Language varieties in the province of Fryslân

Bloemhoff, H.; de Haan, G.J.; Versloot, A.P.

DOI
10.1515/9783110261332.721

Publication date
2013

Document Version
Final published version

Published in
Language and space: an international handbook of linguistic variation. - Vol. 3: Dutch

Citation for published version (APA):
https://doi.org/10.1515/9783110261332.721
1. Introduction

In this chapter we will discuss the language situation in Fryslân, one of the twelve provinces of the Netherlands. We will restrict ourselves to the native vernaculars of the last centuries, and pay attention to the following language varieties: (1) West Frisian (section 2.), the Netherlandic branch of the Frisian language family (the other branches being North Frisian and East Frisian, both spoken in the northwestern part of Germany); West Frisian should not be confused with the Dutch dialect with the same name, spoken in the province of North Holland; (2) Town Frisian (section 3.), which is an umbrella term for varieties that exhibit traces of extensive language contact between Frisian and Dutch, such as Amelânsk, Biltsk, and Midsânsk (section 3.4.6.); (3) the Low Saxon dialect of Kollumerlânsk spoken in the northeast of Fryslân (section 3.4.7.); (4) Stellingwerfs, a Low Saxon dialect spoken in the southeast of Fryslân (section 4.). The geographic distribution of these language varieties is shown on Map 38.1:
IV. Dynamics of contact varieties of Dutch

2. West Frisian

2.1. Language varieties

West Frisian is spoken by about 350,000 people in the Dutch province of Fryslân. The Frisian language shows geographical variation (see Map 38.1). Traditionally, three main dialects are distinguished: Klaaifrysk ‘Clay Frisian’ in the western part of Fryslân, Wâldfrysk ‘Forest Frisian’ in the eastern part, and the dialect spoken in the southwest corner of the province, Südwesthoeks. These dialects are distinguished linguistically by very few properties. In fact, boundaries between them are fuzzy; variation is quite often not absolute but a matter of tendencies, and there is a lot of variation that cuts across presumed dialect boundaries.

In addition to these three main dialects, there are a number of smaller dialects: Skylgersk and Aastersk, which are the dialects of the western and eastern part of the island Skylge (Terschelling), respectively; Skiermünzteagersk, the dialect of the island of Skiermünzeach (Schiermonnikoog), Hylpersk, the dialect of the city of Hylpen (Hindeloopen) and Noardo(east)hoeksk, spoken in the northeastern part of Fryslân.

For an overview of properties of Frisian dialects, we refer to Van der Veen 2001.

As to the linguistic description of Frisian, it is important to note that there is no officially codified standard of spoken Frisian. In contrast with spoken Frisian, written Frisian is codified in the sense that its essential characteristics are laid down in dictionaries, grammatical descriptions and an officially recognized orthography. The properties of this written standard are based on the main dialects Klaaifrysk and Wâldfrysk. The difference between spoken and written Frisian is to a great extent lexical. Written Frisian contains numerous lexical elements that are no longer used in the spoken language. The degree of variation in written Frisian and the considerable lexical distance to the spoken standard makes standard written Frisian less useful as a norm for regulating behavior (see Breuker 1993: 21–71 for a discussion of these issues).

2.2. A language contact perspective on Frisian and Dutch

In the province of Fryslân, bilingualism has taken the shape of a non-personal, societal bilingualism during the past centuries. Roughly, there was a geographical division of labour between Frisian dialects on the countryside and Dutch in the most important cities. After World War II, significant changes occurred in the position of Dutch in Fryslân, which have led to personal bilingualism of nearly all native speakers of Frisian. This type of bilingualism sets a favorable condition for all kinds of interference between Frisian and Dutch, which is exactly what has happened and still happens. The most important factor that determines the relation between Dutch and Frisian is the unbalanced position of Dutch and Frisian in the speech community. For centuries, Frisian has mainly been used as, and considered by the speakers to be, a spoken language, used in informal domains such as home, neighbourhood, and informal contacts at work. The language has a very modest position in education, formal settings at work, religion and as a written language in official institutions (public administration and law). Compared to
Dutch, the use of Frisian is functionally severely limited. Dutch has a strong position in all domains. Even native speakers of Frisian who use the language dominantly, or exclusively, will be exposed to Dutch to some extent in one or all of the informal domains. Frisian bilinguals will use the Dutch language now and then in such situations. There is no longer a functional division of labour between Dutch and Frisian. Dutch is functionally dominant. The relation between the two languages can therefore be characterized as one of *unbalanced bilingualism*. Due to this unbalanced relation, the influence of Dutch on the Frisian language system is strong. The Frisian lexicon and grammatical system have changed and continue to change substantially due to contact with Dutch. (Note that we have argued elsewhere that these grammatical changes do not involve copying parts of the system of grammatical rules of Dutch (see De Haan 1990, De Haan 1992). These changes happen in all grammatical subsystems. Below we will present an overview of some of these changes (see De Haan 1997 for a further overview).

