------------------------------------|-------|
| (50) | Jan gaat vissen.<br><i>Jan goes fish.inf</i><br>"Jan is going to fish." | Dutch |
|------|-------------------------------------------------------------------------|-------|

- (51) Jan zal/wil/moet vissen.  
*Jan will/wants/must fish.inf*  
 "Jan will / wants / must fish."

At first, this seems like a big difference between Dutch and Frisian regarding the absentive. Any analysis of the absentive would have to take into account that the absentive in Frisian can be embedded under different types of verbs. However, I would like to argue that this difference is actually only apparent. First of all, while (49) and (51) include modals as finite verbs, I would like to propose that it is actually the verb *gean* ("go") which is part of the absentive in those cases, too. That is, I would like to say that the underlying representation of (49) is actually as in (52):

- (52) Jan sil/wol/moat te fiskjen GEAN. Frisian  
*Jan will/wants/must to fish.inf go*  
 "Jan will / wants / must go off fishing."

Similarly, there could be an empty GO in (51), as in (53):<sup>69</sup>

- (53) Jan zal/wil/moet GAAN vissen.  
*Jan will/wants/must GO fish.inf*  
 "Jan will / wants / must go fishing."

The difference between the possible verbs that can occur in the Dutch and Frisian absentive is then reduced to the possibility of including a finite form of *go* in the absentive. However, I would like to argue that this, too, is only an apparent difference. Although a sentence like (50) indeed does not seem to have an absentive interpretation, I propose that *gaan* actually can be part of the Dutch absentive. Sentences with *gaan* + infinitival complement can be the answer to a where-question, which suggests that *gaan* with an infinitival complement does not only have a future interpretation, but also a motion interpretation, as illustrated below:

---

<sup>69</sup> I do not want to claim that sentences with modal verbs always involve an empty GO. It would only be present if one would want to convey an absentive interpretation.

- (54) A: "Waar gaat Jan naar toe?"  
           *Where goes Jan to to*  
           "Where is Jan off to?"  
       B: "Hij gaat vissen."  
           *He goes fish.inf*  
           "He is going off fishing."

The reason that we do not get an absentive interpretation for sentences like (50) is then not that this interpretation is impossible, but that the future interpretation is just more prominent.<sup>70</sup>

Since *gean* ("go") does not have this future interpretation, this problem never arises in Frisian. Therefore, it appears that the same class of verbs can be part of the absentive in Dutch as well as Frisian: *be*, *go* and modal verbs. The superficial observation that *go* and modal verbs cannot be part of a Dutch absentive can be accounted for by the different properties of the verbs *gaan* (Dutch) and *gean* (Frisian).

#### 5.4.2.3 The passive absentive

A crucial difference between the Frisian and Dutch absentive is the fact that in Frisian, the subject does not have to be the agent of the action described by the infinitive. It can also be the patient, as is shown by the example below:

- (55) Jan is te hierknippen.  
       *Jan is to hair-cut.INF*  
       "Jan is off getting his hair cut." / "Jan is off cutting someone else's hair."

Which of the two interpretations is appropriate, depends on the context. If Jan is a hairdresser, the one in which he is the agent (henceforth: active

---

<sup>70</sup> This is hard to prove, as it is, to my knowledge, impossible to force an absentive interpretation in these examples. However, based on (54) I think it can be present. Moreover, one could also wonder if perhaps the Frisian examples in (48) and (49) illustrate the same issue; the infinitives express an unrealized activity, so a future interpretation is always available, and it is hard to isolate a pure absentive meaning. Perhaps (48) and (49) are not absentive constructions, then. In any case, the patterns for Frisian and Dutch are very similar in nature.

interpretation) is more prominent than the one in which he is the patient (henceforth: passive interpretation). In Dutch, only the active interpretation is possible:<sup>71</sup>

- (56) Jan is haren knippen.  
*Jan is hair cut.inf*  
 \*"Jan is off getting his hair cut." / "Jan is off cutting someone else's hair."

Since in Frisian, the subject of the absentive does not have to be the agent, the absentive can have an inanimate subject in Frisian, but not in Dutch:

- (57) De masine is te reparearjen. Frisian  
*The device is to repair.inf*  
 "The device is off being repaired."
- (58) \*De machine is repareren. Dutch  
*The device is repair.inf*  
 "The device is off being repaired."

I argue that this difference between Frisian and Dutch can be explained by the syntactic structure of the absentive. Indirectly, it is then again caused by the different properties of the verb *go* in both languages. More specifically, the different selectional features of *gean* and *gaan* lead to different syntactic structures in the Frisian and Dutch absentive. Consider again the structures I proposed in section 5.2.0, repeated below:

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<sup>71</sup> A few native speakers reported that they could have a passive interpretation with this example. However, this might be facilitated by the fact that getting a haircut is a much more common activity than cutting someone else's hair. Moreover, I did not find a passive interpretation possible for other examples in Dutch, and the inanimate subjects (as in (58)) are definitely ungrammatical.

In section 5.2.1, I argued that the subject of the Frisian absentive originates in a small clause. In Frisian, this small clause is a PP:

- (61) [TP is [vP [SC (=PP) Jan te fiskjen] GONGEN]]

In Dutch, however, the subject originates simply as the subject of the infinitive, as there is no PP in the absentive at all:

- (62) [TP is [AspP gaan [vP Jan wissen] ] ]

I propose that this different position of the subject is the reason that the Frisian absentive can have a passive interpretation, while this is impossible in Dutch. This has to do with the type of theta role the participants receive. In Dutch, the subject receives a theta role from the infinitive. Since the infinitive in the absentive is always an activity or accomplishment (see section 5.1.1), the default would be that the subject is assigned the role of agent. So, in (62), *Jan* is interpreted as the agent of *vissen*. In the Frisian absentive, however, the subject receives its theta role from the preposition *te*, as the subject is in the specifier of this predicate (see the structure in (59)). A locative or directional preposition assigns the role of theme to its subject and the role of location to its complement. In (59), *Jan* is then interpreted as a theme, while *fiskjen* is the location. Consider now (63):

- (63) [SC (=PP) Jan te hierknippen.]  
       *Jan to haircut.inf*

In this small clause, *Jan* is the theme of *te*, and *hierknippen* is the location. As *Jan* does not receive an agent role from the infinitive, there is no a priori reason why he should be interpreted as the agent of the haircutting event. This agent could be implicit, and *Jan* could be the patient, the one whose hair is being cut. In absentive constructions with an active interpretation, as in (61), the subject of the SC could be coreferential with an implicit subject of the infinitive.

Again, this difference between the Dutch and Frisian absentive can be traced back to the different properties of the verbs *gaan* and *gean*.

#### 5.4.2.4 Direct objects in the absentive

A further difference between the Dutch and Frisian absentive is that the Dutch absentive can include a direct object DP, whereas in Frisian, objects in the absentive have to be incorporated (see Chapter 4, section 4.1 for an analysis for Frisian noun incorporation). This is illustrated below. In Dutch, direct objects in the absentive can be bare, but also occur with an indefinite or definite determiner, as shown in (64):

- (64) a. Jan is brood kopen.  
           *Jan is bread buy.INF*  
       b. Jan is een brood kopen.  
           *Jan is a bread buy.INF*  
       c. Jan is het brood kopen.  
           *Jan is the bread buy.INF*  
           “Jan is off buying Ø/a/the bread.”

These examples would be appropriate in slightly different contexts, but are all fully grammatical. However, in Frisian, the direct object can only be bare (and actually, incorporated to the infinitive). J. Hoekstra (1997:86) shows this with the following examples:

- (65) a. dat er te hierknippen is  
           *that he to hair-cut.INF is*  
       b. \*dat er it hier te knippen is  
           *that he the hair to cut.INF is*  
           “That he is off giving/getting a haircut.”

This is not a general property of Frisian *te*-infinitives (J. Hoekstra 1997), but specific for the absentive. Other kinds of *te*-infinitives actually show the opposite pattern, as is illustrated by (66) (see also Chapter 4, section 4.1.4):

- (66) a. dat er it hier skynt te knippen  
           *that he the hair seems to cut.INF*  
           “That he seems to cut the hair.”

- b. \*dat er skynt te hierknippen  
*that he seems to hair-cut.INF*  
 “That he seems to cut the hair.”

The obligatory incorporation is thus a special property of the Frisian absentive. I propose that is a consequence of the fact that the verb in the absentive is the most nominal type of nominal infinitives (see Chapter 3, section 3.1.1). In Chapter 3, I proposed that the structure of a nominal infinitive includes a vP with nominal layers on top. However, which verbal and nominal layers are present can vary. I propose that the nominal infinitive has the following structure in the absentive:<sup>72</sup>

The fact that there is no AspP present is evidenced by the fact that the infinitive cannot be modified by the adverb *almar* (“constantly”):

- (68) \*Jan is te almar fiskjen.  
*Jan is to constantly fish.INF*  
 “Jan is constantly off fishing.”

I propose that in this case, then, there is also no VoiceP, since there cannot be a direct object, and the infinitive is directly nominalized above the vP (see also Chapter 3, section 3.1.1). This means that there is no room for an accusative object in the Frisian absentive, as there is no position in which it could receive accusative Case (i.e. no spec,VoiceP). Instead, the object incorporates into the

<sup>72</sup> I assume that the nominal *-en* suffix in  $n^0$  is attached to the verb by means of Lowering (see Chapter 3, section 3.1.4).



verb, as discussed in Chapter 4 (section 4.1):<sup>73</sup>

In short, there cannot be a non-incorporated direct object in the Frisian absentive, because the infinitive is nominalized at a low point in the structure (directly above vP). The infinitive in the Dutch absentive is not nominalized at all, *gaan* takes infinitival complements. As a result, direct objects are possible in the Dutch absentive:

- (70) Jan is een vis vangen.  
*Jan is a fish catch.INF*  
“Jan is off catching a fish.”

<sup>73</sup> I interpreted *hier* (“hair”) as a mass noun and therefore as an nP which incorporates (see section 4.1 of Chapter 4).

(71)

Here, the DP *(een) vis*, which is the internal complement of  $\sqrt{\text{VANG}}$ , moves to spec, VoiceP to receive accusative case. Again, we find a difference between the Frisian and Dutch absentive which can be explained by the two different types of *go* in these structures.

### 5.4.3 Challenges for this analysis

In the previous sections, I discussed my analysis for the Dutch and Frisian absentive. I proposed that they both involve a silent perfective *GO*, and that the differences between the Frisian *GO* (*gean*) and the Dutch *GO* (*gaan*) can account for the differences between the Dutch and Frisian absentive. In this section, I will discuss possible challenges for this analysis.

Haslinger (2007) argues against a silent *gaan* in the absentive. One of her arguments is that *gaan* usually selects different infinitival complements than *zijn* in the absentive. In section 5.1, we saw that the absentive can include activities and accomplishments, but not states or achievements. However,

*gaan* can have achievements as a complement, as illustrated in (72).

- (72) Jan gaat de top bereiken.  
*Jan goes the top reach.INF*  
 "Jan is going to reach the top."

The achievement *de top bereiken* ("reach the top") is not allowed in the absentive, as shown below:

- (73) \*Jan is de top bereiken  
*Jan is the top reach.INF*  
 Intended: "Jan is off reaching the top."

This is a problem for the analysis, because having a silent GAAN in the absentive predicts that the infinitives in the absentive and in the overt *gaan* constructions should be the same. However, I have assumed that the silent GAAN in the absentive is perfective. Perfective *gaan* cannot take achievements as a complement:

- (74) \*Jan is de top gaan bereiken  
*Jan is the top gone reach.INF*  
 Intended: "Jan has gone reaching the top."

Therefore, there is no discrepancy between the types of complements we find with perfective *gaan* and in the absentive.

Another argument Haslinger (2007) provides against the silent GO analysis of the absentive is that the word order of the *gaan*-construction and that of the absentive is different in embedded clauses. This would be unexpected if it were the same construction.

- (75) a. ... omdat Jan is gaan zwemmen.  
           *because Jan is go.INF swim.INF*  
           "... because Jan has gone swimming."  
       b. ... omdat Jan zwemmen is  
           *because Jan swim.INF is*  
           "... because Jan is off swimming."

In (75a), with overt *gaan*, the infinitive follows the finite verb. In the absentive, in (75b), the infinitive precedes the finite verb. However, (75a) is not the only possible order for the *gaan*-construction. Dros-Hendriks' (2018) analysis of the SAND-data<sup>74</sup> shows that the word order in which the finite verb is final is also very frequent:

- (76) ... omdat Jan gaan zwemmen is  
           omdat Jan gone swim.INF is  
           "... because Jan has gone swimming."

This is the same order as we find in the absentive. Moreover, Broekhuis (2013) argues that the absentive can also have more than one word order. He found a few dozen instances of the following order in an internet search, and I agree that this example is grammatical (Broekhuis 2013:93):

- (77) ... dat hij boodschappen is doen  
           that he purchases is do.INF  
           "... that he is off doing his shopping."

In this sentence, the infinitive is sentence final, just like in (75a). This shows that the absentive and the construction with overt *gaan* also both allow an order in which the infinitive is sentence final. To sum up, there does not seem to be a difference between the possible word orders with overt *gaan* or with silent GAAN in the absentive.

Another potential argument against the silent GO-analysis is the fact that the absentive can be uttered if you are about to leave, as in (78):

- (78) Ik ben boodschappen doen.  
       I am groceries do.INF  
       "I'm off buying groceries."

The sentence in (78) could be uttered if the speaker is, for example, putting on a jacket or walking towards the door. The speaker refers to a moment in the near future when he will indeed be absent, buying his groceries. However, this use of the absentive is unexpected in an analysis that assumes a perfective GO. This perfective verb suggests, after all, that the subject is already gone.

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<sup>74</sup> The Syntactic Atlas of the Dutch Dialects (SAND) is a corpus resulting from a dialect syntax project conducted between 2000 and 2003 (Barbiers et al. 2005)

The equivalent of (78) with overt *go* would indeed not be felicitous in the same situation:

- (79) #Ik ben boodschappen gaan doen  
       I am groceries gone do.INF  
       Intended: “I have gone off buying groceries.”

At this point, I do not have a solution to this problem. A related problem is the fact that if you put the Dutch absentive in perfect tense, the temporal auxiliary *wezen* (“been”) shows up, as in (80):

- (80) Jan is wezen vissen.  
       Jan is been fish.INF  
       “Jan has been off fishing.”

The problem here is that overt *gaan* would be ungrammatical in this context, as illustrated in (81):

- (81) \*Jan is wezen gaan vissen.  
       Jan is been gone fish.INF  
       “Jan has been gone off fishing.”

It is therefore unclear how there could be a silent GAAN in (81). At this point, the only way I see to solve this problem is to assume that silent GAAN en overt *gaan* have slightly different characteristics (following van Riemsdijk 2002) and assume that a silent GAAN would be grammatical in (80). However, it is also possible that the structure of (80) is more complex and involves more than the perfect tense of the absentive structure presented in section 5.2.2. I leave this matter for future research.

## 5.5 The parametric difference

In the previous sections I presented my analysis for the Dutch and Frisian absentive. I proposed that they both involve a silent perfective GO, and that the differences between the Frisian GO (*gean*) and the Dutch GO (*gaan*) can account for the differences in the Dutch and Frisian absentive. In this section, I aim to formalize this variation in terms of parameters. Recall from Chapter

2 that I assume that syntactic variation is parametric, and that there are only three types of parameters: Spell-out parameters, Move parameters and Merge parameters. In Chapter 3, we saw an example of a Spell-out parameter. In Chapter 4, we saw an example of a Move parameter. I propose that for the absentive, the variation can be explained by a Merge parameter.

Recall that I argued that the Dutch and Frisian absentive are uniform in the sense that they both involve a silent GO. They are diverse in the sense that this GO is different in each language, and this difference leads to several points of variation: 1) the *te*-infinitive in the Frisian absentive vs. the bare infinitive in the Dutch absentive (section 5.2.2.1), 2) the possibility to have *go* and modal verbs in the absentive in Frisian, but (apparently) not in Dutch (section 5.2.2.2), 3) the possibility for a passive interpretation in the Frisian absentive but not in Dutch (section 5.2.2.3), and 4) the obligatory incorporation of the direct object in the Frisian absentive versus a regular direct object in the Dutch absentive (section 5.2.2.4). As these points of variation are all the results of different properties of in the silent GO in the absentive, the only point of variation which needs to be coded in the speaker's grammars is the difference between Frisian *gean* and Dutch *gaan*.

As discussed in section 5.2, the differences between *gean* and *gaan* become clear by looking at the type of complements they select. While Frisian *gean* is a motion verb which takes a PP as a complement, as in (82), Dutch *gaan* is either a motion verb which takes a PP as a complement (cf. (83)) or an aspectual verb, which takes a verbal complement (cf. (84)).

