

The change of Frisian infinitives

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This paper discusses the two types of infinitives in Frisian: infinitives ending in -E (e.g. *rinne* “walk”) and infinitives ending in -EN (e.g. *rinnen* “walk”). It shows that their distribution can be accounted for by their different underlying syntactic structure: the -E infinitive has a fully verbal structure whereas the -EN infinitive has a flexible structure which always involves a DP. Moreover, I argue that the fact that the difference between the two forms is disappearing can be explained both by Dutch influence and by the fact that the structure of the infinitives already showed much overlap.

Keywords: infinitives, nominal and verbal structure, language change, Dutch-Frisian language contact

1. Introduction

Frisian has two kinds of infinitives:¹ infinitives ending in -E (e.g. *rinne* ‘walk’) and infinitives ending in -EN (e.g. *rinnen* ‘walk’). All verbs can take either of the two forms, depending on the context.² These two forms are (almost) in complementary distribution. Traditionally, the -EN infinitive is said to be nominal, whereas the -E infinitive is said to be verbal (De Haan 2010; Hoekstra 1997), but there is no comprehensive theory on what exactly is nominal and verbal in the structure of these elements. Moreover, recently collected questionnaire data shows that the difference is disappearing; many speakers allow both infinitives in both nominal and verbal contexts. The aim of this paper is on the one hand to explain the difference in distribution of the infinitives by proposing different syntactic structures for the two forms and on the other hand to explain why this is a context for language change.

1. Frisian in this article refers to the West-Frisian variety spoken in the area of Friesland, in the northern part of The Netherlands.

2. There is a very small group of verbs that do not distinguish between these two forms, but always end in Ø: *dwaan* (‘do’), *jaan* (‘give’), *gean* (‘go’), *stean* (‘stand’), *sjen* (‘see’) and *tsjen* (‘travel’) (Hoekstra 1997).

2. The data

In this section, I will first give an overview of the traditional distribution (i.e. the situation before the change). Next, I will provide some data from a questionnaire study I performed in 2016, which shows that not all of the speakers make the traditional distinction anymore.

2.1 Traditional distribution

The distribution of the infinitives has been discussed in the literature in some detail (cf. De Haan 2010 and Hoekstra 1997). The contexts in which the -E infinitive is used are summed up in Table 1.

Table 1. The distribution of the -E infinitive

-E infinitive	
After modal verbs	<i>Ik kin appels ite</i> I can apples eat.INF-E
After the verb <i>litte</i> ('let')	<i>Wy litte de bern appels ite</i> We let the children apples eat.INF-E
In argument position	<i>Rinne is sùn</i> Walk.INF-E is healthy

The -E infinitive has often been called the “verbal infinitive”, because it occurs as a complement of modal verbs – a position in which we expect a verb, rather than a noun. The -EN infinitive, on the other hand, occurs in more contexts, some of which seem quite nominal, as is illustrated in Table 2.

Table 2. The distribution of the -EN infinitive

-EN infinitive	
After a determiner	<i>It iten fan appels is sùn.</i> The eating.INF-EN of apples is healthy
After infinitival marker <i>te</i> ('to')	<i>Hy probearjet appels te iten</i> He tries apples to eat.INF-EN
After the verbs <i>gean</i> ('go') and <i>bliuwe</i> ('remain')	<i>Hy giet sitten / hy bliuwt sitten</i> He goes sit.INF-EN / He remains sit.INF-EN
After perception verbs such as <i>hearre</i> ('hear') and <i>sjen</i> ('see')	<i>Wy sjogge de bern appels iten</i> We see the children apples eat.INF-EN
In argument position	<i>Rinnen is sùn</i> Walk.INF-EN is healthy

The -EN infinitive has often been called the “nominal infinitive”. This is mostly based on the fact that this type of infinitive co-occurs with a determiner, suggesting that the infinitival clauses headed by the -EN infinitive are nominal rather than a verbal. However, for the other contexts, it is less clear that the -EN infinitive should necessarily be nominal. For the infinitival marker *te* (‘to’) one could possibly argue that, because this marker developed from a preposition, it might also need a nominal complement. However, it is not so clear why verbs like *go* or *see* would require a nominal complement.

Another problem for a traditional nominal/verbal distinction is the argument position context, in which both infinitives can occur (see Tables 1 and 2). An analysis of these infinitives should therefore not only explain their differences in distribution, but also their overlap. I will return to this issue in Section 3.1.

2.2 Recent data

In the previous section, I discussed the traditional distribution of the infinitives as it is found in grammars, the literature and confirmed by native speakers. However, data from a recent questionnaire shows that the distributional difference between the infinitives is not as strict anymore.