As to the lexicon, Frisian has borrowed words from Dutch on a large scale. This borrowing does not only concern new words (constituting *lexical innovation*), but also replacement of, even frequently used, Frisian words (e.g. `sleutel for kaai"key"), and what is remarkable, replacement of ‘grammatical’ words (`hen for harren ‘their‘; `zich(zelf)’ for `him(sels) ‘himself‘). These last two types, lexical and grammatical replacement, in particular, show that there is a loss of lexical skills in Frisian native speakers.

In the literature on Frisian, a number of cases of grammatical influence of Dutch on Frisian have been discussed. An example in morphology is the change in the system of Frisian diminutive formation. Frisian shows the following diminutive suffixes: `-ke, -tsje, -kje and -je. The last three suffixes are considered to be allomorphs of underlying `-tje. The distribution of these suffixes is determined by the final segment of the noun: `-ke is appended to nouns ending in a (semi)vowel, a labial, a labiodental, /s/ or /r/, and the variants of `-tje appear elsewhere. The change in progress in the diminutivization system is an expansion of the domain of the suffix `-tsje at the expense of `-ke. sigaarsje ‘little cigar’ changes into the variant `sigaartjes. It is plausible that this development is stimulated by Dutch, since `-ke is replaced with `-tsje in a context where Dutch has the similar suffix `-tje. A second example of grammatical influence concerns the order of the constituent parts of verb clusters. The word order of the Frisian verbal cluster is generally the mirror image of that of Dutch; compare Frisian (`dat ik) it famke helpe3 wold3 hawwe2 soe1 with Dutch (`dat ik) het meijse zou, hebben2 willen2 helpen4 ‘that I the girl would have want to-help’. This word order difference is related to other dissimilarities. The order of the verbs in the verbal cluster is fixed in Frisian, whereas Dutch shows a limited number of possibilities for inversion (see also Bennis and Van Oostendorp, ch. 35 in this volume): (a) a verbal cluster consisting of two verbs allows for inversion: compare Dutch (`dat ik) <wou> maaien <wou> with Frisian (`dat ik) <*>meane <woe> ‘that I wanted mow wanted’; (b) a past participle can occupy different positions in the verbal cluster, compare (`dat ik) <gemaaid> zou <gemaaid> willen <gemaaid> hebben <gemaaid> ‘that I <mowed> would <mowed> want <mowed> have <mowed>’). In Frisian, the past participle can only appear immediately to the left of the governing perfective or passive auxiliary: (`dat ik) <meand> hawwe <meand> wolle <*>meand> soe <*>meand>. The example mentioned above, Frisian (`dat ik) it famke helpe3 wold3 hawwe2 soe1 and Dutch (`dat ik) het meijse zou, hebben2 willen3 helpen4 ‘that I the girl would have want to-help’ displays another difference between both languages, i.e. the absence versus pres-
ence of the so-called *Infinitivus-pro-Participio Effect*. In both languages, a perfective auxiliary generally selects a verb with past participle morphology. But if in Dutch this selected verb acts as a (morphological) governor in the verbal cluster, then the expected past participle (*gewild* ‘wanted’ in the example above) is ‘replaced’ with an infinitive (*wollen*).