- |      |                                                                                                                                        |         |
|------|----------------------------------------------------------------------------------------------------------------------------------------|---------|
| (82) | Ik <i>gean</i> [ <sub>PP</sub> <i>nei Amsterdam.</i> ]<br><i>I go to Amsterdam</i><br>"I go to Amsterdam."                             | Frisian |
| (83) | Ik <i>ga</i> [ <sub>PP</sub> <i>naar Amsterdam.</i> ]<br><i>I go to Amsterdam</i><br>"I go to Amsterdam."                              | Dutch   |
| (84) | Ik <i>ga morgen</i> [ <sub>v</sub> <i>verhuizen.</i> ]<br><i>I go tomorrow move-houses.INF</i><br>"I'm going to move houses tomorrow." | Dutch   |

In Frisian, this aspectual use of *gean* is ungrammatical, as illustrated in (85):

- (85) \*Ik gean moarn [<sub>v</sub> ferhúzjen].  
 I go tomorrow move-houses.INF  
 “I’m going to move houses tomorrow.”

Recall from Chapter 2 that Merge parameters encode the types of elements an item can merge with. For Frisian, the parameter setting for *gean* would then be:

- (86) go [gean]: F<sub>Merge</sub> PP

What we see here is the motion verb *go*, spelled out as *gean*, with a Merge feature saying it can merge with objects of the type PP. For a speaker of Dutch, on the other hand, the parameter setting would look like this:

- (87) go [gaan]: F<sub>Merge</sub> PP  
 F<sub>Merge</sub> vP

Here, there are two Merge features: one which says it can merge with elements of type PP and one which says it can merge with elements of type vP.

In short, the variation in the Dutch and Frisian absentive can all be traced back to a Merge parameter concerning the verb *go*. The variation in the verb *go* is in principle unrelated to the absentive; the variation we find in the absentive is merely a consequence of it.

In section 5.5, I will discuss the parametric change that is currently taking place in Frisian. First, I will discuss alternative analyses of the absentive.

## 5.4 Alternative analyses

### 5.4.0 Introduction

There is not much literature on the absentive. I follow Abraham (2008), who proposes *go*-deletion for German and Dutch. De Groot provides a description of the absentive in Dutch (1995) and a cross-linguistic overview (2000), but does not provide an analysis. Broekhuis (2013) discusses the absentive in Dutch, but mainly focusses on the status of the infinitive, and does not provide an account for the absentive semantics. Haslinger (2007) provides, to

my knowledge, the only extensive account for the Dutch absentive. She claims that the semantics of the absentive are the result of a Principle B effect. I will discuss this analysis in the next section. In section 5.4.2, I will discuss an alternative analysis Haslinger (2007) provides, which assumes a covert predicate with the meaning “away”.

### 5.4.1 *The absentive as a principle B effect*

Haslinger (2007) analyzed the absentive construction in Dutch. She takes an approach based on anaphorical relations, which is quite a different focus than I had in this chapter. To be more specific, Haslinger (2007: Chapter 2) claims that the semantics of the absentive are a result of the Principle B effect from Binding Theory. Principle B states that pronouns cannot be bound within their governing category (see Chomsky 1980). This means that *him* in (88) cannot be bound by another argument in the same clause, i.e., *him* cannot refer to *John*.

- (88) John<sub>x</sub> saw him<sub>y</sub> when he<sub>x/y</sub> entered the room.

The *disjoint reference* of *John* and *him* is signaled by the use of different indices: *x* for *John* and *y* for *him*. The argument *he* in the embedded clause could refer to either *John* or *him* (i.e. John entered the room (index *x*) or the person John saw entered the room (index *y*)).

Haslinger (2007) shows, based on Zagana (1992), that indices can also be used to express disjoint reference in Time rather than Person. Tense can be viewed as a two-place predicate that relates the Speech Time (S) to the Event time (E). If they are coreferential ( $E_t, S_t$ ), there is a present tense interpretation: the speech time is equal to the event time. But if the speech time and event time do not share the same referent ( $E_t, S_z$ ), this means that the speech time is either before or after the event time, leading to respectively a future or past interpretation of the sentence.

Haslinger proposes that a third dimension, Location (the third deictic dimension besides Person and Time), should be represented by means of coindexation as well. Her analysis rests on the following hypothesis (Haslinger, 2007:34):



- (89) An argument has a triple index consisting of three variables ( $x$ ,  $t$ ,  $l$ )<sup>75</sup>

This means that an argument refers to a certain person ( $x$ ), at a certain point in time ( $t$ ), at a certain location ( $l$ ).

Haslinger proposes that *zijn* ("be") in the absentive functions as a control verb, which introduces a PRO subject. That is, the infinitive has a silent subject PRO, as in (90):

- (90) SUBJ is [PRO INF]

Haslinger proposes that coreference is established between the sentential subject and the PRO argument on the level of Person (i.e. the main subject is the same person as the subject of the infinitive) and Time (i.e. it happens at the same point in time), but not for Location (i.e. the main subject and PRO subject are not in the same location). This means that the indices will look as in (91):

- (91)  $Jan_{(x, t, l)}$  is  $[PRO_{(x, t, p)} \text{vissen}]$ .  
*Jan* is PRO *fish.inf*  
 "Jan is off fishing"

As this example illustrates, *Jan* and PRO share indices for Person and Time (i.e., they refer to the same person at the same moment), but not for Location (i.e., they are at different locations). It is crucial that *zijn* functions as a control verb here, as disjoint reference is only possible between arguments which are not part of a chain, and have their own theta roles (i.e. the subject of the infinitive has to be PRO rather than a trace). The "absence" of someone, which is part of the absentive's meaning, is then formalized as disjoint reference between the spatial dimension of two arguments, namely the lexical subject and PRO.

The question that remains is why this disjoint reference of the spatial dimension emerges. Haslinger proposes that this is the result of a principle B effect. She reformulates the principle B effect of the Binding Theory as follows (Haslinger 2007:37):

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<sup>75</sup> Where  $x$  = Person,  $t$  = Time,  $l$  = Location

## (92) Principle B for the triple index:

$$*A1_{(x,t,l)} \dots A2_{(x,t,l)}$$

While Principle B originally stated that a pronoun could not have the same Index within its governing domain, this reformulation states that the three indices cannot *all* be the same: one has to be different. A domain is not made explicit. This is because the Time index restricts the domain. Coreference of the *t* (Time) implies that there is one tense domain. Haslinger (2007) says that each clause has its own tense domain, as illustrated in (93):

$$(93) \quad [_{TP} T \dots v \ [_{TP} T \dots v]]$$

This means that for any domain bigger than one clause, the T index is not shared, and it is no problem if the Person and Location index are shared. However, if the Time index is shared, that limits the domain to one clause, and either the Person or the Location index cannot be shared within this one clause, to obey (92).

Haslinger assumes that the absentive consists of one clause, as she believes that a bare infinitive does not introduce a new clause (a new Tense domain, TP):

$$(94) \quad [_{TP} T \dots V_{inf}]$$

Therefore, Haslinger argues that the *t* index is indeed shared in the absentive. The *x* (Person) index is also shared: the subject of the auxiliary in T and the subject of the infinitive is the same person. The only way to obey to principle B in the absentive is then disjoint reference for the Location index.

Haslinger (2007) therefore provides a clear analysis that can explain the semantics of the Dutch absentive. The approach I followed in this chapter focused on quite different (syntactic) aspects of the absentive, and therefore resulted in an analysis presented from a different point of view.

### 5.4.2 The absentive as an AWAY-predicate

Another possible analysis for the absentive is to assume the presence of an Absentive Phrase (AbsP), headed by a lexical item expressing absence, such as *weg* ("away"). As the absentive can be paraphrased as (95), it could be the

case this is actually the underlying structure of the absentive, and that the AbsP is then phonologically deleted.

- (95) Jan is weg om te vissen.  
*Jan is away for to fish.INF*  
 "Jan is off fishing."

Haslinger (2007:65) calls this absentive element (exemplified by *weg* in (95)) the AWAY-predicate, which would head an AbsP. The finite form of *zijn* would be a copula (a raising verb), which connects the subject to the AbsP. The *te*-infinitive can be a small clause complement of the AWAY-predicate. It seems necessary to assume the presence of PRO in this structure, too, since *Jan*, the sentential subject, already gets his theta role from the Away-predicate. According to this analysis, the structure of the absentive would be as in (96):

- (96) Jan<sub>i</sub> is [ t<sub>i</sub> AWAY [PRO vissen]].  
*Jan is fish.INF*  
 "Jan is off fishing."

For an analysis like this to be convincing, we would expect there to be overt lexicalizations of the AWAY-predicate. Haslinger (2007) mentions two candidates that could provide absentive semantics with a bare infinitival complement. The first option she discusses is the particle *uit* ('out'). In Dutch, you can make the absence of a subject more explicit by adding *uit* to the absentive:

- (97) Jan is uit vissen.  
*Jan is out fish.INF*  
 "Jan is off fishing."

There are also some combinations of *uit* + infinitive which have been lexicalized, such as *uit eten* (lit. "out eat", i.e. go out for dinner). Therefore, *uit* could be a candidate for an overt lexicalization of the AWAY-predicate. Haslinger shows, however, that the use of *uit* + infinitive is much more restricted than the infinitival verbs which can be used in the absentive. With *uit*, there must be a positive connotation that it is "some kind of outing" (Haslinger, 2007: 70). Sentences like (98), with recreational activities are

therefore fine, but sport activities (99) or activities that are not recreational at all (100) are ungrammatical:

- (98) Jan is uit wandelen/fietsen.  
*John is out walk.inf / cycle.INF*  
 "John is off walking/cycling."
- (99) \*Jan is uit volleyballen/schaken.  
*John is uit volleyball.inf/chess.INF*  
 "John is off playing volleyball/playing chess."
- (100) \*Jan is uit werken.  
*John is out work.INF*  
 "John is off moving."

*Uit* is therefore much more restricted than the absentive. Moreover, Haslinger shows that the constructions are not the same syntactically. In the absentive, both definite and indefinite objects are possible. But when *uit* is added, only indefinite objects are possible:

- (101) a. De poes is muizen vangen.  
*The cat is mice catch.INF*  
 "The cat is off catching mice."  
 b. De poes is de muizen vangen.  
*The cat is the mice catch.INF*  
 "The cat is off catching the mice."
- (102) a. De poes is uit muizen vangen.  
*The cat is out mice catch.INF*  
 "The cat is off catching mice."  
 b. \*De poes is uit de muizen vangen.  
*The cat is out the mice catch.INF*  
 "The cat is off catching the mice."

Haslinger concludes that *uit* is not a likely candidate as an overt lexicalization of an AWAY-predicate. I would like to add to this that in Frisian, too, *út* ("out") is unlikely to be the lexicalizer of an AWAY-predicate. Although *út* can be added to the absentive, as in (103), it is again restricted to "recreational activities".

- (103) Jan is út te fiskjen. Frisian  
*Jan is out to fish.INF*  
 "Jan is off fishing."
- (104) \*Jan is út te wurkjen.  
*Jan is out to work.INF*  
 "Jan is off working."

The second option Haslinger (2007) discusses as a possible overt lexicalization of an AWAY-predicate is the particle *heen*. This particle indicates movement away from the speaker and will be glossed as *away*. In some Dutch dialects, this can be added to the absentive:

- (105) a. Jan is hen vissen. Gramsbergen dialect,  
*John is away fish.INF* Sleen dialect
- b. Jan is en visken. Noord-Deurningen dialect  
*John is away fish.INF*
- c. Jan is heen vissen. Hooghalen dialect,  
*John is away fish.ING* Erica dialect  
 "John is off fishing"

*Heen* has the same syntactic restriction as *uit*; only indefinite objects are allowed, as shown below in (106). This is different from the absentive, where as we saw both definite and indefinite objects are allowed (see 101)).

- (106) De poes is hen (\*de) muze vange. Gramsbergen  
*the cat is away the mice catch.INF* dialect  
 "The cat is off catching mice."

In this way, the sentences that include *heen* are not similar to the absentive. Moreover, *heen* in Standard Dutch does not behave like this *heen* particle in the dialects, as it is restricted to some fixed expressions like (107).



absentive without *te*, as in (111):

- (111) Jan is fiskjen.  
       *Jan is fish.INF*  
       “Jan is off fishing.”

This looks, of course, a lot like the Dutch absentive construction. Does this mean that the absentive construction is losing *te* in Frisian? Or does this mean that some speakers allow both kinds of absentive construction? The aim of this section is to investigate what kind of change is taking place in the Frisian absentive. I will investigate this language change at two levels. At the descriptive level, in order to better understand the potential change, I will look at to how frequently this new form is accepted and in which contexts it occurs most frequently. At the explanatory level I will investigate how this change can be accounted for in terms of parametric change. I will argue that this change is influenced by contact with Dutch.

In the next two sections, I will present the relevant data.

### 5.5.1 *The items*

The data that is discussed in this section was collected by means of two digital written questionnaires. The details on these questionnaires and the participants can be found in the Introduction chapter of this thesis. For now, I will focus on the items concerning the absentive.

The first questionnaire included 18 items on the absentive, which are illustrated below:<sup>76</sup>

#### i. **Original Frisian absentive**

- (112) *Absentive in main clause:*  
       Heit is net thús, hy is te silen.  
       *Dad is not home, he is to sail.INF*  
       “Dad is not at home, he’s off sailing.”

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<sup>76</sup> An overview of all questionnaire items can be found in the Appendix.

- (113) *Absentive in embedded clause:*  
 Ik tink dat hy te fytsen is.  
*I think that he to cycle.INF is*  
 "I think he's off cycling."
- (114) *Absentive with incorporated object:*  
 Hy is te wyndrinken.  
*He is to wine drink.INF*  
 "He's of drinking wine."
- (115) *2 items with giet instead of is:*  
 Hy giet te silen.  
*He goes to sail.INF*  
 "He's going off sailing."
- (116) *2 items with modals instead of is:*  
 Mem sil moarn te sporten.  
*Mom will tomorrow to sport.INF*  
 "Mom will go off sporting tomorrow."
- (117) *With durative modification:*  
 Heit is in oerke te fytsen.  
*Dad is an hour.dim to cycle.INF*  
 "Dad is off cycling for an hour or so."
- (118) *Possible passive interpretation*  
 Heit is te hierknippen.  
*Dad is to haircut.INF*  
 "Dad is off getting/giving a haircut."

*With interpretation question:*

What does this sentence mean?

A. Someone cuts father's hair.

B. Father cuts someone else's hair.

C. Both A and B are possible.



- (119) *Necessary passive interpretation:*  
 De masine is te reparearjen.  
*The device is to repair.INF*  
 "The device is off being repaired."
- (120) *2 items absentive as an adjunct:*  
 Hy is nei Amsterdam te winkeljen.  
*He is to Amsterdam to shop.INF*  
 "He's off to Amsterdam to shop."

**ii. Dutch-like absentive (without *te*)**

- (121) *Absentive in main clause*  
 Mem is net thús, se is silen.  
*Mom is not home, she is sail.INF*  
 "Mom is not at home, she's off sailing."
- (122) *Absentive in embedded clause*  
 Wy tinken dat mem fytsen is.  
*We think that mem cycle.INF is*  
 "We think mom is off cycling."

**iii. Other**

- (123) *Frisian absentive with non-incorporated direct object:*  
 Hy is de bôle te keapjen.  
*He is the bread to buy.INF*  
 "He's off buying the bread."
- (124) *Frisian absentive with unexpected word order:*  
 Hy seit dat heit is te fytsen.  
*He said that dad is to cycle.INF*  
 "He said that dad is off cycling."

- (125) *Dutch-like absentive with unexpected word order:*

Se sizze dat hy is fytsen.  
*They say that he is cycle.INF*  
 "They say that he is off cycling."

- (126) *Absentive with incorporated object and indirect object:<sup>77</sup>*

Hy is him te hierknippen.  
*He is him to haircut.INF*  
 "He's off giving him a haircut."

The items (112) to (120) exemplify the original Frisian absentive. These items were all expected to be judged as acceptable, and can, in this way, be used as a confirmation of the literature (cf. J. Hoekstra 1997, Dyk 2009). For the interpretation question related to (119), we expect most speakers to choose C, or perhaps A, which would show that a passive interpretation is indeed possible for the Frisian absentive. It could be the case that for some speakers, these variants are not, or no longer, grammatical, possibly because of Dutch influence, and that there is no passive interpretation for them.

The items (121) and (122) are Dutch-like absentives: they include a bare infinitive rather than a *te*-infinitive. These were expected to be ungrammatical, unless there have been changes under the influence of Dutch. Based on the amount of contact between Dutch and Frisian (see Chapter 2), and the changes I found in the previous chapters, I do expect there to be some contact-induced changes.

Finally, the items in (123) to (126) include items that are neither Frisian-like, nor Dutch-like. For example, (123) has a *te*-infinitive like the Frisian absentive, but a non-incorporated object like the Dutch absentive. These items were ungrammatical in the original Frisian grammar (cf. J. Hoekstra 1997, Dyk 2009). However, it might be the case that under Dutch influence, mixed forms become grammatical, as Koenenman & Postma (2006) also found for verb clusters (see Chapter 2 for more details on this issue).