2.2.1 *Method*

The data was collected by means of a written questionnaire that was administered among 537 speakers of Frisian. This group consisted of 408 females and 129 males, aged 17–86. 447 of them were native speakers of Frisian (i.e. they acquired Frisian before the age of 4). The questionnaire consisted of two parts: a background questionnaire (asking participants about their age, gender, education, native language, language of their parents, and amount of use of Dutch and Frisian) and an acceptability judgment task on a 5-point Likert-scale. The acceptability judgment task consisted of 73 Frisian items. 12 items concerned Frisian infinitives and are therefore relevant to this paper. The items per context can be found in the Appendix. For each context, there was one item with an -E infinitive and one item with an -EN infinitive. The items were randomly mixed with the other items.

2.2.2 *Results*

The average acceptance rates can be found in Table 3. In all cases the range of the given answers was 1–5:

Table 3. Average acceptance rates infinitival contexts on a 5-point scale

	-EN	-E
Determiner	Mean: 4.37 sd: .95	Mean: 3.17 sd: 1.59
<i>Te</i> ("to")	Mean: 4.52 sd: .97	Mean: 2.94 sd: 1.61
Preposition	Mean: 4.39 sd: 1.08	Mean: 3.32 sd: 1.54
Modal	Mean: 3.69 sd: 1.60	Mean: 4.43 sd: 1.01
Bare argument	Mean: 4.40 sd: 1.04	Mean: 4.44 sd: .98
Bare argument in embedded clause	Mean: 4.65 sd: .78	Mean: 3.50 sd: 1.38

As one can see, none of the infinitives is judged as entirely ungrammatical in any of the contexts.³ Although these are averages, a closer look at the data shows that many speakers allow both infinitives in all contexts; the differences sketched in Section 2.1 do not seem to exist for them.

On the other hand, paired sample t-tests show that for all contexts, except the bare argument context, the difference in ratings between the *-EN* and *-E* infinitive is significant ($p < .001$). The *-EN* infinitive is preferred after determiners and prepositions (a context not mentioned in the literature, but which fits within the idea that this infinitive is nominal). The *-E* infinitive is preferred after modals, which is a clear verbal context. In argument position, they are equally accepted, but for the embedded clause context there seems to be a difference. Perhaps embedded arguments appear more nominal because they seem to be case-marked, whereas matrix subjects could for example be a topic. I leave this open for future research.

Table 4 shows the results per age group. Paired sample t-tests show in all age groups, for all contexts, except the bare argument context, the difference in ratings between the *-E* and *-EN* infinitive is significant ($p < .001$). It is therefore not the case that older speakers make a distinction and younger speakers do not. However, the younger speakers seem to rate the forms that are expected to be

3. An anonymous reviewer points out that there might be various reasons for these high acceptance rates. First of all, it might be due to L2 speakers of Frisian, who did not fully acquire the language. However, recalculating means for L1 speakers only shows the same pattern of results, with means being at most 0.1 higher or lower. Secondly, speakers might have regarded *-e* and *-en* as spelling variations or errors. This might have been the case for some speakers, but as we see differences between age groups and context, I will assume that this cannot account for all the high ratings.

ungrammatical higher than the older speakers. As independent sample t-tests show, for 8 out of 12 items, the difference in ratings between the oldest group of speakers and the younger group is significant ($p < 0.05$). This could mean that the older speakers can be taken as a baseline (their ratings might be relatively high for other reasons) and it are mostly the younger speakers who do not distinguish between the -EN and -E infinitive anymore. In any case, it is clear that not all speakers of Frisian make a distinction between the -E and -EN infinitive; for some, the language has changed.

Table 4. Mean ratings per age group

	16–35 years n = 137		35–49 years n = 168		50+ years n = 232	
	EN-infinitive	E-infinitive	EN-infinitive	E-infinitive	EN-infinitive	E-infinitive
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
Bare argument	4.08	4.26	4.46	4.42	4.54	4.55
Bare argument in embedded clause	4.55	3.55	4.64	3.72	4.71	3.32

3. Analysis

A potential analysis for the ambivalent distribution of infinitives is that the degree of “nominalness” differs from context to context (cf. Ackema & Neeleman 2004; Alexiadou et al. 2011; Alexiadou 2013). However, many languages have one form that shows mixed behavior, such as the English gerund or the Dutch infinitive. Few languages make a morphological distinction like Frisian, but one cannot easily map the two Frisian forms onto the proposals made for English and Dutch mixed projections. In this paper, I will propose that the -E infinitive is not nominalized: it only has verbal structure. The -EN infinitive, on the other hand, shows mixed behavior. I will also propose that the change in the infinitives is caused by two factors: language contact with Dutch and the fact that the structures already showed much overlap.