The order of the verbs in the Frisian cluster is changing under the influence of Dutch, see for example De Haan (1990). A Dutch speaker can say that he *wil doen* ‘will do’ something, or *doen wil* ‘do will’, the speaker of Interference Frisian not only has the possibility to say that *he wat dwaan wol* ‘he what do will’, the standard Frisian order, but also that *er wat wol dwaan* ‘he what will do’, the Dutch-Frisian order. This change of order also gives rise to orders that are neither (standard) Frisian, nor (standard) Dutch: (*dat ik dat*) dwaan hie wollen, Dutch *dat ik dat doen had gewild* ‘that I that do had wanted’. These changes also allow for the introduction of the *Infinitivus-pro-Participio Effect* into Frisian, e.g. *dat er it hie wolleinf dwaan* ‘that he it had wantinf do’.

The context in which these interferences from Dutch take place is the functional dominance of Dutch over Frisian. Other factors that favor these interferences are (1) the very small linguistic distance between both languages (see Sjölin (1993: 70–71)); (2) mixing of Dutch and Frisian during the acquisition process; (3) unfinished acquisition of Frisian due to the weak position of the language in secondary socialization (education and work) (see Sjölin 1976); and (4) lack of (acceptance of) a Frisian standard.

3. **Town Frisian**

3.1. **History**

At several places in the province of Fryslân, vernaculars are spoken that bear witness of language contact between Frisian and Dutch: in several historical Frisian towns (*Town Frisian*), on the Wadden Island (*Amelân*), in some villages on the Wadden Island *Skylge* (*Midslân*) and in the *It Bilt* region (see Map 38.1). Despite some differences among those varieties, they are fairly similar. For native speakers of Dutch without knowledge of Frisian, these dialects are lexically intelligible but they ‘sound Frisian’. These mixed varieties will be referred to as a group as *Town Frisian* (usually referred to in Frisian as ‘Stedsk’), even though the island dialects and Bilsk are not perceived in this way by their own speakers.

In most localities where Town Frisian is spoken, Frisian was the vernacular in the Middle Ages. That implies that some form of language shift has taken place in the past due to language contact with Dutch. Contemporaneous sources from the sixteenth century explicitly mention a language shift in the capital of Leeuwarden (Jönkö 1993: 51, 298 ff.) and there is some second-hand information about the eighteenth century developments on Amelân (Winkler 1874: 484). A rough estimation, based on numbers of inhabitants of Frisian cities and municipalities in the eighteenth century, suggests that at that time roughly 25% of the inhabitants of Fryslân spoke some form of Town Frisian.

In the nineteenth century, Town Frisian was the prestigious spoken language form in the larger Frisian cities even though it differed considerably from written Dutch. In the twentieth century, it gradually became a low-prestige, mainly lower class vernacular that
was used increasingly less widely. Nowadays only 10–15% of the city population has Town Frisian as a mother tongue. In It Bilt (Provincje Fryslân 2008: 10) and especially on the island Amelân (Jansen 2010), the figures are more prosperous.

3.2. Aspects of origin and status: Three hypotheses

As unambiguous sources of Town Frisian from before the late eighteenth century are lacking, there is no direct evidence of the language as it was spoken in the sixteenth century. Theories about the origin of Town Frisian therefore rely on comparison of more recent materials and reconstructions. The study of Town Frisian produced three genesis hypotheses, all reflecting different language contact scenarios (see references and discussion in Van Bree and Versloot 2008: 35–37):

1. Town Frisian is Frisian that was largely re-lexicalized with Dutch words;
2. Town Frisian is the result of incomplete L2—acquisition by Frisian L1—speakers;
3. Town Frisian is mainly the result of the adoption of sixteenth century spoken Dutch, especially from North Holland.

In the first two scenarios, a new language variety emerges from the contact between Frisian and Dutch. In the last one, people adopted an already existing language variety of Dutch. Where Town Frisian differs from both Modern Dutch and Modern Frisian, the differences could be assigned to innovations (as in a creolisation process) in scenario 2, but would reflect older stages of the North Holland dialects in scenario 3.

Studies on the origin of Town Frisian tend to start from the comparison of Modern Dutch and Modern Frisian (e.g. Fokkema 1937). However, in the genesis of Town Frisian several linguistic varieties should be considered. Town Frisian emerged in the sixteenth century among speakers of the Frisian language as it was spoken at that time. This implies first of all that Frisian as it was at that time has to be considered as a source of Frisian substratum features. During its existence, Town Frisian remained in close contact with Frisian, e.g. through Frisian speaking people from the countryside moving to the cities, causing ongoing adstratum phenomena from different stages of Frisian.