The second questionnaire included 8 more items on the absentive, all concerning the possibility to add a direct object. These items were created to find out whether, in cases where speakers of Frisian accept a Dutch-like

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<sup>77</sup> In some incorporation patterns, it is possible to include an extra argument (in this case *him* ("him"), even though *hier* ("hair") already seems to be the internal argument for *knippen* ("cut"). See also Chapter 4, footnote 53.

absentive, they accept it with all its corresponding Dutch properties, such as the possibility to add an object. This was compared to the addition of objects in the original Frisian absentive with *te*. The items included 4 Frisian absentives (with *te*). One with an indefinite object, one with a definite object, one with a bare object and one with a plural object. The other 4 items were Dutch-like absentives (without *te*) with the same types of objects. The items are illustrated below:

**i. Frisian absentive**

(127) *Indefinite object:*

Hy is net thús, hy is in bôle te keapjen.  
*He is not home, he is a bread to buy.INF*  
 “He is not at home, he is off buying a bread.”

(128) *Definite object:*

Se is net thús, se is de bôle te keapjen.  
*She is not home, she is the bread to buy.INF*  
 “She is not at home, she is off buying the bread.”

(129) *Bare object:*

Pake is net thús, hy is bôle te keapjen.  
*Grandpa is not home, he is bread to buy.INF*  
 “Grandpa is not at home, he is off buying a bread.”

(130) *Plural object:*

Beppe is net thús, se is bôlen te keapjen.  
*Grandma is not home, she is bread.PL to buy.INF*  
 “Grandma is not at home, she is off buying bread.”

**ii. Dutch-like absentive**

(131) *Indefinite object:*

Heit is net thús, hy is in bôle keapjen.  
*Dad is not home, he is a bread buy.INF*  
 “Dad is not at home, he is off buying a bread.”

(132) *Definite object:*

Mem is net thús, se is de bôle keapjen.

*Mom is not home, she is the bread buy.INF*

"Mom is not at home, she is off buying the bread."

(133) *Bare object:*

Hy is net thús, hy is bôle keapjen.

*He is not home, he is bread buy.INF*

"He is not at home, he is off buying a bread."

(134) *Plural object:*

Se is net thús, se is bôlen keapjen.

*She is not home, she is bread.PL buy.INF*

"She is not at home, she is off buying bread."

Again, originally the Frisian examples are supposed to be grammatical, but the Dutch-like examples are not. However, given the intense contact situation between Dutch and Frisian and the changes I found in the previous chapters, I expect to observe some contact-induced change. The results will be discussed in the next section.

## 5.5.2 Results

### 5.5.2.1 General results

I will now discuss the results of the questionnaire and look at their implications in terms of language change. Table 1 provides the main results of questionnaire 1: the means and standard deviations of all participants combined. For an illustration of the items, see the previous section. Table 2 provides the main results of questionnaire 2. For all items, answers ranged from 1 (unacceptable) to 5 (fully acceptable).

|                      |                                               | Ratings                    |
|----------------------|-----------------------------------------------|----------------------------|
| Frisian absentive    | Main clause (example (112))                   | <b>Mean: 4.84</b> SD: .52  |
|                      | Embedded clause (113)                         | <b>Mean: 4.7</b> SD: .60   |
|                      | Incorporated object (114)                     | <b>Mean: 3.39</b> SD: 1.49 |
|                      | <i>Giet</i> (2 items) (115)                   | <b>Mean: 4.66</b> SD: .83  |
|                      | Modal (2 items) (116)                         | <b>Mean: 4.83</b> SD: .53  |
|                      | Durative modification (117)                   | <b>Mean: 4.85</b> SD: .47  |
|                      | Passive interpretation (2 items) (118), (119) | <b>Mean: 3.91</b> SD: 1.42 |
|                      | Adjunct (2 items) (120)                       | <b>Mean: 4.52</b> SD: .88  |
| Dutch-like absentive | Main clause (121)                             | <b>Mean: 3.01</b> SD: 1.46 |
|                      | Embedded clause (122)                         | <b>Mean: 2.40</b> SD: 1.44 |
| Other                | Non-incorporated object (123)                 | <b>Mean: 1.64</b> SD: .99  |
|                      | Frisian unexpected word order (124)           | <b>Mean: 2.41</b> SD: 1.53 |
|                      | Dutch-like unexpected word order (125)        | <b>Mean: 1.85</b> SD: 1.12 |
|                      | Incorporated object + indirect object (126)   | <b>Mean: 1.75</b> SD: 1.13 |

Table 1: Overview of ratings for all participants for questionnaire 1 (*n* = 537)

The results in Table 1 show that all ratings for the “original Frisian absentive” are quite high; almost all means are above 4. This indicates that this is, as expected, an acceptable construction for almost all speakers of Frisian. It shows no signs of disappearing.

The items with a passive interpretation show a slightly lower mean: 3.91. Nevertheless, the results of the interpretability question illustrate that a passive interpretation is still possible in Frisian. Recall that the questionnaire included the item in (135):

- (135)
- Heit is te hierknippen.  
Dad is to hair-cut.INF  
“Dad is off getting/giving a haircut.”

Following this item, the question in (136) was asked:

- (136) What does this sentence mean?
- A. Someone cuts father's hair.
  - B. Father cuts someone else's hair.
  - C. Both A and B are possible.

To this question, 185 participants answered A, 311 answered C and 40 answered B. So, for most speakers of Frisian, a passive interpretation is possible in the absentive.

The lowest rating for the “original Frisian absentive”-items can be found on an item with an incorporated object (3.39). It is unclear why this item is less acceptable, as we know from Chapter 4 that incorporation in non-finite sentences is quite acceptable for Frisian speakers.

The “other” items, which were neither Dutch-like nor Frisian-like, have rather low mean ratings (all below 2.5). This suggests that they are not part of the grammars of the informants and they will therefore not be considered further in this section.

Let's now turn to the results of the Dutch-like absentive. A 3.01 mean rating for the main clause item suggests that the construction is not entirely grammatical, but also not completely ungrammatical.<sup>78,79</sup> If we take a look at the frequencies of the judgments on the main clause item, presented below in Table 2, we see that the ratings are extremely varied. The group of people (221) for whom the construction is grammatical (rated 4 or 5) is almost the same size as the people (218) for whom it is ungrammatical (rated 1 or 2). There is also a rather large group in the middle (104) for whom the grammaticality of this item is not very clear (who rated it with a 3).

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<sup>78</sup> If only L1 speakers are included in the analysis, the mean is 3.02 instead of 3.01. This shows that the relatively high rating on Dutch-like items is not only due to L2 speakers of Frisian.

<sup>79</sup> It is currently unclear why the ratings for embedded clauses are lower. It might be the case that main clauses show change more easily, since Dutch and Frisian main clauses are superficially more similar than embedded clauses. However, the questionnaire did not include enough items to further investigate this.

| Rating           | Participants |
|------------------|--------------|
| 1 (unacceptable) | 112          |
| 2                | 106          |
| 3                | 104          |
| 4                | 93           |
| 5 (acceptable)   | 122          |

Table 2: Rating frequencies “Dutch absentive”

In short, it seems as if there is a reasonable group of speakers who regard a Dutch version of the absentive as grammatical or at least not fully ungrammatical in Frisian. Translated to percentages; 40% of the speakers of Frisian accepts (gives a rating of 4 or 5) this Dutch-like absentive. This suggests that for some speakers, a change is taking place: they accept a Dutch-like infinitive, alongside the Frisian absentive.

The acceptability of non-incorporated objects in the absentive was tested again in Questionnaire 2. The results of this questionnaire, presented in Table 3, confirm that the inclusion of a non-incorporated object is always judged to be quite unacceptable, with all mean ratings below 3. This follows the traditional grammar of Frisian in which objects in the absentive always have to be incorporated (cf. J. Hoekstra 1997, see also section 5.2.2.4 of this chapter).

|                      |                         | Ratings           |          |
|----------------------|-------------------------|-------------------|----------|
| Frisian absentive    | Indefinite object (127) | <b>Mean: 2.14</b> | SD: 1.21 |
|                      | Definite object (128)   | <b>Mean: 1.94</b> | SD: 1.19 |
|                      | Bare object (129)       | <b>Mean: 2.53</b> | SD: 1.39 |
|                      | Plural object (130)     | <b>Mean: 2.23</b> | SD: 1.33 |
| Dutch-like absentive | Indefinite object (131) | <b>Mean: 2.58</b> | SD: 1.47 |
|                      | Definite object (132)   | <b>Mean: 1.99</b> | SD: 1.21 |
|                      | Bare object (133)       | <b>Mean: 2.96</b> | SD: 1.50 |
|                      | Plural object (134)     | <b>Mean: 2.62</b> | SD: 1.44 |

Table 3: Overview of ratings for all participants for questionnaire 2 ( *n* = 350)

Although these mean ratings are quite low, for some individual speakers the inclusion of an object is acceptable. The item that was judged the highest was the bare object in a Dutch-like absentive (2.96). This item is presented in (137):

- (137) Hy is net thús, hy is bôle keapjen.  
He is not home, he is bread buy.INF  
“He is not at home, he is off buying a bread.”

It is hard to distinguish a bare object from an incorporated object, so this might have influenced the results. However, based on the other items, there is a (small) group of participants for whom the Dutch-like absentive is grammatical.

As language change is often driven by younger speakers, it is worth investigating whether the group for whom the Dutch-like absentive is grammatical indeed represents the younger speakers. Similar to Chapter 3 and 4, I will compare the ratings of three age groups. Tables 4 and 5 present the results on the Dutch-like items per age group.

|                         |                    | 16-34<br>( <i>n</i> = 137) | 35-49<br>( <i>n</i> = 168) | 50+<br>( <i>n</i> = 232) |
|-------------------------|--------------------|----------------------------|----------------------------|--------------------------|
| Dutch-like<br>absentive | Main clause        | 3.31                       | 3.10                       | 2.77                     |
|                         | Embedded<br>clause | 2.69                       | 2.51                       | 2.15                     |

Table 4: Mean ratings per age groups on Dutch-like items from Questionnaire 1

As one can see in Table 4, younger speakers generally give higher ratings to the Dutch-like items than the older speakers. A one-way ANOVA showed that this was significant for both the main clause (*p* = .002) and the embedded clause (*p* = .001).

For Questionnaire 2, again the younger speakers gave higher ratings to the Dutch like items than the older speakers:

|                         |                         | 16-34<br>( <i>n</i> = 73) | 35-49<br>( <i>n</i> = 92) | 50+<br>( <i>n</i> = 181) |
|-------------------------|-------------------------|---------------------------|---------------------------|--------------------------|
| Dutch-like<br>absentive | Indefinite object (131) | 2.77                      | 2.87                      | 2.35                     |
|                         | Definite object (132)   | 2.19                      | 1.99                      | 1.90                     |
|                         | Bare object (133)       | 3.33                      | 2.87                      | 2.83                     |
|                         | Plural object (134)     | 2.85                      | 2.73                      | 2.45                     |

Table 5: Mean ratings per age groups on Dutch-like items from Questionnaire 2



A one-way ANOVA showed that for the Dutch-like item with a bare object and the Dutch-like item with an indefinite object, these differences were significant ( $p = 0.05$  and  $p = 0.01$  respectively). In short, younger speakers were indeed more likely to rate Dutch-like items higher, and therefore, to show language change.

### 5.5.2.2 The parametric change

In the previous section, it became clear that for some speakers of Frisian, the Dutch-like absentive (the absentive without *te*) is grammatical. This does, however, not replace the original Frisian absentive, which still has very high ratings. Recall from section 5.3 that I propose that the variation in the Dutch and Frisian absentive can be explained by the different parametric settings for the Merge-parameter of the verb GO, as the verb *go* is silently present in the absentive. I proposed that the parametric variation could be represented as follows:

(138) *go* [gean]:  $F_{\text{Merge PP}}$  Frisian

(139) *go* [gaan]:  $F_{\text{Merge PP}}$  Dutch  
 $F_{\text{Merge VP}}$

In order to accept the Dutch absentive, a speaker's parametric setting would need to be as in (139): *gean* would not only need to be able to take PP-complements, but also verbal complements. One could counterargue that this parametric change is not necessary: *fiskjen* in (140) could also be a PP with an empty P:

(140) Jan is fiskjen Innovated Frisian  
*Jan is fish.INF*  
 "Jan is off fishing."

However, as I have no proof of empty prepositions in related Frisian contexts, I assume that this is not the case. Moreover, the change from a motion verb to an aspectual verb that can also take verbal complements is a very common process for the verb *go* crosslinguistically (Bybee et al. 1994). It is a process of grammaticalization (i.e. a process in which a lexical item becomes (more)

functional, see Chapter 2, section 2.1.2), which also occurred in languages related to Frisian, such as Dutch, Flemish and English (“*going to*”). According to Demirdache & Uribe-Etxebarria (1998) this is due to the fact that *go* expresses a precedence relation: item X is before item Y, and “before” could have either a spatial or a temporal interpretation.

In short, since a change from a parameter setting in (139) to the one in (140) is very likely to occur, I propose that this causes high ratings of Dutch-like items in the questionnaire presented above; the grammars of some speakers now allows for *gean* to have a verbal complement. The verb *gean* has an extra merge feature and the new parameter setting would then be as in (141):

- (141)    *go* [*gean*]:     $F_{\text{Merge}} \text{ PP}$                       Innovated Frisian  
                                           $F_{\text{Merge}} \text{ vP}$

The speakers who rate the Dutch-like absentive as grammatical, have this parametric setting in their Frisian grammar. Note that with this parametric setting, the Frisian absentive is still grammatical as well, as *gean* can still take PP complements.

In section 5.4.2.4, I will discuss this parametric change further in relation to the hypotheses presented in Chapter 2. First, I will take a more detailed look at the data by looking at the results of individual speakers.

### 5.5.2.3 Individual patterns

As I showed in Chapter 3 and 4, it is important to consider the results not only at a general level, but to also look for individual patterns, as parameters are part of I-language and hence part of the individual. Are the conclusions in the previous sections confirmed on an individual level? That is, do we indeed find some people who accept both types of absentives? Are there speakers for whom the change has advanced so far that they accept all Dutch-like absentives, also with direct objects?

To investigate individual patterns, I randomly selected 5 participants and analyzed their ratings. Their ratings are presented below in Table 6 and Table 7 (where “*P<sub>n</sub>*” refers to the *n*th randomly selected participant). The results of the interpretation question in (136) show that all five allowed a passive interpretation for the Frisian absentive.

|                                             | P1<br>F, 57 | P2<br>F, 30 | P3<br>M, 69 | P4<br>F, 42 | P5<br>F, 37 |
|---------------------------------------------|-------------|-------------|-------------|-------------|-------------|
| <b>Frisian absentive</b>                    |             |             |             |             |             |
| Main clause (112)                           | 5           | 4           | 4           | 5           | 5           |
| Embedded clause (113)                       | 4           | 5           | 5           | 5           | 5           |
| Incorporated object (114)                   | 5           | 1           | 1           | 2           | 4           |
| <i>Giet</i> (115)                           | 3           | 5           | 5           | 4.5         | 5           |
| Modal (116)                                 | 5           | 4.5         | 4.5         | 4.5         | 5           |
| Durative modification (117)                 | 5           | 4           | 4           | 4           | 5           |
| Passive interpretation (118), (119)         | 4           | 4           | 4           | 3.5         | 4.5         |
| Adjunct (120)                               | 5           | 5           | 5           | 3.5         | 5           |
| <b>Dutch-like absentive</b>                 |             |             |             |             |             |
| Main clause (121)                           | 4           | 4           | 4           | 2           | 2           |
| Embedded clause (122)                       | 1           | 1           | 1           | 2           | 3           |
| <b>Other</b>                                |             |             |             |             |             |
| Non-incorporated object (123)               | 1           | 1           | 1           | 4           | 1           |
| Frisian unexpected word order (124)         | 1           | 2           | 2           | 1           | 5           |
| Dutch-like unexpected word order (125)      | 1           | 2           | 2           | 1           | 2           |
| Incorporated object + indirect object (126) | 5           | 1           | 1           | 1           | 3           |

Table 6: Individual results questionnaire 1

|                             | P1<br>F, 57 | P2<br>F, 30 | P3<br>M, 69 | P4<br>F, 42 | P5<br>F, 37 |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|
| <b>Frisian absentive</b>    |             |             |             |             |             |
| Indefinite object (127)     | 1           | 3           | 2           | 2           | 1           |
| Definite object (128)       | 1           | 4           | 1           | 2           | 1           |
| Bare object (129)           | 1           | 4           | 2           | 2           | 2           |
| Plural object (130)         | 1           | 4           | 1           | 2           | 1           |
| <b>Dutch-like absentive</b> |             |             |             |             |             |
| Indefinite object (131)     | 1           | 4           | 1           | 3           | 1           |
| Definite object (132)       | 2           | 4           | 1           | 2           | 1           |
| Bare object (133)           | 2           | 4           | 2           | 3           | 1           |
| Plural object (134)         | 1           | 4           | 2           | 2           | 1           |

Table 7: Individual results Questionnaire 2

Let us consider each speaker separately. Participant 1, a 57-year-old woman, to whom Frisian is native and who speaks it 60% of the time, gives high ratings to all items that included original Frisian absentives. This Frisian absentive is therefore grammatical to this Frisian speaker. For the Dutch-like items, the participant accepts the Dutch-like absentive in a main clause. This suggests that the parameter in this speaker's grammar is probably as in (141): *gean* can take verbal complements. However, the speaker does not accept a Dutch-like absentive in an embedded clause. Moreover, all items with a direct object are judged as ungrammatical. This shows that the speaker probably has multiple grammars of which the use depends on the context: while the one is relevant for main clauses, the other is used for embedded clauses (see also Chapter 2, section 2.3 on E-language and I-language, and the individual patterns in Chapter 3, section 3.3, for a similar result).