3.1 The structure of the infinitives

Although infinitives are often seen as a kind of nominalization, I will propose here that the -E infinitive is a completely verbal form. Take a look at Table 5, based on a classification of English gerunds by Alexiadou (2013).

Table 5. Classification of “nominalness” and “verbalness”

	Verbal gerund	Nominal gerund	-E infinitive	-EN infinitive	Dutch infinitive
Article (→ D)	*	√	*	√	√
Adjective (→ nP)	*	√	*	√	√
Adverb (→ AspectP)	√	*	√	√	√
Overt subject (→ Spec,DP)	√ (genitive)	√ (genitive)	*	√	√
Accusative object (→ VoiceP [+transitive])	√	*	√	√	√

The first column shows the diagnostics used by Alexiadou to determine the structure for the English gerunds. For example, the possibility of an article is a diagnostic for the presence of a D head and the presence of an adjective shows that an nP must be present in the structure.

3.1.1 *The -E infinitive*

As illustrated in Table 3, the -E infinitive can be combined with an adverb and an accusative object, suggesting that they project up at least to AspectP according to Alexiadou’s analysis, but not with articles or adjectives, leading to the conclusion that the structure these infinitives is not nominal at all (no DP or nP). For that reason, I propose that they have the structure in (1):

- (1) [TP [AspP [VoiceP [vP [Root]]]]]

Despite the presence of a TP projection, which we expect to be there for a verb, infinitives do not have overt subjects. One might wonder how the lack of a subject can be regarded a verbal property, since verbs usually obligatorily express their arguments (contrary to the optionality of arguments with nouns). However, it is not the case that there is no subject, it just cannot be expressed overtly with infinitives. A possible explanation for this is that the TP of infinitives is different from the TP of finite verbs, and does not probe for a subject.

The subject of the -E infinitive could be in spec,vP. Here the subject cannot be overt, because it cannot be case marked, so it can only be PRO or a trace. As modals are raising verbs (Wurmbrand, 1999), the infinitival subject would be a trace in spec,vP, as the subject has moved to the subject position of the modal. The

bare -E infinitive in argument position also never has an overt subject; here the subject can be PRO. The only exception seems to be the *litte* ('let') context; in this case the infinitive does have an overt subject. However, *litte* is an ECM verb, so the subject of *ite* in (2) is case-marked by the matrix verb and it can stay in spec,vP. Therefore, this is not a counterexample to the claim that an infinitive cannot case-mark an overt subject.

- (2) *Wy litte de bern appels ite.*
 we let the children apples eat.INF

The structure in (1) can also account for contexts in which an -E infinitive is used as an argument. The -E infinitive really behaves like a verbal phrase in this context, as De Haan (2010) shows: the infinitival clause can include verbal material, as in (3), with an object *dizze westriid* 'this game' and an adverb *mei ien-nul* 'with one-zero'. The -EN infinitive cannot include this argument and an adverb, suggesting that it is nominal in nature, as I will also argue in the next section.

- (3) *Dizze wedstriid mei ien-nul winne/*winnen wie slimmer as ferlieze.*
 This game with one-zero win.INF was worse than lose.INF

Even though the -E and -EN infinitive can both occur in argument position, their internal distribution remains rather different. This corroborates the hypothesis that the -E infinitive is purely a verbal element.

3.1.2 The -EN infinitive

Table 5 shows that -EN infinitives can have verbal properties as well as nominal properties. Importantly, these properties cannot all be present at the same time: the -EN infinitive seems to *either* allow a determiner, adjective and overt subject, or an adverb and an accusative object, but not a mix. For example, if there is a determiner, the object cannot receive accusative case and has to be expressed as a PP:

- (4) a. **It appels iten is sûn.*
 the apples eat.INF is healthy
 b. *It iten fan appels is sûn.*
 the eat.INF of apples is healthy

This behavior looks similar to that of the German infinitive, for which Alexiadou et al. (2011) proposed the following two structures:

- (5) a. [DP [AspectP [VoiceP [vP [Root]]]]]
 b. [DP [ClassP [nP [AspectP [VoiceP [vP [Root]]]]]]]

The structure in (5b) can account for the contexts in which adjectives and determiners occur, whereas the structure in (5a) accounts for the contexts in which the

infinitive is bare and can case-mark its object. Can these structures also account for the behavior of Frisian -EN infinitives?