In the sixteenth century, there was no fixed Dutch standard language that could be taught to Frisian speakers. Language acquisition will have been largely informal, through oral contact with speakers of the vernacular of Holland (‘Hollandish’), the powerful neighbour of Fryslân in the sixteenth and especially in the seventeenth century, the Dutch ‘Golden Age’. Hollandish itself has a linguistic Frisian substratum from earlier times.

Two potential centres of Hollandish influence can be identified: on the one hand, these are the varieties of North Holland transmitted through ports such as Medemblik and Enkhuizen, which are nearest to Fryslân, and on the other hand this was the vernacular of Amsterdam, the main-port and centre of power, economy and culture since the late sixteenth century. In general, the northern Hollandish dialects show more lexical and structural similarities with Frisian, which cannot all necessarily be deduced from a Frisian substratum (cf. ch. 22 by Van Koppen and Hoekstra, this volume). In the seventeenth century, a written standard of Dutch emerged as a dialectal ‘compromise’ between Flemish, Brabantish and Hollandish. It became more definitively shaped in the eighteenth century (cf. ch. 5 by Marynissen and Janssens, this volume). Through time, the importance of this SD grew.
3.3. Sources

The oldest source on Town Frisian may be the lemmas marked *fris.* in Kiliaan’s *Etymologicum Teutonicae Linguae* (1599; cf. Van Bree and Versloot (2008: 229)). Considering their linguistic form and the supra-regional aims of the dictionary, these ‘frisian’ lemmas may reflect Dutch as it was spoken in Frisian cities at the time. There are some snippets in case files from the seventeenth and eighteenth century from the cities of Leeuwarden and Sneek and in the linguistic studies by Hilarides (c. 1700, cf. Feitsma 1965—66). The first coherent text is from 1768 (Jeltema), which is the first text to underline the specific linguistic character of the Leeuwarden dialect. The dictionary by Wassenbergh (1780—1806; cf. Van Bree and Versloot (2008: 230)) emphasizes the supra-regional relevance of Town Frisian for the rest of Dutch. The Town Frisian of the dictionary by and large matches the later attestations of Town Frisian.

Important information about the earliest stage of the Bilt dialect is provided by Dirck Jansz’ notes (1604—1636, cf. Fokkema in Gerbenzon 1993: 53 ff.), written in what seems to be a mixture of emerging SD of his era and local forms. The oldest source of the Amelân dialect is from 1842 (Oud 1987: VIII).

The late eighteenth and early nineteenth century offer some texts in Town Frisian, sometimes as part of dialogues in Frisian texts. The oldest dialect surveys are from 1879 and 1895, the first sources to show the extent and variety of Town Frisian. Johan Winkler (1867; 1874: 461 ff.) gives extensive texts and descriptions of his Leeuwarden dialect from the second half of the nineteenth century. The dissertation by Fokkema (1937) is the first treatment of Town Frisian grammar. The twentieth century shows more texts and the publication of dictionaries of the Leeuwarden, Bilt and Amelân dialects and an extensive word list of the dialects of most of the other cities (Van den Burg 1991, Buwalda et al 1996, Oud 1987, Duijff 1998).

3.4. General characteristics in a language-contact perspective

This section presents a number of linguistic aspects of Town Frisian from a contact-linguistic perspective. Van Bree and Versloot (2008) explore this issue from the viewpoint of the stability hierarchy proposed by Van Coetsem, further elaborated by Van Bree (see Van Bree and Versloot (2008: 54 ff./235)). In a slightly simplified form, the stability hierarchy ranges from unstable to stable: lexicon — lexical phonology — derivation/composition — inflection — syntax — accent/phonetics. The theory makes the prediction that in a situation of language shift the stable elements will show more remnants from the L1 / substratum language, while the unstable elements will be dominated by L2 / the newly acquired language.