Participant 2, a 30-year-old woman to whom Frisian is native and who speaks it 70% of the time, gives high ratings to all items which included original Frisian absentives as well, so the Frisian absentive is acceptable for this speaker, too. However, this participant also gives high ratings to the Dutch-like absentives. Although she does not accept the item with the embedded Dutch absentive, there are high ratings for all other Dutch-like items. Adding direct objects is grammatical to this speaker, too. It appears that the parameter must have changed for this speaker, too. For her as well, the Frisian absentive is not lost.

Participant 3, a 69-year-old man to whom Frisian is native and who speaks it 70% of the time, is similar to Participant 1; the Frisian absentive is rated as acceptable and the Dutch-like absentive in the main clause too, but all other Dutch-like items are not. Similar to Participant 1, the new Dutch-like parameter setting might be present, but another mini-grammar with the original Frisian setting probably also still exists.

Participant 4, a 42-year-old woman to whom Frisian is native and who speaks it 70% of the time, rates the Frisian absentive as acceptable and appears to reject the Dutch-like absentive, suggesting that for this speaker, there is no language change in the absentive. However, the speaker does rate some of the items with direct objects as questionable or acceptable (3 and 4). It is unclear what this means exactly.

Finally, participant 5, a 37-year-old woman to whom Frisian is native and who speaks it 70% of the time, shows no signs of language change: she rates the Frisian absentive as acceptable ( $\geq 4$ ) and the Dutch-like absentive as unacceptable ( $\leq 3$ ).

In short, we find that the results reflect the picture from the previous section: there is a change taking place for some, but not all speakers of Frisian, and the “main clause Dutch-like absentive” is the most acceptable Dutch-like item. There is a lot of variation between speakers. The randomly selected speakers in this section all have Frisian as their native language and all of them speak it more than 50% of the day; the variation found in this section can therefore not be explained by the factors ‘native language’ or ‘language use’; there are clearly other factors that play a role here.

5.5.2.4 Discussion

In the previous sections, I discussed the results from the questionnaires. These results showed that some speakers accept Dutch-like absentives and that their grammars are different than the original Frisian grammars; Frisian is changing. I analyzed this as a parametric change from (142) to (143):

- (142)

go [gean]:

F<sub>Merge</sub> PP

Traditional Frisian
- (143)

go [gean]:

F<sub>Merge</sub> PP  
F<sub>Merge</sub> vP

Innovated Frisian

This analysis makes a clear prediction: if (144) is part of some Frisian speakers’ grammars, we would expect them to accept other items in which *gean* merges with a verb, too, as *gean* would be able to take verbal complements, irrespective of the context. We can test if this is the case, since Questionnaire 1 included 2 items in which *gean* was used as an aspectual auxiliary, as in (144):

- (144)

Hy giet fannemiddei mei syn broerke boartsjen.  
*He goes this afternoon with his brother.dim play.INF*  
“He is going to play with his little brother this afternoon.”

The prediction is confirmed: almost all (93%) of the participants who accepted the Dutch-like absentive (with a rating of 4 or 5) accept the items with *gean* as an auxiliary (with a rating of 4 or 5).

Unfortunately, the reverse does not hold; 80% of the participants rated

items like (145) with a 4 or 5, but not all of them accept a Dutch-like absentive. As discussed in the previous section, changes in E-language are gradual. These speakers may not accept the Dutch-like absentive for independent reasons. I leave this matter for future research and will now discuss whether the change was expected or not.

In section 5.4.2.2 I discussed the fact that grammaticalization of *go* is very common crosslinguistically (Bybee et al. 1994). Based on this, the change in the *gean*-parameter is not surprising. However, grammaticalization is a descriptive term and not an explanation (see Chapter 2, section 2.3). Other factors might be able to account for the change, such as the type and size of parameter, as discussed in Chapter 2.

The parametric change that accounts for changes in the absentive is the change of a Merge-parameter, as shown above. In Chapter 2 I hypothesized that Merge parameters are less likely to change than Spell-out parameters and Move parameters:

- (145) “Spell-out before Move and Merge”-hypothesis:  
Spell-out parameters are more prone to change than Move parameters and Merge parameters.
- (146) “Move before Merge”-hypothesis :  
Move parameters are more prone to change than Merge parameters.

Although we do not find a widespread change in the absentive yet (see section 5.4.2.1), the change in the *gean*-parameter seems to have occurred for many speakers of Frisian (see the beginning of this section). Considering (145) and (146), I would not have expected this change to be so common. However, in Chapter 2 I showed that parameters do not only differ in type (Merge, Move of Spell-out), but also in size. Following Biberauer & Roberts (2017), I assume that they can relate to a big class of functional items, to small classes or even to a single item. In the case of *go*, the parameter relates only to one particular item. In Chapter 2 I hypothesized that small parameters are more prone to change than larger ones:

- (147) “Small before big”-hypothesis:  
Smaller parameters are more prone to change than bigger ones

This would explain why the *gean*-parameter in Frisian has changed for many speakers, even though it is a Merge-parameter. As I explained in chapter 2, this study was not designed to confirm or falsify the hypotheses in (145)-(147). However, the reflection in this section confirms that they could form the basis of an interesting approach to language change. In Chapter 6, section 6.2 and 6.4, I will discuss this further.

### 5.5.3 *Influence from Dutch*

From the previous sections, we can conclude that there is a change taking place in the Frisian absentive. While the original pattern remains in use, a second, Dutch-like absentive becomes acceptable for some speakers of Frisian.

So far, this chapter has discussed how the language variation and change in the absentive works exactly. Another question is why there is language change. So far, I have suggested that this is (partly) because of Dutch influence. As discussed in earlier chapters, it is often hard to disentangle contact-induced language change from language changes caused by endogenous factors, but since there is so much contact between Dutch and Frisian and we find contact-induced change in Frisian for other elements of the grammar (see for example De Haan 2010a and Koenenman & Postma 2006), this change might be influenced by Dutch, too. There are three indications that this is indeed the case. First, the absentives without *te* that some participants rate as acceptable are, at least in their surface form, similar to the Dutch absentive. If the language change was not contact-induced, it is less clear why exactly a second kind of absentive would come into use too, and why it would look like this. Second, although the grammaticalization process of *go* is very common cross-linguistically, Heine & Kuteva (2003) showed that grammaticalization is often contact-induced. Finally, questionnaire data showed that there was a relation between the ratings that the participants gave on the Dutch-like absentive and the amount that they speak Dutch in their daily life. This correlation is illustrated below in Table 8. It shows that the more Dutch the participants speak on an average day, the likelier they were to give a high acceptance rate to the item. On the other hand, the more Frisian they spoke, the less likely they were to give a high rating to the item.

|                                                | % of Dutch spoken<br>on average day | % Frisian spoken on<br>average day |
|------------------------------------------------|-------------------------------------|------------------------------------|
| Acceptance rate Dutch<br>absentive main clause | $r = .229$ $p < .001$               | $r = -.212$ $p < .001$             |

Table 8: Correlations acceptability rating and language use

The correlations presented here are very small<sup>80</sup> and cannot be taken as direct evidence for the influence of Dutch on the grammars of these participants. However, it gives an indication that language contact might have played a role here. To summarize section 5.5, the data collected by means of the questionnaires showed that while the original Frisian absentive is still very much accepted, a Dutch-like absentive is also accepted by some speakers, due to language contact with Dutch.

5.6 Conclusion

In this chapter I discussed the variation and change that we find in the absentive in Frisian and Dutch. I argued that in both languages, the absentive can be analyzed by assuming a silent GO in the structure, as in (148) and (149):

- (148)

Jan is te fiskjen GONGEN

Frisian

Jan is to fish.INF gone

"Jan is off fishing"
- (149)

Jan is GAAN vissen

Dutch

Jan is gone fish.INF

"Jan is off fishing"

I proposed that this analysis cannot only explain the structure and semantics of the absentive, but can also account for all the differences between the Frisian and Dutch absentive. All of them can be traced back to the nature of the verb *go*, which is different in Frisian than in Dutch: in Frisian it merges with a PP, while in Dutch it can either merge with a PP or with a verb. The variation between the Frisian and Dutch absentive can therefore be captured

<sup>80</sup> The r-value represents the amount of the variation which can be explained by each particular factor. An r-value of 0.1 for a particular factor therefore means that 10% of the variation can be explained by this factor.



by a parameter involving the verb *go*:

- (150) Merge parameter:
- *gean*:  $F_{\text{Merge}} \text{PP}$
  - *gaan*:  $F_{\text{Merge}} \text{PP}$   
 $F_{\text{Merge}} \text{vP}$

Data from questionnaires shows that some speakers of present-day Frisian also allow for a Dutch-like absentive without *te*. For them, the parameter setting for *gean* has changed: it also contains a Merge feature for vP. In short, this chapter presented a case study of variation and change in a Merge parameter.



# Chapter 6

## Conclusion

### 6.1 Summary

This dissertation aimed to investigate the mechanisms of syntactic change in relation to language contact. To do so, I have studied three cases in the context of Frisian-Dutch language contact. This dissertation discusses these three areas in which we find innovations in the Frisian grammar: infinitival suffixes (Chapter 3), noun incorporation (Chapter 4) and the absentive (Chapter 5). In each of these chapters, I have looked at **what** type of innovation we find, **how** they could be analyzed syntactically and **why** they have their particular form. In this way, I aimed to answer the following three research questions:

- (1) *The empirical question*  
What kind of morphosyntactic innovations do present-day speakers of Frisian show in addition to the original patterns of their language?
- (2) *The syntactic question*  
How are these innovations represented in the speakers' grammars? How does this relate to the grammatical representation of the original patterns?
- (3) *The change question*  
Why do we find these innovations, i.e.:  
Why do we find more innovations in certain areas of the grammar than in others?  
Why do the innovations have this particular form?

I will now briefly summarize the findings of each chapter.

### 6.1.1 Chapter 2: Language contact and change

Chapter 2 provided a theoretical background on language contact and change. I gave a brief overview of the key concepts from the literature and showed that while language change is observed at the E-level (external language, the language use of a community), syntactic change actually happens in I-language. A syntactic change happens when a parametric setting in speakers' internal grammars is different than that of a previous generation. Following Rizzi (2017), I assumed that there are only three types of parameters: Merge parameters, Move parameters and Spell-out parameters. Merge parameters determine the type of syntactic element which an item can Merge with, Move parameters determine the type of syntactic element which an item can connect with and whether overt movement takes place, and Spell-Out parameters concern the way in which a functional head is spelled out.

It follows from this theory that syntactic change cannot occur freely; it is constrained by the type of variation that follows from different settings to these parameters.

Following Biberauer & Roberts (2017) I assumed that parameters can have different sizes; they can apply to a class of functional items (e.g. "verbs"), a more restricted class of functional items (e.g. "modal verbs") or even a single (or a few specific) functional item(s) (e.g. a specific modal verb). Based on this parameter theory, I proposed three hypotheses:

- (4) "Move before Merge"-hypothesis:  
Move parameters are more prone to change than Merge parameters.
- (5) "Spellout before Move and Merge"-hypothesis:  
Spellout parameters are more prone to change than Move parameters and Merge parameters.
- (6) "Small before big"-hypothesis:  
Smaller parameters are more prone to change than bigger ones

In section 6.2, I will further reflect on these hypotheses.

6.1.2 Chapter 3: Infinitival suffixes

Chapter 3 provided a case-study on the variation and change in a Spell-out parameter. This chapter discussed variation in infinitival suffixes. While Dutch infinitives always have an [ə] (-en) suffix, Frisian shows formal variation between an [ə] (-e) and [ən] (-en) suffix, as illustrated below:

- (7)

Ik sil moarn nei skoalle rinne.

*I will tomorrow to school walk.INF-ə*

"I will walk to school tomorrow."
- (8)

It iten fan appels is sûn.

*The eat.INF-en of apples is healthy*

"The eating of apples is healthy"

I argued that this variation in Frisian spells out a syntactic difference which occurs in both Frisian and Dutch, but is phonologically marked only in Frisian: the distinction between a verbal and a nominal infinitive. In section 3.1, I argued that nominal infinitives always involve an  $n^0$  in the structure, which nominalize the verb. In Frisian, this  $n^0$  is spelled out by [ən], as in (9):

Here, the verb is nominalized by  $n^0$ , with optional VoiceP and AspP in between, and an optional DP on top. I argued that this structure can account for all the contexts in which the [ən]-suffix is found on the infinitive. I proposed that in Dutch, the nominal infinitive has the same structure, but  $n^0$

is spelled out by [ə] rather than [ən] (although both are written as *-en*). I expressed this variation by means of the following Spell-out parameter:

- (10) Frisian  
n<sub>[nominalizing]</sub>: [ən] (-en)
- Dutch  
n<sub>[nominalizing]</sub>: [ə] (-en)

This parameter encodes the way in which the nominalizing n-head is expressed in both languages; [ən] in Frisian and [ə] in Dutch.

In section 3.2, I discussed the verbal infinitive and proposed that it has the structure in (11), both in Frisian and Dutch:

I showed that this structure can account for all the contexts in which we find [ə] on the verb in Frisian. I proposed that [ə] spells out  $v^0$ . I showed that the parameter settings for Dutch and Frisian were the same:

- (12) Frisian  
v<sub>[inf]</sub>: [ə] (-e)
- Dutch  
v<sub>[inf]</sub>: [ə] (-en)

In both languages, the infinitival v-head is spelled out by [ə].

In section 3.3, I discussed data from questionnaires which showed that many speakers of Frisian accept both suffixes in all contexts. This signals a language change; for these speakers, the parameter setting is not as in (10) and (12). For these speakers,  $n^0$  and  $v^0$  can now be spelled out in two ways, which can be encoded by the following parameter settings:

- (13) Innovated Frisian  
 $v_{[inf]}$ : [ə] (-e), [ən] (-en)
- (14) Innovated Frisian  
 Nominalizing  $n^0$ : [ən] (-en), [ə] (-e)

I argued that this change is influenced by contact with Dutch, although interestingly, the parameter settings are not the same as Dutch (cf. (10) and (12)).

### 6.1.3 Chapter 4: Noun incorporation

Chapter 4 provided a case-study on variation and change in Move parameters. This chapter discussed variation in noun incorporation patterns: Frisian noun incorporation versus Dutch pseudo-noun incorporation, as illustrated in (15) and (16):

- (15) Hy is oan't messeslypje. Frisian  
*He is at the knife-ə-sharpen.INF*  
 "He is sharpening a knife/knives."
- (16) Hij is aan het muizen vangen. Dutch  
*He is at the mice catch.INF*  
 "He is catching mice."

I argued that these two patterns involve different syntactic derivations: while Frisian noun incorporation involves head movement, Dutch pseudo-noun incorporation consists of phrasal movement of a NumP into the specifier position of an infinitive. In section 4.1, I proposed the following syntactic structure for the Frisian pattern:

Here, a noun moves into a classifier head, followed by further incorporation of this unit into the verb. I showed that this can be encoded by the following Move parameter:

- (18) Frisian noun incorporation:
- |                 |              |              |
|-----------------|--------------|--------------|
| $V_{[trans]}$ : | $F_{search}$ | Class, $n^0$ |
|                 | $F_{IM}$     | Class, $n^0$ |

This parameter expresses that a transitive v-head in Frisian can attract a Classifier element (or  $n^0$  element in the case of mass nouns), resulting in an incorporated noun.

In section 4.2, I discussed the Dutch pattern in (16) and proposed the following syntactic structure:

Here, a NumP moves into the spec of an infinitive. I proposed that this can be encoded by the following parameter:

- (20) Dutch pseudo-noun incorporation
- |               |              |                |
|---------------|--------------|----------------|
| $V_{[inf]}$ : | $F_{search}$ | NumP           |
|               | $F_{IM}$     | NumP (to Spec) |

In section 4.5, I discussed data from questionnaires which showed that some present-day speakers of Frisian also allow the Dutch-like pseudo-noun incorporation pattern. Moreover, some speakers do not accept the Frisian noun incorporation pattern. This means that there is a change taking place in Frisian: for some speakers, (20) is part of their grammar, and (18) is not. In short, Chapter 4 presented a case study of variation in Movement parameters and showed how changes in very similar surface patterns (14) and (15) can be explained by changes in underlying Move parameters.