First, let's focus on the most nominal context: an infinitive preceded by a determiner. This could be accounted for by the structure in (5b).⁴ The DP projection provides a position for the determiner or a genitive subject (in spec,DP) and the nP provides a position for an optional adjective, following Alexiadou (2013), or a fan-PP. Assuming that prepositions require a DP complement, it makes sense to assume that this structure would be relevant in prepositional contexts, like the one in (6), as well. However, if we look closely at this example, we see that there is no determiner in this structure.

- (6) *Mei skellen losse jo neat op.*
with namecall.INF fix you nothing PRT

Why there is no D in this structure, remains an open question for now. Related to this is the structure of the infinitive after the infinitival marker *te*. *Te* derives from a preposition, and as Hoekstra (1997) argues, *te* is still more prepositional in Frisian than in Dutch. In this context, D is obligatorily empty. Therefore, I propose that the structure in (5b) with an obligatorily empty D can account for the *te*-context, as in (7).

- (7) [DP D: \emptyset [ClassP [nP [AspectP [VoiceP [vP [Root]]]]]]

A context which is not clearly nominal nor verbal is the argument position-context. As illustrated above, a verbal phrase is possible in this position, as in (3). On the other hand, since it is an argument position, one would expect a more nominal phrase to be possible too. It turns out that the -EN infinitive in this context is indeed more nominal, because it cannot include the verbal material in (3). However, in this context, too, there is no determiner, so I propose that the structure in (7) can also account for this context.⁵

The contexts with the verbs *gean* ('go') and *bliuwe* ('remain') are quite complicated at first sight. *Gean* and *bliuwe* may seem like auxiliaries similar to modals, but they (at least used to) have selectional restrictions in Frisian: they can only select postural verbs (*stand*, *sit*, *lie* and *hang*) (Tiersma 1985), as illustrated in (8). Because of these selectional restrictions, I propose that they do not simply select for a verb phrase or aspectual phrase, so an -E infinitive would not suffice here.

4. One potential problem is the fact that (5b) includes a vP, so it is not clear why accusative case is not licensed. Sleeman (2010) suggests that if an nP is present, genitive case will be assigned to the object and v will be defective.

5. Why determiners are excluded in so many contexts remains an open question for now, to which future research will be directed.

But it remains an open question for now why *gean* and *bliuwe* would require a structure like (5a) or (5b).

- (8) *Wy gean sitten/stean/lizzen.*
 we go sit/stand/lie.INF

Finally, we turn to the perception verb context. This context seems to be the most “verbal” of all -EN infinitive contexts. The verb needs to be able to assign accusative case, as to the object *appels* in (9). Moreover, there is no space for a determiner, adjective or PP.

- (9) *Wy sjogge de bern appels iten.*
 we saw the children apples eat.INF

The construction looks similar to the construction with *litte* “let” in (2), but perception verbs require an -EN infinitive instead of an -E infinitive. Perhaps this is related to the other kinds of complements that perception verbs can take, namely regular DPs:

- (10) *Wy sjogge de bern.*
 we saw the children.

I propose that this is the reason that perception verbs require a DP on top of the infinitive, as in (5a). This DP is the place where the subject *de bern* can be, as in (11), and be exceptionally case marked by the matrix verb. Of course, this is rather speculative at this point, but it could be a possible way to explain why *litte* and perception verbs select different infinitives in Frisian.

- (11) *Wy sjogge [DP de bern [AspectP [VoiceP [vP apples [iten]]]]]]*

To conclude, although the infinitives in German do not occur in exactly the same contexts as the Frisian -EN infinitive, it seems the structures proposed by Alexiadou et al. (2011) can account for its behavior. The biggest difference is that besides this flexible infinitive which can have both the structure in (5a) or (5b), Frisian also has the -E infinitive, which is completely verbal.

3.2 Language change

In the previous section, I have focused on the underlying structure of the two types of infinitives in Frisian, based on their different behavior. However, in Section 2 I showed that the difference is actually disappearing. How can we account for this?

The questionnaire data in Section 2.2.2 shows that the traditional distribution was visible to some extent: the -EN infinitive had higher acceptability ratings in determiner contexts, preposition contexts and *te*-contexts, whereas the -E

infinitive had higher acceptability ratings in modal verb contexts. However, the data also shows that the difference is not very big, and that there are many speakers who find either infinitive acceptable in both contexts. The difference is thus disappearing for some speakers. Two factors might be relevant here. On the one hand, there is influence from Dutch. All speakers of Frisian are Dutch-Frisian bilinguals, so there is a lot of language contact. Dutch only has one type of infinitive, which is spelled with an -N, but often pronounced as the Frisian -E infinitive. The pronunciation of the Dutch infinitive is not constrained syntactically. The Frisian grammar of Frisian speakers might therefore be influenced by Dutch, in assuming that the Frisian -E and -EN suffixes are also only phonological variants of the same syntactic element. This idea is strengthened by the correlations that were found in the 2016 questionnaire data. Table 6 shows the relevant correlations.⁶