Examples will be presented from the lexicon, the lexical phonology, some aspects of morphology, syntax and phonetics. The discussion is based on the Town Frisian of the capital Leeuwarden. In an additional section, some remarkable deviating features from the peripheral dialects of Amelân, it Bilt and Midslân are discussed. This description follows the outline of Van Bree and Versloot 2008.
3.4.1. Lexicon: Primary/secondary

In the quest for characteristics of the lexicon, a distinction must be made between primary lexicon, roughly covering words for high-frequent, semantically neutral items, and secondary lexicon comprising words referring to local, intimate or connotative concepts. In spontaneous language acquisition, the former kinds of words are easily learned through regular exposure; the latter, however, are easily transferred from the substratum language because of both lack of exposure and limited need, since these concepts are mostly discussed with other locals.

As geographically adjacent West Germanic languages, Dutch and Frisian share large parts of their lexicon; so most lexical items, roughly 90%, do not bear on the stability issue. In those cases where Dutch and Frisian differ, Town Frisian usually sides with Dutch where the primary lexicon is concerned. Frisian lexemes are underlined:

<table>
<thead>
<tr>
<th>Dutch</th>
<th>Town Frisian</th>
<th>Frisian</th>
<th>Dutch</th>
<th>Town Frisian</th>
<th>Frisian</th>
</tr>
</thead>
<tbody>
<tr>
<td>'child'</td>
<td>kind</td>
<td>kyn</td>
<td>bern</td>
<td>'little'</td>
<td>klein</td>
</tr>
<tr>
<td>'pull'</td>
<td>trekken</td>
<td>kyn</td>
<td>trekke (&lt;D.)</td>
<td>'knee'</td>
<td>knie</td>
</tr>
</tbody>
</table>

The secondary vocabulary shows many words of Frisian origin, such as:

<table>
<thead>
<tr>
<th>Dutch</th>
<th>Town Frisian</th>
<th>Frisian</th>
<th>Dutch</th>
<th>Town Frisian</th>
<th>Frisian</th>
</tr>
</thead>
<tbody>
<tr>
<td>'woodlouse'</td>
<td>pissebed</td>
<td>krobbe</td>
<td>smots</td>
<td>'sluggish'</td>
<td>traag</td>
</tr>
<tr>
<td>'apple sauce'</td>
<td>appelmoes</td>
<td>krobbe</td>
<td>smots</td>
<td>'kiss'</td>
<td>zoen</td>
</tr>
</tbody>
</table>

Hilarides (c. 1700) mentions Town Frisian _pat_ instead of _tût_ ‘kiss’, matching early Modern Frisian _pat_. This change illustrates that the Frisian component in modern Town Frisian is not only due to the sixteenth century language shift but results from a continuous process of linguistic exchange through ongoing contact between speakers of Town Frisian and Frisian, bilingualism and the continuous influx of Frisian speakers.

Comparing the inventory of Frisian relics in Town Frisian, North Hollandish and the Groningen dialects – all three non-Frisian idioms with a Frisian substratum – suggests that the number of Frisian substratum words is not significantly higher in Town Frisian. All relic words are predominantly from the secondary vocabulary but the lexemes are only partly shared (Van Bree and Versloot 2008: 82ff.).

3.4.2. Lexical phonology

Town Frisian lexical phonology is Dutch and not Frisian. Where Town Frisian and Dutch differ (or differed in the past), Town Frisian mostly matches North Hollandish. This does not imply, however, that Town Frisian is like North Hollandish in every single instance, neither in sixteenth century features (e.g. Town Frisian has the SD [a:] for
Proto-West Germanic /a:/ (Germ. ə¹) while Hollandish has palatal sounds such as [ɛ], [ɛ] and [ɛ.i], nor in innovations (such as the diphthongisation of Germanic /i:/ and /u:/ which are absent in Town Frisian). Frisian forms are underlined, distinctive Hollandish forms are bold face:

<table>
<thead>
<tr>
<th>Dutch</th>
<th>North Hollandish</th>
<th>Town Frisian</th>
<th>Frisian</th>
<th>Dutch</th>
<th>North Hollandish</th>
<th>Town Frisian</th>
<th>Frisian</th>
</tr>
</thead>
<tbody>
<tr>
<td>'water'</td>
<td>water</td>
<td>water</td>
<td>water</td>
<td>'sheep'</td>
<td>schaap</td>
<td>sleepp</td>
<td>skaap</td>
</tr>
<tr>
<td>'bridge'</td>
<td>brug</td>
<td>breg/brug</td>
<td>brug</td>
<td>'two'</td>
<td>twee</td>
<td>twie</td>
<td>twee</td>
</tr>
<tr>
<td>'play'</td>
<td>spelen</td>
<td>speule</td>
<td>speule</td>
<td>'time'</td>
<td>tijd [ɛ.i]</td>
<td>taid [ai]</td>
<td>tyd [i]</td>
</tr>
</tbody>
</table>