6.1.4 Chapter 5: The *absentive*

Chapter 5 provided a case-study on variation and change in a Merge parameter. This chapter discussed the *absentive*, a grammatical construction expressing the absence of the subject, which is illustrated in (21) and (22):

- (21) Jan is te fiskjen. Frisian  
*Jan is to fish.INF*  
 "Jan is off fishing."
- (22) Jan is vissen. Dutch  
*Jan is fish.INF*  
 "Jan is off fishing."

I argued that in both Frisian and Dutch, the absentive can be analyzed by assuming the presence of silent GO in the syntactic structure, as in (23) and (24):

- (23) Jan is te fiskjen GONGEN. Frisian  
*Jan is to fish.INF gone*  
 "Jan is off fishing."
- (24) Jan is GAAN vissen. Dutch  
*Jan is gone fish.INF*  
 "Jan is off fishing."

In section 5.2, I showed that this silent GO can account for the variation between the Dutch and Frisian absentive. I proposed that the syntactic structure of the Frisian absentive is as in (25), whereas the syntactic structure of the Dutch absentive is as in (26):

(25)

(26)

I argued that this variation is caused by the nature of the verb *go*, which is different in Frisian and Dutch. In Frisian it merges with a PP, while in Dutch it can either merge with a PP or with a vP. The variation between the Frisian and Dutch absentive can therefore be captured in a parameter involving the verb *go*:

- (27) Merge parameter:
- *gean*:  $F_{\text{Merge}} \text{ PP}$
  - *gaan*:  $F_{\text{Merge}} \text{ PP}$   
 $F_{\text{Merge}} \text{ vP}$

In section 5.5, I discussed data from questionnaires, which showed that some speakers of present-day Frisian also accept a Dutch-like absentive without *te*. For them, the parameter setting for *gean* has changed: it also contains a Merge feature for a vP, as in (28):

- (28) Innovated Frisian:
- gean*:  $F_{\text{Merge}} \text{ PP}$   
 $F_{\text{Merge}} \text{ vP}$

In short, Chapter 5 presented a case study on variation and change in a Merge parameter, and showed how a parametric change related to the specific item *go* resulted in changes in the absentive construction in Frisian.

## 6.2 Language variation and change

In this section I will discuss the answers to my research questions and the hypotheses which I presented in Chapter 2, and see how these findings are relevant for linguistic theory. The first research question was the empirical question:

- (29) *The empirical question*  
What kind of morphosyntactic innovations do present-day speakers of Frisian show in addition to the original patterns of their language?

The answer to this question is of course empirical too; in Chapter 3, 4 and 5 I

presented three case-studies on syntactic variation between Frisian and Dutch. In each case, it turned out that the grammar of the Frisian speakers was no longer the same as that of previous generations.<sup>81</sup> The data discussed in this dissertation all related to infinitival verbs. In each case study, there were participants who accepted Dutch-like grammatical patterns, often in addition to the original Frisian patterns. More detailed data can be found in Chapters 3, 4 and 5.

The second research question was syntactic:

(30) *The syntactic question*

How are these innovations represented in the speakers' grammars? How does this relate to the grammatical representation of the original patterns?

The answers to this question are the syntactic analyses which I presented in Chapter 3, 4 and 5. In Chapter 3, I showed that the variation in infinitival suffixes were a case of Spell-out variation for the nominal and verbal infinitive, and the innovation is therefore represented as a change in the Spell-out parameter regarding these infinitives: the way in which  $v^0$  and  $n^0$  are spelled out. In Chapter 4, I showed that variation in incorporation patterns could be represented by Move parameters: while the Frisian noun incorporation pattern involves head movement of a Classifier, the Dutch pseudo-noun incorporation pattern involves phrasal movement of a NumP. Some speakers of Frisian allow for this Dutch pattern too; the Move parameter that was part of Dutch grammar is now part of their grammars, too. For some speakers of Frisian the original Frisian NI pattern is no longer grammatical; for them the Move parameter related to Frisian is lost. Finally in Chapter 5 I showed that the innovation we find in the Frisian absentive (namely the acceptance of a Dutch-like absentive, without *te*) is actually related to a Merge parameter involving the verb *go*. This is because the absentive can be analyzed as involving a silent verb GO. As Frisian *gean* and Dutch *gaan* have a different setting for a Merge parameter, the innovation is represented by a change from the Frisian to the Dutch setting in which *gean* cannot only merge with PP's but

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<sup>81</sup> To establish the original patterns of Frisian, I used information from reference grammars (Tiersma 1985, E. Hoekstra 2018 a-d), other work on Frisian syntax (mainly J. Hoekstra 1997, Dyk 1997, De Haan 2010) and information from native speakers. See also footnote 3, Chapter 1.

also with verbs: a process of grammaticalization.

The final research question of this dissertation concerned language change:

(31) *The change question*

Why do we find these innovations, i.e.:

Why do we find more innovations in certain areas of the grammar than in others?

Why do the innovations have this particular form?

In Chapter 2, I argued that language change is not only guided and restricted by external factors (e.g. social factors), but also by language internal factors. To be more precise, I argued that syntactic variation is restricted in its form, and therefore language change is, too. Following Rizzi (2017) I assumed that there are only three types of parameters: Spell-out, Move and Merge. Following Biberauer & Roberts (2017), I argued that parameters can differ in their size. Syntactic variation and change occurs within these limits; this is the answer to the question why innovations have their particular form.

In Chapter 2, I have proposed three hypotheses (see also section 6.1.1), repeated below:

(32) “Spellout before Move and Merge”-hypothesis:

Spellout parameters are more prone to change than Move parameters and Merge parameters.

(33) “Move before Merge”-hypothesis:

Move parameters are more prone to change than Merge parameters.

(34) “Small before big”-hypothesis:

Smaller parameters are more prone to change than bigger ones

With these hypotheses, I aimed to answer the question of why we find more innovations in certain areas of the grammar than in others. In Chapters 3, 4 and 5, I discussed the data which relates to these hypotheses. I showed that the Spell-out parameter in Chapter 3 indeed showed a lot of change. Further, I showed that the Merge-parameter on *gean*, which was discussed in Chapter 5, is very small (a nanoparameter, which relates to one specific item (Biberauer & Roberts 2017)), and that this might be a reason why this change

occurs quite easily. However, I also explained that this study was not designed to be able to (dis)confirm these hypotheses. While these were expectations from an I-language perspective, there are many external factors which play a role. In order to be able to make more general claims we would not only need much more examples of each type of parameter, we would also need a more detailed classification of parameter sizes and a manual on “how to count”, as it differs per phenomenon how the data from the questionnaire is related to the underlying syntactic parameter. For example, it might play a role whether questionnaire items are expected to be grammatical or ungrammatical, based on the proposed parameter setting. Moreover, it might be relevant how complicated the examples are. And it is unclear whether “more prone to change” would only relate to the amount of speakers which would show change, or whether the exact number of the ratings matters. These type of data are just very hard to quantify, but once we investigate more of it, I think it is at least possible to see if there are tendencies to confirm or disconfirm these hypotheses. And even though the *how* needs to be studied further, the data from the current dissertation does indeed confirm *that* the internal, linguistic factors (i.e. I-language properties) do partly determine what language change looks like.

This dissertation also showed that if one wants to study language change at both an E-language and an I-language level, it is useful to look at groups of speakers as well as individual speakers. While studying big groups of speakers can indicate whether changes are going on in the E-language and which linguistic contexts are most relevant to this changes, studying individual participants can help to understand how a parametric change in I-language works exactly. In short, although it is obviously beyond the scope of this dissertation to answer the question of “*why language change happens in certain areas of the grammar and not in others*” on a general level, this study provided an exploratory approach to this question, and it provides a great starting point for future research, as I will show in section 6.4.

## 6.3 Additional data

The data discussed in this dissertation were collected by means of two questionnaires, as explained in Chapter 1. The first of these questionnaires was more exploratory and included some grammatical phenomena which have so far not been discussed, because they do not belong to the empirical

domain that was included in this dissertation. In this section, I will briefly discuss some of the data that was found, and show what a more thorough analysis of these topics could add to the theory of language change presented in this dissertation.

### 6.3.1 *The phenomena*

The first questionnaire included 9 empirical domains, of which 3 have been extensively discussed in this dissertation. The other 6 domains were:

- Verb second in embedded clauses
- Complementizer agreement
- Complementizer after relative pronoun
- Preposition stranding
- The Imperativus-pro-infinitivo construction (IPI)
- The verbs *gean* & *bliuwe*

I will now discuss each of these phenomena.

### 6.3.2 *Verb second in embedded clauses*

Many Germanic languages exhibit V2 word order. For Dutch, this is only the case in main clauses. In embedded clauses, the finite verb is usually at the end of the sentence and the V2 order is ungrammatical:

- (35) Jan loopt naar school.  
*Jan walks to school*  
 "Jan walks to school."

- (36) Ik denk dat Jan <\*loopt> naar school <loopt>  
*I think that Jan walks to school walks*  
 "I think that Jan walks to school."

For Frisian, V2 order in embedded clauses used to be possible (De Haan 2010c):



- (37) Hy leaude dat it skip <wie> juster fergien <wie>.  
*He believed that the ship was yesterday wrecked was*  
 “He believed that the ship was wrecked yesterday.”

Questionnaire 1 included 5 items with embedded clauses with V2 word order. These were rated quite low with a mean of 2,09 (out of 5). This suggests that for many speakers of Frisian, embedded V2 is not grammatical anymore. Assuming that V2 word order arises by moving the finite verb from T to C, the possibility of V2 order would be encoded in a Move parameter on C, but it would apply only to C's in embedded clauses. These data seem to be an example of change in a Move parameter which is moderate in size; related to a subclass of functional items.

### 6.3.3 Complementizer agreement

In Frisian, we find complementizer agreement for the second person singular (Tiersma 1985). That is, in these cases, there is the agreement marker *-sto*, *-ste* or *-st* on the complementizer, as in (38):

- (38) Ik fyn datsto/datste/datst my efkes helpe moatst.  
*I think that-2SG me PRT help must*  
 “I think that you have to help me.”

In Dutch, there is no complementizer agreement. Frisian complementizer agreement is often analyzed as movement (from T to C) (Zwart 1993b) or Agreement (from the subject with C) (van Koppen 2017). This suggests that this variation is again related to a Move parameter related to C. However, in this case we do not find language change: 6 items in questionnaire one which included complementizer agreement were rated with a mean of 4.45 (out of 5). Moreover, 2 items which did *not* include complementizer agreement were rated with a mean of 2.27. Complementizer agreement for the second person singular is therefore still considered obligatory for most speakers of Frisian.

### 6.3.4 Complementizer after relative pronoun

In Frisian, it is possible to pronounce a reduced form of a complementizer after a relative pronoun, as in (39):

- (39) In frou dy't ik ken is skilderes.  
*A woman who that I know is painter*  
 "A woman that I know is a painter."

The relevant item here is *'t* (reduced form of *dat*, "that") after *dy* ("who") (Dyk 2019). In Dutch, this sentence is ungrammatical:

- (40) \*Een vrouw die't ik ken is schilderes.  
*A woman who that I know is painter*  
 "A woman that I know is a painter."

As *'t* occurs in the same contexts as full complementizers, it is often analyzed as a reduced complementizer (Dyk 2019). The variation between Dutch and Frisian is therefore a Spell-out parameter: whether embedded *C* is pronounced in these contexts or not.

Questionnaire 1 had 4 items which included *'t* after relative pronouns. These had a mean rating of 4.04, which suggests that for many speakers of Frisian, this is still grammatical. For this Spell-out parameter, there does not seem to be a change taking place. To be sure we would need to have more data, as the questionnaire unfortunately did not include items in which *'t* was left out.

### 6.3.5 Preposition stranding

In Frisian, when a DP is fronted, a preposition can be stranded, as in (41) (E. Hoekstra 2019):

- (41) De bern wurdt net **nei** harke.  
*The children is not to listened*  
 "The children are not being listened to."

While *de bern* ("the child") is moved to the front of the sentence, the

preposition *nei* (“to”) is stranded. This is ungrammatical for most speakers of Dutch (van Riemsdijk 1978):<sup>82</sup>

- (42) \*De kinderen wordt niet **naar** geluisterd.  
*The children is not to listened*  
 “The children are not being listened to.”

Without further research, it is not exactly clear how this variation could be encoded, although it seems to be related to movement.

Questionnaire 1 included 6 items which included preposition stranding. The ratings on these items ranged from 2.12 to 4.10 and did therefore not really show to which extent this construction is grammatical for Frisian speakers. More research is needed to find out what the variation looks like exactly and whether there are any changes taking place.

### 6.3.6 *The Imperativus-Pro-Infinitivo (IPI) construction*

A typical Frisian pattern is the IPI construction, in which an infinitive is replaced by an imperative, but the infinitival meaning remains (De Haan 2010e):

- (43) De plysje soe by him komme en **nim** syn  
*the police would to him come and bring.imp his*  
*papieren mei.*  
*papers along*  
 “The police would come to him and bring his papers along.”

In this sentence, we find the imperative *nim* instead of the infinitive *nimme*. Moreover, if we did find an infinitive, it would occur at a different position in the sentence, as in (44):

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<sup>82</sup> Preposition stranding does occur in Dutch, but only with so-called R-pronouns:

- (I) Er wordt niet naar geluisterd.  
*There is not to listened*  
 “There is not being listened to.”

- (44) De plysje soe by him komme en syn papieren  
*the police would to him come and his papers*  
 meinimme.  
*along-bring.*  
 “The police would come to him and bring his papers along.”

The IPI-pattern is ungrammatical in Dutch:

- (45) \*De politie zou bij hem komen en neem zijn  
*the police would to him come and bring.imp his*  
 papieren mee.  
*papers along*

Without further research, it is unclear how this variation could be encoded exactly syntactically. There might be multiple parameters involved, as (44) and (45) do not only have a different verbal form but also a different word order. Further research could be directed to syntactically analyze this pattern.

Questionnaire 1 included 2 items with an IPI-pattern. These were rated with means of 2.2 and 2.74 out of 5, which shows that many speakers of Frisian do not accept this pattern. However, the construction was already reported to be infrequent (De Haan 2010e); it is therefore unclear whether these ratings are the result of a (contact-induced) change, or whether this construction has been ungrammatical for many speakers for a long time. Future research could be directed to the (gradual) loss of the IPI-pattern in Frisian.

### 6.3.7 *The verbs gean & bliuwe*

Another point of variation between Dutch and Frisian concerns the verbs *gean* (“go”) and *bliuwe* (“stay”). The variation between Frisian *gean* and Dutch *gaan* has been extensively discussed in Chapter 5 in relation to the absentive. There, I showed that while Dutch *gaan* can have either a PP complement or a verbal complement, for Frisian only the PP complement is grammatical (Tiersma 1985):

- (46) Ik ga naar Amsterdam. Dutch  
*I go to Amsterdam*  
 “I go to Amsterdam.”

- (47) Ik ga morgen verhuizen.  
*I go tomorrow move-houses.INF*  
 "I'm going to move houses tomorrow."
- (48) Ik gean nei Amsterdam. Frisian  
*I go to Amsterdam*  
 "I go to Amsterdam."
- (49) \*Ik gean moarn ferhúzen.  
*I go tomorrow move-houses.INF*  
 "I'm going to move houses tomorrow."

The verb *bliuwe/blijven* ("stay") shows a similar type of variation; in both languages it can take a PP complement (see (50) and (52)), but Dutch it can take a bare infinitival verb (see (51)) and in Frisian it cannot (see (53)) (Tiersma 1985):

- (50) Hij blijft in Amsterdam Dutch  
*He stays in Amsterdam*  
 "He stays in Amsterdam."
- (51) Hij blijft zeuren over dat boek.  
*He stays whine.INF about that book*  
 "He keeps whining about that book."
- (52) Hy bliuwt yn Amsterdam. Frisian  
*He stays in Amsterdam*  
 "He stays in Amsterdam."
- (53) \*Hy bliuwt seuren oer dat boek.  
*He stays whine.INF about that book*  
 "He keeps whining about that book."

The variation we find here is related to the types of complements that *gean/gaan* and *bliuwe/blijven* select. In Chapter 5, I explained that this can be encoded in a Merge parameter. We already saw that regarding *gean*, there is a change taking place: for many speakers of Frisian sentences such as (49) are now acceptable: *gean* has grammaticalized. Two items which tested this

particular pattern were included in Questionnaire 1 and received a mean rating of 4.22. For *bliuwe*, we find a similar result: the two items on this received a mean rating of 4.49. This suggests that for many speakers of Frisian, these verbs can now also take verbal complements.