Table 6. Correlations acceptability ratings and language use. Significant correlations at 0.05 are starred *, significant correlations at 0.01 are double starred **

	% of Dutch spoken on average day	% of Frisian spoken on average day
<i>Expected uses</i>		
-EN after determiner	$r = -.125^{**}$	$r = .120^{**}$
-EN after preposition	$r = -.133^{**}$	$r = .129^{**}$
-EN after <i>te</i>	$r = -.199^{**}$	$r = .219^{**}$
-E after modal	$r = -.029$	$r = .029$
<i>Unexpected uses</i>		
-E after determiner	$r = .143^{**}$	$r = -.182^{**}$
-E after preposition	$r = .136^{**}$	$r = -.149^{**}$
-E after <i>te</i>	$r = .072$	$r = -.088^*$
-EN after modal	$r = .073$	$r = -.091^*$

These results should be looked at with caution, as all correlations are extremely small. They can therefore never be taken as proof for the fact that much use of the Dutch language *causes* the change. However, it is at least interesting to see that all correlations point in the same direction: for all the “expected uses” (the traditional contexts in which they were used), there is a negative correlation with use of Dutch and a positive correlation with use of Frisian. For all the “unexpected” uses,

6. These correlations are based on means when all participants are considered together. As an anonymous reviewer suggests, they might be caused by L2 speakers of Frisian, since these are often the people who speak more Dutch anyway. However, recalculating the correlations for only L1 speakers shows a similar pattern of correlations, so influence from Dutch is not only limited to L2 speakers.

on the other hand, we see a positive correlation with use of Dutch and a negative correlation with use of Frisian. This means that the more Dutch the participants spoke, the likelier they were to give a high acceptability rating for the infinitives in contexts they traditionally do not appear in. These correlations therefore suggest that Dutch influence is related to the change.

The second factor that might be relevant in facilitating this language change is that, if the proposed structures in (1) and (5) are correct, the structure of the -E infinitive has much overlap with the structure of the -EN infinitive in two respects. Firstly, the nP already is an optional part of the nP structure: in (5b) it is not there, just like in the -E infinitive. Speakers might therefore assume that this is always an optional part of any type of infinitive. Secondly, although the -E infinitive includes a TP whereas the -EN infinitive includes a DP, these two projections have been argued to be very similar (see a.o. Larson 2014).

This “overlap” between the two suffixes is stated quite informally for now, as space limitations do not allow me to develop the analysis in detail here. Future research could be directed to this. A possible tool to develop this further could be *spanning*, which allows one item to spell out multiple heads (see e.g. Svenonius 2012).

4. Conclusion

To summarize, this paper has focused on the difference between the two types of infinitive that Frisian has. To account for their distribution, I have proposed a verbal structure for the -E infinitive (see (1)) and a more flexible structure for the -EN infinitive (see (5)), which always involves a DP, but in which an nP is not always present. Moreover, I argued that the change that is now going on in Frisian, which seems to lead to a loss of the difference between the infinitives, is due to language contact with Dutch and the fact that the structures of the infinitives already showed much overlap.

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Appendix. Questionnaire items

a. Determiner

- (1) It lezen fan boeken fyn ik fantastysk.
The read.INF-EN of books find I fantastic
- (2) Syn fuotten waarden wurch fan it rinne.
His feet were tired of the walk.INF-E

b. Te ('to')

- (3) Hy besiket de bal te fangen.
He tries the ball to catch.INF-EN
- (4) Dy poddestoel is net bedoeld om op te ite.
That mushroom is not intended for up to eat.INF-E

c. Preposition

- (5) Mei skellen lose jo neat op.
With namecalling.INF-EN fix you nothing PRT
- (6) Mei fjochtsje wurdt it net better.
With fight.INF-E gets it not better

d. Modal verb

- (7) Hy kin hiel moai tekenjen.
He can very beautiful draw.INF-EN
- (8) Ik kin oeren oanien lêze.
I can hours long read.INF-E

e. Bare argument

- (9) Kuierjen doch ik alle dagen.
Stroll.INF-EN do I all days
- (10) Kuierje is sûn.
Stroll.INF-E is healthy

f. Bare argument in embedded clause

- (11) Ik tink dat fytsen sûn is.
I think that cycle.INF-EN healthy is
- (12) Ik tink dat er fytse wol aardich fynt.
I think that he cycle.INF-E PRT nice finds

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