3.4.3. Inflection and derivation

This section presents examples from plural formation, diminutives and verbal inflection. For most words, plural forms are identical in Dutch, Town Frisian and Frisian. This is largely the result of Frisian having adapted Dutch plural formation since the late Middle Ages: generalisation of -en to most nouns and the introduction of -s-plurals. Two specific groups can be mentioned where Town Frisian usually follows Dutch: in the first place, irregular Frisian plural forms such as ko - kij 'cow(s), skiep - skiep 'sheep' do not appear in Town Frisian. Secondly, Dutch has a set of words that take a plural in -eren, such as kind - kinderen 'child - children'. This morpheme is absent in Frisian. Formal Dutch preserves more instances of this plural morpheme than spoken Dutch (as shown by replacement by regular -en as in volken 'peoples' instead of volkeren) and spoken Dutch more than Town Frisian, such as Town Frisian kalven 'calves', Dutch kalveren, Frisian keallen. Town Frisian prefers the variant -ers, which it shares with some Hollandish dialects, while Dutch has a preference for -eren. The older Hollandish form kyeren 'children' is absent in Town Frisian (but also in most of the modern Hollandish dialects). Overall, this aspect shows an ongoing impact of Dutch, where Town Frisian is basically like Dutch, with some traces of colloquial Hollandish and impact from surrounding Frisian.

A similarly dynamic pattern is found in the formation of diminutives. (On diminutives in Dutch, cf. Algemene Nederlandse Spraakkunst (Haeseryn 1997); digital edition on <http://www.let.ru.nl/ans/e-ans/index.html>, section 12.3.1.4.ii). The process in current Town Frisian exactly matches the Frisian pattern, with a phonologically defined alternation of -je, -tsje and -ke. SD forms such as -pje and -etje are missing in Town Frisian (and Frisian):

<table>
<thead>
<tr>
<th>Dutch</th>
<th>Town Frisian</th>
<th>Frisian</th>
<th>Dutch</th>
<th>Town Frisian</th>
<th>Frisian</th>
</tr>
</thead>
<tbody>
<tr>
<td>'tree'</td>
<td>boompje</td>
<td>boomke</td>
<td>'man'</td>
<td>mannetje</td>
<td>mantsje</td>
</tr>
<tr>
<td>'house'</td>
<td>huisje</td>
<td>húské-</td>
<td>'flower'</td>
<td>bloemcpje</td>
<td>bloemké</td>
</tr>
<tr>
<td></td>
<td></td>
<td>húské</td>
<td></td>
<td>bloemetje</td>
<td>blomké</td>
</tr>
</tbody>
</table>
Analysis of historical Frisian texts shows that this pattern was not common in Frisian in the sixteenth century and gradually developed during the seventeenth century. However, seventeenth century Amsterdam can be excluded as a source as the city dialect (already) showed the SD pattern at that time. Archaic northern Hollandish, however, shows a pattern that is nearly identical to the current Town Frisian and Frisian pattern, but developed in a different direction since the nineteenth century. Diminutive formation therefore shows the ongoing flux from western influence – not necessarily SD – on the one hand and the symbiotic relation between Town Frisian and Frisian in the course of time, where it is hard to define which was the giving and which was the receiving party.

The final example comes from verbal endings. In the verbal paradigm, SD has the ending -en (with free variation in pronunciation between [a] and [an]) in the infinitive, plural present and past tense and the past participle of strong verbs. Town Frisian and Frisian have -e in the verbal infinitive (e.g. in combination with auxiliary verbs), the plural present tense, but -en in the plural past tense, past participles and the gerund (nominal infinitive, e.g. following te ‘to’). This is a good example of a parallelism between Town Frisian and Frisian that does not have any counterpart in (early) SD or the seventeenth century Amsterdam dialect. The northern Hollandish dialects show almost the same pattern, except for the fact that the plural of the past tense has -e, instead of -en.