### 6.3.8 *Some concluding remarks*

The data presented in this section served as further illustrations for the types of empirical data one could look at to investigate parametric variation and change on a microscale (i.e. variation and change involving closely related languages). These phenomena are not analyzed in enough detail to find out whether they (dis)confirm the hypotheses discussed in Section 6.2 and could therefore be the topic of future research. However, the examples do not suggest that classifying changes by type of parameter (Spell-out, Move or Merge) is enough to understand why a change is wide-spread or not: for example, while both complementizer agreement and verb second could involve movement parameters related to C, the amount of change we find is rather different. Other factors have to play a role here as well. In this dissertation I have proposed that one of these factors is the size of a parameter, and I have suggested that smaller parameters change more easily than bigger ones. However, it is currently unclear how exactly this size-factor interacts with the type of parameter and which other factors are relevant. Nevertheless, these data offer an interesting possibility for comparing syntactic areas of variation and change on a microscale in a well-known and well-described contact situation.

## 6.4 **Suggestions for further research**

In the previous section, I have already touched upon some interesting topics for future research. However, in this section I want to say a few more words on this from a more general point of view. The empirical body of this dissertation consisted of three case studies, which each illustrate variation and change in a type of syntactic parameter: Spell-out, Move and Merge. Each of these case studies helped to understand how each type of parameter works and how it restricts or guides the way in which syntactic change can occur. As each change which is discussed in this chapter occurs in the same extra-

linguistic context (i.e., they all occur in the Frisian-Dutch language contact situation, with the same speakers and at the same time), they offered a great way to compare these types of parameters to each other. However, the empirical coverage is too small to really (dis)prove the hypotheses that were discussed in section 6.2; one would need much more data. This study was not designed in a quantitative way and one could question to which extent these comparisons are completely fair.

If one aims to find out how the format of parameters (based in particular on Rizzi's (2017) and Biberauer & Roberts's (2017) frameworks), can help us understand, analyze and eventually, maybe predict syntactic change, I see two general lines of research which one could pursue. The first is focus on one specific sociolinguistic context, but look at more empirical domains. For example, one could investigate more ongoing changes in the Frisian-Dutch context, like some of the ones presented in the previous section, and find out whether these show the same tendencies we found in this dissertation. One could also investigate whether change happens in both directions, that is, if the minority language (in this case Frisian) affects the majority language (in this case Dutch) in a similar way as the other way around.

The second path one could follow is to focus on one or a few empirical phenomena, but to investigate more languages. One example was presented in Chapter 5; the absentive occurs in more languages than Frisian and Dutch and looks similar, but also shows some variation. Future research could be directed to the analysis of the absentive in all these languages, to find out whether this variation can be captured within the same Merge parameter as the Dutch-Frisian variation, and to see if it is affected by language change in these other languages, too. However, when following this line of research, it might be harder to exclude the influence from external factors from the analysis.

In short, although there is much more to explore before we can make bold statements about how syntactic structure exactly influences language change, this dissertation already offers an interesting window into the Dutch-Frisian language contact-situation by providing three case studies on three types of syntactic variation and currently ongoing language changes.





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# Appendix<sup>83</sup>

## A. Questionnaire 1

### *Sociolinguistic part (in Dutch):*

- (1) Wat is is je geslacht? Man/vrouw  
*What is your gender? Male/female*
- (2) Wat is je leeftijd?  
*What is your age?*
- (3) Wat is je woonplaats?  
*What is your place of residence?*
- (4) Wat is je geboorteplaats?  
What is your place of birth?
- (5) Waar heb je het grootste gedeelte van je leven gewoond?  
(provincie + plaats)  
Heb je voornamelijk in het buitenland gewoond, noem dan het land  
*Where did you live most of your life? (province + city)*  
*If you have mostly lived abroad, name the country*

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<sup>83</sup> This Appendix consists of the two questionnaires which were used to collect the data discussed in this dissertation. The items are presented here sorted by linguistic category, but were put in a random order for the participants. Moreover, the original questionnaires did not include translations.

- (6) Wat is je hoogst afgeronde opleiding?

Basisschool

LBO, VBO, LTS, LHNO, VMBO

Mavo, VMBTO-t, VMBO-kort

MBO, MTS, MEAO

Havo, VWO, Gymnasium

HBO, HEAO, HBS

Universiteit

Anders, namelijk...

*What is your highest finished education level?*

*Primary school*

*LBO, VBO, LTS, LHNO, VMBO*

*Mavo, VMBTO-t, VMBO-kort*

*MBO, MTS, MEAO*

*Havo, VWO, Gymnasium*

*HBO, HEAO, HBS*

*University*

*Other, namely...*

- (7) Op welke leeftijd ben je begonnen Fries te spreken?

(Als je het niet precies weet, make een schatting)

0 – 3

4 – 6

7 – 12

13 – 18

Ouder dan 18

*At which age did you start speaking Frisian?*

*(If you don't know exactly, make an estimation)*

*0 – 3*

*4 – 6*

*7 – 12*

*13 – 18*

*Ouder dan 18*

- (8) Spreken of spraken je ouders Fries?

Ja, beiden

Ja, mijn vader

Ja, mijn moeder

Nee, geen van beide

*Do or did your parents speak Frisian?*

*Yes, both*

*Yes, my father*

*Yes, my mother*

*No, neither*

- (9) In welke situaties gebruik je het Fries?

(Formele situaties zijn bijvoorbeeld: bij de dokter, met een docent, met een leidinggevende.

Informele situaties zijn bijvoorbeeld: met vrienden, met familie, in een winkel.)

Formele situaties

Informele situaties

Beide

Geen van beide

*In which kind of situations do you use Frisian?*

*(Formal situations are for example: at the doctor's, with a teacher, with a superior.*

*Informal situations are for example: with friends, with family, at a store.)*

*Formal situations*

*Informal situations*

*Both*

*Neither*

- (10) Heb je ooit onderwijs in het Fries gevolgd?

Ja, op de basisschool

Ja, op de middelbare school

Ja, op beide

Nee

Anders, namelijk

*Did you ever have Frisian education?*

*Yes, in primary school*

*Yes, in high school*

*Yes, in both*

*No*

*Other, namely...*

- (11) Op welke leeftijd ben je begonnen Nederlands te spreken?

(Als je het niet precies weet, make een schatting)

0 – 3

4 – 6

7 – 12

13 – 18

Ouder dan 18

*At which age did you start speaking Dutch?*

*(If you don't know exactly, make an estimation)*

0 – 3

4 – 6

7 – 12

13 – 18

Ouder dan 18

- (12) In welke situaties gebruik je het Nederlands?  
 (Formele situaties zijn bijvoorbeeld: bij de dokter, met een docent, met een leidinggevende. Informele situaties zijn bijvoorbeeld: met vrienden, met familie, in een winkel.)

Formele situaties  
 Informele situaties  
 Beide  
 Geen van beide

*In which kind of situations do you use Dutch?  
 (Formal situations are for example: at the doctor's, with a teacher, with a superior. Informal situations are for example: with friends, with family, at a store.)*

*Formal situations  
 Informal situations  
 Both  
 Neither*

- (13) Geef per taal aan hoeveel procent van de dag u deze taal ongeveer gebruikt  
 Spreekt u bijvoorbeeld alleen maar Fries, vul daar dan 100% in.  
 Spreekt u bijvoorbeeld evenveel Nederlands als Fries, vul dan bij beide 50% in.

Fries  
 Nederlands  
 Anders, namelijk...

*Indicate for each language what percentage of the day you use this language approximately. For example, if you only speak Frisian, fill in 100% for Frisian. If you speak Dutch and Frisian an equal amount of the time, fill in 50% for both.*

*Fries  
 Nederlands  
 Other, namely...*

### *Introduction syntactic part*

Bêste respondent,

Betanke foar dyn meiwurking oan dit ûndersyk!  
Dizze enkête bestiet út in oantal Fryske sinnen.

Wy freegje jo om foar elke sin oan te jaan oft dizze foar jo natuerlik klinkt of net en oft jo it sels ek sa sizze soenen. Dit kinne jo oanjaan op in skaal fan 1 oant en mei 5, wêrby 1 **“folslein ûnnatuerlik, dit soe ik sels noait sa sizze”** bestjút en 5 **“folslein natuerlik, dit soe ik sels ek sa sizze kinne.”**

Wy binne ynteresseare yn jo dageliks taalgebrûk. It is dus belangryk dat jo oan jo eigen spraak tinke, net oan wat yn formele situaasjes it bêste wêze soe, of oan wat neffens jo de offisjele regel is. Der binne hjir dan ek gjin goede of ferkearde antwurden!

Jo kinne sa folle tiid nimme as jo wolle. As jo fragen of opmerkingen hawwe, nim kontakt op mei: [m.bergstra@uu.nl](mailto:m.bergstra@uu.nl)

Alfêst betanke foar it ynfolje!  
Mei freonlike groetnis, Myrthe Bergstra

*Dear participant,*

*Thanks for your participation in this research.  
This questionnaire consists of some Frisian sentences.*

*We ask you to indicate for each sentence whether this sounds natural to you or not, and whether you would say it like that, too. You can indicate this on a scale from 1 to 5, where 1 means “completely unnatural, I would never say it like that”, and 5 “completely natural, I would also say it like that.”*

*We are interested in your daily language use. It is important that you think about your own speech, not about what would be best in formal situations, or what would be correct by the official rule. There are no right or wrong answers here!*

*You can take as much time as you need. If you have any questions or remarks, you can contact: [m.bergstra@uu.nl](mailto:m.bergstra@uu.nl)*

*Thanks in advance for filling in this questionnaire!  
Kind regards, Myrthe Bergstra*



**Items:****Infinitival suffixes****Determiner context**

- (1) It lezen fan boeken fyn ik fantastysk.  
*The read.INF-ən of books find I fantastic*  
 "Reading books I find fantastic."
- (2) Syn fuotten waarden wurch fan it rinne.  
*His feet were tired of the run.INF-ə*  
 "His feet were tired of running."

**Te ("to")-context**

- (3) Hy besiket de bal te fangen.  
*He tries the ball to catch.INF-ən*  
 "He tries to catch the ball."
- (4) Dy poddestoel is net bedoeld om op te ite.  
*That mushroom is not meant to up to eat.INF-ə*  
 "That mushroom is not meant to be eaten."

**Preposition context**

- (5) Mei skellen lose jo neat op.  
*With namecall.INF-ən fix you nothing PRT*  
 "With namecalling, you fix nothing."
- (6) Mei fjochtsje wurdt it net better.  
*With fight.INF-ə becomes it not better*  
 "It doesn't get better by fighting."

**Modal verb context**

- (7) Hy kin hiel moai tekenje.  
*He can very nicely draw.INF-ən*  
 "He can draw very nicely."
- (8) Ik kin oeren oanien lêze  
*I can hours at once read.INF-ə*  
 "I can read for hours at the time."

**Items excluded from analysis:<sup>84</sup>**

- (9) Kuierjen doch ik alle dagen.  
*Walk.INF-ən do I all days*  
 "Walking, I do that everyday."
- (10) Kuierje is sûn.  
*Walk.INF-ə is healthy*  
 "Walking is healthy"
- (11) Ik tink dat fytsen sûn is.  
*I think that cycle.INF-ən healthy is*  
 "I think that cycling is healthy."
- (12) Ik tink dat er fytse wol aardich fynt.  
*I think that he cycle.INF-ə quite nice finds*  
 "I think he finds cycling quite nice."

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<sup>84</sup> These items were excluded because the items are not comparable to each other. The second questionnaire included items for these nominal context that were included in the analysis.

## Noun incorporatie

### Non-finite main clauses

- (13) Wy wolle moarn wyndrinke.  
*We want tomorrow wine-drink.INF*  
 "We want to drink wine tomorrow."
- (14) De kapper sil hierknippe.  
*The hairdresser will hair-cut.INF*  
 "The hairdresser will cut hair."

### Finite main clauses

- (15) Wy wyndrinke gauris.  
*We wine-drink often*  
 "We often drink wine."
- (16) De kapper hierknipt alle dagen.  
*The hairdresser hair-cuts all days*  
 "The hairdresser cuts hair everyday."

### Finite embedded clause

- (17) Hy seit dat dy kapper hiel goed hierknipt.  
*He says that that hairdresser very well hair-cuts*  
 "He says that the hairdresser cuts hair very well."

### With extra argument

- (18) De kapper hierknipt him.  
*The hairdresser hair-cuts him*  
 "The hairdresser cuts his hair."
- (19) Hy behangplakt de keamer.  
*He wallpaper-covers the room*  
 "He covers the room with wallpaper."

**Item excluded from analysis**

- (20) Ik wit net oft hy moarn wol wyndrinke.  
*I know not whether he tomorrow wants wine-drink.INF*  
 "I don't know whether he wants to drink wine tomorrow."

**The absentive****Original Frisian absentive**

- (21) Heit is net thús, hy is te silen.  
*Dad is not home, he is to sail.INF*  
 "Dad is not at home, he's off sailing."
- (22) Ik tink dat hy te fytsen is.  
*I think that he to cycle.INF is*  
 "I think he's off cycling."

**With incorporated object**

- (23) Hy is te wyndrinken.  
*He is to wine-drink.INF*  
 "He's of drinking wine."

**With *giet* ("goes")**

- (24) Hy giet te silen.  
*He goes to sail.INF*  
 "He's going off sailing."
- (25) Wy gean te fytsen.  
*We go to cycle.INF*  
 "We're going off to cycle."

### With modal verbs

- (26) Mem sil moarn te sporten.  
*Mom will tomorrow to sport.INF*  
 "Mom will go off sporting tomorrow."
- (27) Pake wol moarn te fiskjen.  
*Grandpa wants tomorrow to fish.INF*  
 "Grandpa wants to go off fishing tomorrow."

### With durative modification

- (28) Heit is in oerke te fytsen.  
*Dad is an hour.dim to cycle.inf*  
 "Dad is off cycling for an hour or so."

### Possible passive interpretation

- (29) Heit is te hierknippen.  
*Dad is to haircut.inf*  
 "Dad is off getting/giving a haircut."

### Interpretation question

- (30) What does sentence (29) mean?  
 A. Someone cuts father's hair.  
 B. Father cuts someone else's hair.  
 C. Both A and B are possible.

### Necessary passive interpretation

- (31) De masine is te reparearjen.  
*The device is to repair.inf*  
 "The device is off being repaired."

**Absentive as an adjunct**

- (32) Hy is nei Amsterdam te winkeljen.  
*He is to Amsterdam to shop.INF*  
 "He's off to Amsterdam to shop."
- (33) Ik tink dat er nei Amsterdam is te winkeljen.  
*I think that he to Amsterdam is to shop.INF*  
 "I think that he is off to Amsterdam to shop."

**Dutch-like absentive (without *te*)**

- (34) Mem is net thús, se is silen.  
*Mom is not home, she is sail.INF*  
 "Mom is not at home, she's off sailing."
- (35) Wy tinken dat mem fytsen is.  
*We think that mem cycle.INF is*  
 "We think mom is off cycling."

**Other****Frisian absentive with non-incorporated direct object**

- (36) Hy is de bôle te keapjen.  
*He is the bread to buy.INF*  
 "He's off buying the bread."

**Frisian absentive with unexpected word order**

- (37) Hy seit dat heit is te fytsen.  
*He said that dad is to cycle.INF*  
 "He said that dad is off cycling."

### Dutch-like absentive with unexpected word order

- (38) Se sizze dat hy is fytsen.  
*They say that he is cycle.INF*  
 "They say that he is off cycling."

### Absentive with incorporated object and indirect object

- (39) Hy is him te hierknippen.  
*He is him to haircut.inf*  
 "He's off giving him a haircut."

### Embedded V2

- (40) Hy leaude dat it skip wie juster fergien.  
*He blieved that the ship was yesterday wrecked.*  
 "He believed that the ship was wrecked yesterday."
- (41) Hy hie my in boadskip stjoerd, dat hy koe moarn net  
*He has me a message send, that he could tomorrow not*  
*komme.*  
*come*  
 "He has sent me a message that he cannot come tomorrow."
- (42) Hy is sa siik dat hy kin dy hjoed net helpe.  
*He is so sick that he can you today not help*  
 "He is so sick that he can't help you today."
- (43) Hy koe net komme omdat hy moast syn mem helpe.  
*He could not come because he must his mother help*  
 "He couldn't come because he had to help his mother."
- (44) Dat hy is snoad, is dúdlik.  
*That he is smart, is clear*  
 "That he is smart, is clear."

**IPI construction**

- (45) De plysje soe by him komme en nim syn  
*The police would to him come and bring.imp his*  
 papieren mei.  
*papers along*  
 "The police would come to him and bring his papers along."
- (46) De swalker wie der amper ta yn steat en klatterje by  
*The tramp was there barely to in state and climb by*  
 de ljedder op.  
*the ladder up*  
 "The tramp was barely capable of climbing up the ladder."

**P-stranding**

- (47) De bern wurdt net nei harke.  
*The children is not to listened*  
 "The child is not being listened to."
- (48) Him hiene se net op rekkene  
*Him had they net on counted*  
 "On him they had not counted."
- (49) Wa hast mei praat?  
*Who have you with talked*  
 "Who have you talked with?"
- (50) Hokker kandidaat stimme jimme op?  
*Which candidate vote you on*  
 "Which candidate are you voting for?"
- (51) Hokker tentoanstalling ha se hinne west?  
*Which exposition have they to been*  
 "Which exposition have they been to?"



- (52) Hokker stêd ha se nei ta west?  
*Which city have they to been*  
 "Which city have they been to?"

**Gean & Bliuwe**

- (53) Ik gean moarn wer fuotbaljen.  
*I go tomorrow again football.INF*  
 "I'm going to play football again tomorrow."
- (54) Hy giet fannemiddei mei syn broerke boartsjen.  
*He goes this afternoon with his little brother play.INF*  
 "He is going to play with his little brother this afternoon."
- (55) Hy giet net kinne kiezen.  
*He goes not can choose*  
 "He is not going to be able to choose."
- (56) Wy gean nije wike net thús wêzen.  
*We go next week not home be*  
 "We won't be home next week."
- (57) Hy bliuwt seuren oer dat boek.  
*He stays whine.INF about that book*  
 "He keeps whining about that book."
- (58) Ik bliuw laitsjen om dy mop.  
*I stay laugh.INF about that joke*  
 "I keep laughing about that joke."
- (59) Hy bliuwt te iten.  
*He stays to eat.INF*  
 "He is staying for dinner."
- (60) Ik bliuw te útfanhuzjen.  
*I stay to spend-the-night.INF*  
 "I stay here to spend the night."

- (61) Ik hoopje net dat we moarn spinaazje iten gean.  
*I hope not that we tomorrow spinach eat.INF go*  
 "I hope we're not going to eat spinach tomorrow."
- (62) Ik tink dat er noch oeren praten bliuwt.  
*I think that he still hours talk.INF stays*  
 "I think that he will keep talking for hours."

### **Complementizer agreement**

- (63) Ik fyn datsto/datste/datst my efkes helpe moatst.  
*I think that.2SG me PRT help must*  
 "I think that you have to help me."
- (64) Hy seit datste him helpe moatst.  
*He said that.2SG him help must*  
 "He said that you must help him."
- (65) Ik tink datst har dêrmei helpe moatst.  
*I think tha.2SG her there-with help must*  
 "I think you must help here with that."
- (66) Wy fine dat do ús helpe moatst.  
*We find that you us help must*  
 "We think that you should help us."
- (67) Hy freget ofsto moarn ek komst.  
*He asks if.2SG tomorrow also comes*  
 "He asked if you will come as well tomorrow."
- (68) Sy freget ofste nei it feestje komst  
*She asks if.2SG to the party comes*  
 "She asks if you will come to the party tomorrow."
- (69) Hy freget ofst mei him mei komst.  
*He asks if.2SG with him along comes*  
 "He asks if you will come along with him."

- (70) Sy freget oft jo nei de brulloft komst.  
*She asks if you to the wedding come*  
 "She asks if you will come to the wedding."

**Complementizer after relative pronoun**

- (71) In frou dy't ik ken is skilderes.  
*A woman who that I know is painter*  
 "A woman that I know is a painter."
- (72) Oer dy brêge leit it hûs dêr't wy wenje.  
*Beyond the bridge lies the house there that we live*  
 "Beyond the bridge is the house where we live."
- (73) Dat wie in simmer doe't wy in soad sinne hienen.  
*That was a summer then that we a lot sun had*  
 "That was a summer in which we had a lot of sun."
- (74) Dat is de man foar wa't ik wurke ha.  
*That is the man for who that I worked have*  
 "That is the man for whom I have worked."

***End:***

Hertlik betanke foar it ynfolje fan dizze enkête!

De folgjende enkête folget wierskynlik oer in pear moannen. Do ûntfangst dan wer in e-mail.

Ha do ûnderwilens fragen of opmerkingen, nim dan kontakt op mei: [m.bergstra@uu.nl](mailto:m.bergstra@uu.nl)

Mei freonlike groetnis,  
Myrthe Bergstra

*Thank you for filling in this questionnaire.*

*The next questionnaire will probably follow in a few months. You will then receive an email again.*

*If you have questions or comments in the meantime, contact: [m.bergstra@uu.nl](mailto:m.bergstra@uu.nl)*

*Kind regards,  
Myrthe Bergstra*

## B. Questionnaire 2

### *Introduction*

Bêste respondent,

Betanke foar dyn meiwurking oan dit ûndersyk!  
Dizze enkête bestiet út 72 oantal Fryske sinnen.

Wy freegje jo om foar elke sin oan te jaan oft dizze foar jo natuerlik klinkt of net en oft jo it sels ek sa sizze soenen. Dit kinne jo oanjaan op in skaal fan 1 oant en mei 5, wêrby 1 **“folslein ûnnatuerlik, dit soe ik sels noait sa sizze”** bestjút en 5 **“folslein natuerlik, dit soe ik sels ek sa sizze kinne.”**

Wy binne ynteresseare yn jo dageliks taalgebrûk. It is dus belangryk dat jo oan jo eigen spraak tinke, net oan wat yn formele situaasjes it bêste wêze soe, of oan wat neffens jo de offisjele regel is. Der binne hjir dan ek gjin goede of ferkearde antwurden!

Jo kinne sa folle tiid nimme as jo wolle. As jo fragen of opmerkingen hawwe, nim kontakt op mei: m.bergstra@uu.nl

Alfêst betanke foar it ynfolje!  
Mei freonlike groetnis,  
Myrthe Bergstra  
Universiteit Utrecht

*Dear participant,*

*Thanks for your participation in this research.  
This questionnaire consists of 72 Frisian sentences.*

*We ask you to indicate for each sentence whether this sounds natural to you or not, and whether you would say it like that, too. You can indicate this on a scale from 1 to 5, where 1 means “completely unnatural, I would never say it like that”, and 5 “completely natural, I would also say it like that.”*

*We are interested in your daily language use. It is important that you think about*

*your own speech, not about what would be best in formal situations, or what would be correct by the official rule. There are no right or wrong answers here!*

*You can take as much time as you need. If you have any questions or remarks, you can contact: [m.bergstra@uu.nl](mailto:m.bergstra@uu.nl)*

*Thanks in advance for filling in this questionnaire!*

*Kind regards,*

*Myrthe Bergstra*

*Utrecht University*

## *Items*

### Infinitival suffixes

#### **Perception verbs**

- (1) Ik sjoch him dûnsjen.  
*I see him dance.INF-ən*  
 "I see him dance."
- (2) Ik sjoch se boartsje.  
*I see them play.INF-ə*  
 "I see them play."
- (3) Ik sjoch se appels iten.  
*I see them apples eat.INF-ən*  
 "I see them eat apples."
- (4) Ik sjoch him ierdbeien ite.  
*I see him strawberries eat.INF-ə*  
 "I see him eat strawberries."

#### **Adjunct**

- (5) It is moai wenjen yn Ljouwert.  
*It is nice live.INF-ən in Leeuwarden*  
 "It's nice to live in Leeuwarden."
- (6) It is moai fytse yn it bosk.  
*It is nice cycle.INF-ə in the forest*  
 "It's nice to cycle in the forest."

**Purposive adjunct**

- (7) Ik gean nei de winkel, sigaretten heljen.  
*I go to the store, cigarettes get.INF-ən*  
 "I'll go to the store, to get cigarettes."
- (8) Hy giet nei de bakker, bôle helje.  
*He goes to the bakery, bread get.INF-ə*  
 "He goes to the bakery, to get bread."
- (9) Ik tink dat er nei de winkel ta is, iten heljen.  
*I think that he to the store to is, food get.INF-ən*  
 "I think that he went to the store, to get food."
- (10) Ik tink dat se nei de slachter ta is, fleis helje.  
*I think that she to the butcher to is, meat get.INF-ə*  
 "I think that she went to the butcher, to get meat."

**Hawwe/fine context**

- (11) Ik ha in bôle yn de friezer lizzen.  
*I have a bread in the freezer lie.INF-ən*  
 "I have a bread in the freezer."
- (12) Ik ha iten yn de kuolkast lizze.  
*I have food in the fridge lie.INF-ə*  
 "I have food in the fridge."
- (13) Hy fûn har op de flier sitten.  
*He found her on the floor sit.INF-ən*  
 "He found her sitting on the floor."
- (14) Se fûn him op de bank sitte.  
*She found him on the couch sit.INF-ə*  
 "She found him sitting on the couch."



### Infinitive used as subject

- (15) Fytsen is sûn.  
*Cycle.INF-ən is healthy*  
 "Cycling is healthy."
- (16) Appels iten is sûn.  
*Apples eat.INF-ən is healthy*  
 "Eating apples is healthy."
- (17) Dûnsje is fantastysk.  
*Dance.INF-ə is fantastic*  
 "Dancing is fantastic."
- (18) Boeken lêze is geweldich.  
*Books read.INF-ə is amazing*  
 "Reading books is amazing."
- (19) Ik tink dat fytsen sûn is.  
*I think that cycle.INF-ən healthy is*  
 "I think that cycling is healthy."
- (20) Wy fine dat postsegels sammeljen saai is.  
*We find that stamps collect.INF-ən boring is*  
 "We think collecting stamps is boring."
- (21) Hy tinkt dat sporte goed foar do is.  
*He thinks that sport.INF-ə good for you is*  
 "He thinks playing sports is good for you."
- (22) Ik fyn dat boeken lêze saai is.  
*I find that books read.INF-ə boring is*  
 "I think that reading books is boring."

**Infinitive used as an object**

- (23) Wy fine tekenjen fantastysk.  
*We find draw.INF-ən fantastic*  
 "We find drawing fantastic."
- (24) Ik fyn postsegels sammeljen saai.  
*I find stamps collect.INF-ən boring*  
 "I find collecting stamps boring."
- (25) Sy fine skilderje geweldich.  
*They find paint.INF-ə amazing*  
 "They find painting amazing."
- (26) Sy fine koekjes bakke wol aardich.  
*They find cookies bake.INF-ə quite nice*  
 "They find baking cookies quite nice."
- (27) Ik tink dat hy tekenjen saai fynt.  
*I think that he draw.INF-ən boring finds*  
 "I think that he finds drawing boring."
- (28) Wy tinken dat se koekjes bakken fantastysk fynt.  
*We think that she cookies bake.INF-ən fantastic finds*  
 "We think that she finds baking cookies fantastic."
- (29) Sy tinken dat hy dûnsje stom fynt.  
*They think that he dance.INF-ə stupid finds*  
 "They think that he finds dancing stupid."
- (30) Hy tinkt dat se boeken lêze ungesellich fynt.  
*He thinks that she books read.INF-ə not social finds*  
 "He thinks that she finds reading books not social."

## Noun incorporation

### **Dutch-like pseudo noun incorporation with plurals**

- (31) Hy is oan it appels iten.  
*He is at the apples eat.INF*  
 "He is eating apples."
- (32) Pake is oan it sigaren smoken.  
*Grandpa is at the cigars smoke.INF*  
 "Grandpa is smoking cigars."

### **Finite clauses**

- (33) Heit behangplakt hjoed.  
*Father wallpaper-covers today*  
 "Father covers the wall with wallpaper today."
- (34) De kapper hierknipt oerenlang.  
*The hairdresser hair-cuts hours*  
 "The hairdresser cuts hair for hours."
- (35) Ik wit dat hy hjoed autowasket.  
*I know that he today car-washes*  
 "I know he washes the car/cars today."
- (36) Ik tink dat hy oerenlang autowasket.  
*I think that he hours car-washes*  
 "I think that he washes cars for hours."

### **Different types of linking suffixes**

- (37) Heit is oan it messeslypjen.  
*Father is at the knife-a-sharpen.INF*  
 "Father is sharpening knives/a knife."

- (38) Hy is oan it messlypjen.  
*He is at the knife-ø-sharpen.INF*  
 "He is sharpening knives/a knife."
- (39) De man is oan it meskeslypjen.  
*The man is at the knife-DIM-sharpen.INF*  
 "The man is sharpening knives/a knife."
- (40) Hy is oan it amereleegjen.  
*He is at the bucket-ø-empty.INF*  
 "He is emptying buckets/a bucket."
- (41) De man is oan it amerleegjen.  
*The man is at the bucket-ø-empty.INF*  
 "The man is emptying buckets/a bucket."
- (42) Heit is oan it amerkeleegjen.  
*Father is at the bucket-DIM-empty.INF*  
 "Father is emptying buckets/a bucket."
- (43) De boer is oan it kowemelken.  
*The farmer is at the cow-ø-milk.INF*  
 "The farmer is milking cows/a cow."
- (44) De boer is oan it komelken.  
*The farmer is at the cow-ø-milk.INF*  
 "The farmer is milking cows/a cow."
- (45) De boer is oan it kijmelken.  
*De boer is aan het cows-milk.INF*  
 "The farmer is milking cows/a cow."
- (46) Hy is oan it froueversieren.  
*He is at the woman-ø-seduce.INF*  
 "He is seducing women/a woman."
- (47) Hy is oan it frouversieren.  
*He is at the woman-ø-seduce.INF*  
 "He is seducing women/a woman."

- (48) Hy is oan it frouljuversieren.  
*He is at the women-seduce.INF*  
 "He is seducing women/a woman."
- (49) Se is oan it broerpleagjen.  
*She is at the brother-ø-tease.INF*  
 "She is teasing her brother(s)."
- (50) Se is oan it broerepleagjen.  
*She is at the brother-ə-tease.INF*  
 "She is teasing her brother(s)."
- (51) Se is oan it bernfersoargjen.  
*She is at the child-ø-care.INF*  
 "She is taking care of children/a child."
- (52) Se is oan it bernefersoargjen.  
*She is at the child-ə-care.INF*  
 "She is taking care of children/a child."
- (53) De man is oan it plankseagjen.  
*The man is at the shelf-ø-saw.INF*  
 "The man is sawing shelves/a shelf."
- (54) De man is oan it plankeseagjen.  
*The man is at the shelf-ə-saw.INF*  
 "The man is sawing shelves/a shelf."

### Passive

- (55) Der wurdt appeliten.  
*There is apple-eat.INF*  
 "There is eating of apples."
- (56) Yn de biblioteek wurdt boeklêzen.  
*In the library is book-read.INF*  
 "In the library, there is bookreading."

### Different types of te-infinitives

- (57) De kapper skynt it hier te knippen.  
*The hairdresser seems the hair to cut.INF*  
 "The hairdresser seems to cut the hair."
- (58) De kapper skynt te hierknippen.  
*the hairdresser seems to hair-cut.INF*  
 "The hairdresser seems to cut hair."
- (59) Hy sit te boeklêzen.  
*He sits to book-read.INF*  
 "He is reading a book."
- (60) Hij sit in boek te lêzen.  
*He sits a book to read.INF*  
 "He is reading a book."
- (61) Hy helpt my om te autowasken.  
*He helps me for to car-wash.INF*  
 "He helps me wash cars/a car."
- (62) Wy helpen him om de auto te wasken.  
*We help him for the car to wash.INF*  
 "We help him wash the car."

### Other types of arguments

- (63) De famkes syn oan it flechtlinghelpen.  
*The girls are at the refugee-help.INF*  
 "The girls are helping refugees."
- (64) De sinne is de hoarizon oan it readkleurjen.  
*The sun is the horizon at the red-color.INF*  
 "The sun is coloring the horizon red."

**Absentive****With direct object and *te***

- (65) Hy is net thús, hy is in bôle te keapjen.  
*He is not home, he is a bread to buy.INF*  
 “He is not at home, he is off buying a bread.”
- (66) Se is net thús, se is de bôle te keapjen.  
*She is not home, she is the bread to buy.INF*  
 “She is not at home, she is off buying the bread.”
- (67) Pake is net thús, hy is bôle te keapjen.  
*Grandpa is not home, he is bread to buy.INF*  
 “Grandpa is not at home, he is off buying a bread.”
- (68) Beppe is net thús, se is bôlen te keapjen.  
*Grandma is not home, she is bread.PL to buy.INF*  
 “Grandma is not at home, she is off buying bread.”

**With direct object, without *te* (Dutch-like)**

- (69) Heit is net thús, hy is in bôle keapjen.  
*Dad is not home, he is a bread buy.INF*  
 “Dad is not at home, he is off buying a bread.”
- (70) Mem is net thús, se is de bôle keapjen.  
*Mom is not home, she is the bread buy.INF*  
 “Mom is not at home, she is off buying the bread.”
- (71) Hy is net thús, hy is bôle keapjen.  
*He is not home, he is bread buy.INF*  
 “He is not at home, he is off buying a bread.”
- (72) Se is net thús, se is bôlen keapjen.  
*She is not home, she is bread.PL buy.INF*  
 “She is not at home, she is off buying bread

***End***

Hertlik betanke foar it ynfoljen fan dizze enkête!  
Mei freonlike groetnis,  
Myrthe Bergstra - Universiteit Utrecht

*Thank you very much for filling in this questionnaire*  
*With kind regards,*  
*Myrthe Bergstra – Utrecht University*



# Samenvatting in het Nederlands

Het bestuderen van overeenkomsten en verschillen tussen de talen op de wereld is een belangrijke manier voor taalkundigen om erachter te komen hoe taal precies in elkaar zit. Bij talen die nauw aan elkaar verwant zijn, zoals het Nederlands en het Fries, zien we voornamelijk verschillen in woordenschat en uitspraak, maar niet zoveel in de grammatica. De kleine verschillen die er wel zijn, kunnen dus gedetailleerde informatie geven over de manier waarop talen kunnen variëren. Het doel van dit proefschrift is om te kijken welke manieren dit zijn en welke gevolgen dit heeft voor taalverandering.

Deze dissertatie gaat over syntactische veranderingen in de Fries-Nederlandse taalcontactsituatie. Drie casussen binnen het domein van infinitivale werkwoorden worden behandeld: infinitivale suffixen, nomen incorporatie en de absentief. Voor elke casus bespreek ik hoe de microvariatie tussen het Nederlands en het Fries eruit ziet en welke veranderingen Friese sprekers laten zien onder invloed van het Nederlands. Ook toon ik hoe deze veranderingen kunnen worden gevat in syntactische parameters en in hoeverre de vorm van deze parameter invloed heeft op de verandering. Deze drie casussen dienen ter beantwoording van de volgende drie onderzoeksvragen:

(1) De empirische vraag

Welke morfo-syntactische innovaties laten sprekers van het Fries zien in aanvulling op de originele patronen van hun taal?

(2) De syntactische vraag

Hoe worden deze innovaties gerepresenteerd in de grammatica's van de sprekers? Hoe relateert dit aan de grammaticale representatie van de originele patronen?

(3) The veranderingsvraag

Waarom vinden we deze innovaties, i.e.:

Waarom vinden we meer innovaties in bepaalde gebieden van de grammatica's dan in andere?

Waarom hebben de innovaties deze bepaalde vorm?

In **hoofdstuk 2** worden deze vragen geplaatst in een theoretisch kader over taalcontact en taalverandering. Ik laat zien dat hoewel taalverandering wordt geobserveerd in E-language ("External language", de taal van een gemeenschap (Chomsky 1986a)), syntactische veranderingen eigenlijk plaatsvinden in de I-language ("Internal language", de interne grammatica van een individu (Chomsky 1986a)). Om precies te zijn vindt syntactische verandering plaats wanneer de parametrische waarden in de grammatica van een spreker anders zijn dan in de grammatica's van de generatie ervoor. Wanneer meerdere sprekers deze nieuwe waarden hebben, en dit zichtbaar wordt op het niveau van een gemeenschap, spreken we van taalverandering.

In navolging van Rizzi (2017) ga ik er vanuit dat er slechts 3 soorten parameters bestaan: Merge parameters, Move parameters en Spell-out parameters. Oftewel: parameters die gaan over het samenvoegen van syntactische elementen, parameters die gaan over het verplaatsen van syntactische elementen, en parameters die gaan over hoe syntactische elementen worden uitgesproken. Uitgaande van dit idee kan syntactische verandering niet vrij zijn, maar wordt het beperkt door de variatie die kan volgen uit verschillende waarden voor deze parameters.

Afgezien van de verschillende *soorten* parameters die er zijn, kunnen parameters ook verschillende *formaten* hebben (Biberauer & Roberts 2017). Ze kunnen bijvoorbeeld van toepassing zijn op een hele klasse van functionele items (bijvoorbeeld "werkwoorden"), op een subklasse van functionele items (bijvoorbeeld "modale werkwoorden") of zelfs op één of een paar functionele items (bijvoorbeeld 1 specifiek modaal werkwoord).

Naar aanleiding van deze parametertheorie stel ik 3 hypothesen voor, die voorspellen welke syntactische veranderingen gemakkelijker zullen plaatsvinden dan andere:

(4) "Move before Merge"-hypothese:

Move parameters veranderen gemakkelijker dan Merge parameters.

- (5) “Spellout before Move and Merge”-hypothese:  
 Spellout parameters veranderen gemakkelijker dan Move parameters en Merge parameters.
- (6) “Small before big”-hypothese:  
 Kleinere parameters veranderen gemakkelijker dan grotere parameters.

Hoewel de studie niet is ontworpen om deze hypothesen (statistisch) te toetsen, wordt in ieder hoofdstuk teruggekoppeld naar de hypothesen.

**Hoofdstuk 3** presenteert de eerste casus: variatie en verandering in Spellout parameters bij infinitivale suffixen. Het Nederlands kent slechts één type suffix op een infinitief: [ə], geschreven als *-en*. In het Fries vinden we twee types: [ə] (geschreven als *-e*) en [ən] (geschreven als *-en*). De distributie hiervan wordt bepaald door de syntactische context; zo vinden we [ə] bijvoorbeeld na modale werwoorden (zoals bij *sil* “zal” in (7)) en [ən] bijvoorbeeld na lidwoorden, zoals in (8).

- (7) Ik sil moarn nei skoalle rinne.  
*Ik zal morgen naar school lopen.INF-ə*  
 “Ik zal morgen naar school lopen.”
- (8) It iten fan appels is sûn.  
*Het eten.INF-ən van appels is gezond*  
 “Het eten van appels is gezond.”

Ik beargumenteer dat deze variatie wordt veroorzaakt door een syntactisch verschil tussen deze infinitieven: de infinitief in (7) is verbaal, terwijl de infinitief in (8) nominaal is. Deze infinitieven hebben een verschillende syntactische structuur. Voor de nominale infinitief stel ik voor, gebaseerd op onder andere werk van Alexiadou (2013), dat deze structuur maximaal is zoals in (9) (waarbij de DP, AspP en VoiceP niet altijd aanwezig hoeven zijn):

(9)

Het kenmerk van de nominale infinitief is het n<sup>0</sup> element dat boven de verbale projecties in de structuur wordt gevoegd. In het Fries wordt deze uitgespeld door [ən], en post-syntactisch naar het werkwoord verplaatst door een Lowering proces.

Voor de verbale infinitief stel ik de structuur voor in (10):

(10)

Deze structuur bestaat dus alleen uit een werkwoord met bijbehorende functionele projecties. Het werkwoordelijke element v<sup>0</sup> wordt, in het Fries, uitgespeld door [ə].

Hoewel het Nederlands ook beide structuren kent, worden deze niet

fonologisch gemarkeerd: zowel  $n^0$  in de nominale infinitief als  $v^0$  in de verbale infinitief wordt uitgespeld door [ə] (geschreven als *-en*). De variatie tussen het Nederlands en het Fries zit hem dus in de manier waarop  $n^0$  en  $v^0$  worden uitgesproken. Het element  $v^0$  wordt in beide talen op dezelfde manier uitgesproken, alleen verschillend geschreven:

- (11) Fries  
 $v_{[inf]}$ : [ə] (*-e*)
- Nederlands  
 $v_{[inf]}$ : [ə] (*-en*)

Het element  $n^0$  wordt wel verschillend uitgesproken, hoewel het hetzelfde wordt geschreven:

- (12) Fries  
 $n_{[nominaliserend]}$ : [ən] (*-en*)
- Nederlands  
 $n_{[nominaliserend]}$ : [ə] (*-en*)

Het blijkt dat veel sprekers van het Fries tegenwoordig geen duidelijk onderscheid meer maken tussen de twee suffixen. Uit de vragenlijsten van deze studie blijkt dat veel sprekers beide suffixen accepteren in alle contexten. Dat betekent dat er taalverandering heeft plaatsgevonden in deze Spell-out parameters. Voor deze sprekers kunnen  $n^0$  en  $v^0$  op twee manieren worden uitgesproken, zoals te zien in onderstaande parameter settings:

- (13) Vernieuwd Fries:  
 $v_{[inf]}$ : [ə] (*-e*), [ən] (*-en*)
- (14) Vernieuwd Fries:  
 Nominaliserende  $n^0$ : [ən] (*-en*), [ə] (*-e*)

Hoewel deze nieuwe parameter settings niet hetzelfde zijn als die van het Nederlands, lijkt deze verandering beïnvloed te zijn door taalcontact; de innovaties zijn bijvoorbeeld vaker te zien bij respondenten die meer Nederlands spreken.

In **hoofdstuk 4** wordt de tweede casus gepresenteerd: variatie en verandering in Move parameters bij nomen-incorporatie. In het Fries vinden we nomen-incorporatie (zoals in (15)), terwijl we in het Nederlands pseudo-nomen-incorporatie vinden (zoals in (16)):

- (15) Hy is oan't messeslypje.  
*Hij is aan het mes- $\bar{a}$ -slijpen.INF*  
 "Hij is een mes/messen aan het slijpen."

(16) Hij is aan het muizen vangen.

Fries

Nederlands

Hoewel in beide gevallen het directe object (*mes* in (15), *muizen* in (16)) onderdeel uit lijkt te maken van het werkwoord, stel ik voor dat deze patronen verschillende syntactische derivaties hebben. In het Fries is er sprake van hoofd-verplaatsing van het object naar het werkwoord, terwijl in het Nederlands een NumP naar de specifier positie van een infinitief verplaatst. Voor het Fries stel ik de structuur in (17) voor:

In deze structuur verplaatst een zelfstandig naamwoord (n) naar de classifier, waarna deze eenheid verder verplaatst naar het werkwoord. Ik laat zien dat dit gerepresenteerd kan worden door de parameter in (18):

- (18) Friese nomen-incorporatie:
- |           |                     |                       |
|-----------|---------------------|-----------------------|
| V[trans]: | F <sub>search</sub> | Class, n <sup>0</sup> |
|           | F <sub>IM</sub>     | Class, n <sup>0</sup> |

Deze parameter stelt dat een transitief v-element een classifieer element (of een  $n^0$  in het geval van niet-telbare zelfstandige naamwoorden) kan aantrekken, wat resulteert in een geïncorporeerd nomen.

Voor het Nederlands stel ik voor dat er geen sprake is van hoofdverplaatsing, maar van verplaatsing van een NumP naar een specifier positie, zoals in (19):

De mogelijkheid om deze structuren te maken kan in de grammatica worden gepresenteerd door de parameter in (20):

(20) Nederlandse pseudo-nomen-incorporatie

|               |              |                  |
|---------------|--------------|------------------|
| $V_{[inf]}$ : | $F_{search}$ | NumP             |
|               | $F_{IM}$     | NumP (naar Spec) |

Ook in dit geval blijkt dat er taalverandering plaatsvindt in het Fries. Uit de vragenlijsten van deze studie blijkt dat er zijn tegenwoordig sprekers van het Fries zijn die de originele Friese patronen als in (15) niet meer accepteren. Bovendien zijn er sprekers die het Nederlandse patroon in (16) acceptabel vinden in het Fries. Voor hen is de parameter in (20) dus ook onderdeel van hun I-language.

In **hoofdstuk 5** bespreek ik de derde casus: variatie en verandering in een Merge parameter, bij de absentief constructie. De absentief is een grammaticale constructie die de afwezigheid van het subject uitdrukt, zoals in (21) en (22):

- (21) Jan is te fiskjen. Fries  
*Jan is te vis.INF*  
 “Jan is vissen”

- (22) Jan is vissen. Nederlands

Ik beargumenteer dat we deze syntactische constructie kunnen analyseren door de aanwezigheid van een onuitgesproken GAAN aan te nemen, gebaseerd op Abraham (2008), zoals in (23) en (24):

- (23) Jan is te fiskjen GONGEN. Fries  
*Jan is te vis.INF gegaan*  
 “Jan is vissen.”

- (24) Jan is GAAN vissen. Nederlands

Dit onuitgesproken GAAN kan de verschillen tussen de Friese en Nederlandse absentief verklaren, omdat het woord *gaan* in het Fries andere eigenschappen heeft dan in het Nederlands. Hoewel *gean* (“gaan”) in het Fries alleen een prepositionele frase (PP) als complement kan nemen, kan het Nederlandse *gaan* zowel een PP als een werkwoord als complement nemen. Dit leidt tot verschillende syntactische structuren van de absentief: (25) voor de Friese versie waar *gean* een PP-complement neemt, en (26) voor de Nederlandse versie waar *gaan* een functioneel werkwoord met een werkwoordelijk complement is.



(25)

(26)

De variatie tussen de Friese en Nederlandse absentief kan dus worden teruggevoerd naar de eigenschappen van het woord *gaan*, om precies te zijn welke elementen in het complement kunnen staan. Dit kan in de I-language worden gerepresenteerd door middel van de parameter settings in (27):

- (27) Merge parameter:
- Friese *gean*:  $F_{\text{Merge PP}}$
  - Nederlandse *gaan*:  $F_{\text{Merge PP}}$   
 $F_{\text{Merge VP}}$

Opnieuw zien we dat er taalverandering plaatsvindt op dit gebied van de grammatica. Uit de vragenlijsten van deze studie blijkt dat hoewel voor bijna alle sprekers van het Fries het Friese patroon in (21) nog acceptabel is, sommige sprekers tegenwoordig ook de Nederlandse versie van de absentief (zonder *te*) acceptabel vinden in het Fries. Voor deze sprekers maakt dus de parameter setting in (28) deel uit van hun I-language:

- (28) Vernieuwd Fries:
- gean*:  $F_{\text{Merge PP}}$   
 $F_{\text{Merge VP}}$

Bij iedere casus vinden we dus variatie tussen het Nederlands en het Fries, welke telkens gerepresenteerd kan worden door een parameter (Spell-out, Move en Merge). Ook zien we telkens dat er taalverandering gaande is in het Fries, en dat er dus nieuwe parameter settings zijn voor sommige sprekers. Deze casussen illustreren dus wat voor soort verandering we vinden in taalcontact situatie, hoe deze kunnen worden gerepresnteerd en waarom ze deze vorm hebben. Naar aanleiding hiervan bespreek ik tenslotte in **hoofdstuk 6** de antwoorden op de onderzoeksvragen. De empirische vraag, namelijk welk type morfo-syntactische innovaties we vinden bij sprekers van het Fries, wordt beantwoordt door de data in elk hoofdstuk, waarvan hierboven de belangrijkste geïllustreerd zijn. De syntactische vraag, welke vraagt hoe deze innovaties worden gerepresenteerd in de grammatica's van de sprekers, wordt beantwoord door de syntactische analyses welke hierboven zijn samengevat, en de parameters die deze syntactische structuren kunnen genereren. De veranderingsvraag, tenslotte, die vraagt waarom we nu precies *deze* veranderingen zien, wordt beantwoord met behulp van de theorie en voorspellingen in hoofdstuk 2. De vastliggende vormen en

formaten die parameters kunnen hebben bepalen welke soort variatie (en daarmee welke verandering) er mogelijk is. Bovendien suggereren de hypothesen in (4), (5) en (6) dat de vorm en het formaat van een parameter van invloed zijn op hoe gemakkelijk een verandering plaatsvindt; Spell-out parameters veranderen gemakkelijker dan Move en Merge parameters, Move parameters gemakkelijker dan Merge parameters en kleine parameters gemakkelijker dan grotere. Deze voorspellingen zijn gedaan op basis van verwachtingen vanuit I-language, en of dit inderdaad het geval is, is lastig te testen. Hoewel in deze studie inderdaad de grootste veranderingen gevonden waren bij Spell-out parameters, kunnen we hier nog geen bredere conclusies uit trekken. Om in toekomstig onderzoek hierop verder te gaan, zou er eerst een eenduidige manier ontwikkeld moeten worden om de parameterveranderingen te kwantificeren. Het staat namelijk niet vast bij welke waardering van voorbeeldzinnen we kunnen aannemen dat een parameter echt veranderd is. Bovendien kunnen sommige parameters complexer zijn dan andere, of is taalproductie die we verwachten op basis van deze parameters lastig met elkaar te vergelijken. Ook blijkt in deze dissertatie dat het bekijken van individuele patronen een waardevolle aanvulling is op de globale data van grote groepen sprekers, maar is het onduidelijk wat dit betekent voor de kwantitatieve data.

Hoewel het dus moeilijk is om harde conclusies te trekken over welke aspecten van grammatica nu gemakkelijk veranderen in een taalcontactsituatie, kan er in vervolgonderzoek wel gekeken worden of we bepaalde tendensen kunnen ontdekken. Dit zou bijvoorbeeld kunnen door veel meer parameters binnen dezelfde contactsituatie te bekijken, of juist door dezelfde parameters binnen meerdere contactsituaties te bekijken. Al met al biedt deze dissertatie een exploratieve benadering om te onderzoeken waarom syntactische variatie de vorm heeft die het heeft en waarom het meer voorkomt in bepaalde gebieden van de grammatica dan in andere.



# Curriculum Vitae

Myrthe Coret-Bergstra was born on January 5th, 1991 in Leeuwarden, the Netherlands. In 2009, she started her Bachelor Linguistics at Utrecht University. After graduating *cum laude* in 2012, she continued her path with the research master Linguistics at Utrecht University, specializing in language acquisition and multilingualism. In 2014, she obtained her MA degree *cum laude* and began working as a PhD at the UiL-OTS at Utrecht University. Her research was part of the European AThEME project on multilingualism, funded by the EU. During this time, she spent a few weeks with the IKER-CNRS research team in Bayonne, France. Currently, she is working as a researcher at NHL Stenden Hogeschool in Leeuwarden, the Netherlands, on matters involving Frisian and multilingualism in education. This dissertation is the result of her PhD research.