3.4.4. Syntax

The syntax of Town Frisian strongly resembles Frisian. In verbal clusters, both Town Frisian and Frisian have governor-final constructions, such as:

<table>
<thead>
<tr>
<th>Dutch</th>
<th>Town Frisian</th>
<th>Frisian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ik hoop dat ‘ie het zal doen;</td>
<td>Ik hoop dat-y ut doên sal</td>
<td>Ik hoopje dat er it dwaan sil</td>
</tr>
<tr>
<td>I hope that he it shall do/do shall</td>
<td>‘I hope that he will do it’</td>
<td></td>
</tr>
</tbody>
</table>

In verbal clusters with perfect tense auxiliaries, Frisian and Town Frisian do not show the Infinitivus-pro-Participio effect in combination with governor-final word order. SD has governor-first and the Infinitivus-pro-Participio effect, using a concatenation of infinitives:

<table>
<thead>
<tr>
<th>Dutch</th>
<th>Town Frisian</th>
<th>Frisian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ik heb het horen\textsubscript{inf} zeggen\textsubscript{inf}</td>
<td>Ik hew ut seggen\textsubscript{ger} hoard\textsubscript{past part.}</td>
<td>Ik haw it sizen\textsubscript{ger} heard\textsubscript{past part.}</td>
</tr>
<tr>
<td>I have it hear say / saying heard</td>
<td>‘I heard it being said’</td>
<td></td>
</tr>
</tbody>
</table>

Just as in the verbal endings, Town Frisian and Frisian match northern Hollandish, but not SD or the seventeenth century Amsterdam vernacular (Versloot et al. 2011; forthcoming). The pre-1770 fragments that exist confirm the continuity of these constructions.
3.4.5. Phonetics

The phonetics of present day Town Frisian are completely Frisian, with e.g. the lack of syllable initial [z] and [v] (initial fricatives are always [s] and [f]), the realisation of <g> as [g] (instead of [ɣ]) in word initial position, syllabic [ŋ] and [m] in unstressed syllables (e.g. plural endings -en), nasalised vowels in the sequence /ɛn/ as in ons ‘us’, gans ‘goose’, the deletion of /l/ – albeit with a light tongue movement reflex – before alveolar consonants, e.g. [svat] ‘black’ (Dutch zwart; Van Bezooijen 2006: 165–166). Some of these features, such as the preference for voiceless fricatives in word initial position, nasalised vowels in /ɛn/ are also common in various Hollandish dialects, such as present-day Amsterdam speech. The realisation of <g> as [g] was less widespread in the nineteenth century, both in Town Frisian and Frisian (cf. indications in the dialect surveys by the Aardrijkskundig Genootschap 1879 and 1895), but the situation before that time is unclear. The deletion of [z] in unstressed -en and hence syllabic realisation of the nasal is a relatively recent phenomenon in Frisian and probably also in Town Frisian (since the nineteenth century; cf. Hoekstra 2009 for a different opinion). The deletion of /l/ is clearly attested in Frisian since the eighteenth century. Hence, Town Frisian phonetics shows the close relationship between Frisian and Town Frisian in a dynamic way. The pronunciation of Town Frisian keeps pace – in general – with the pronunciation of Frisian: twenty-first-century Town Frisian sounds like modern Frisian, and sixteenth-century Town Frisian probably sounded like sixteenth-century Frisian.

3.4.6. Specific aspects of the dialects of Amelân, It Bilt and Midsla

Note that these dialects have hardly been studied systematically. For Amelân, see Jansen 2010 (mainly sociolinguistic), for It Bilt see Koldijk (2005), to be used with caution. Historical sources of these dialects are rare; cf. section 3.3.; more comparisons are presented in Jonkman and Versloot 2008: 71–77.) The region It Bilt was reclaimed from the sea in the early sixteenth century and occupied by settlers from both northern and southern Holland and Fryslân. The first landowners came from the region of Dordrecht in southern Holland. The Bilt dialect shows some southern traces but in general it is as northern as the other Town Frisian dialects in its syntax and phonetics. This is also indicated by a lexical item such as toan [to.an] ‘toe’, which, outside of Town Frisian, only occurs in the northern Hollandish dialects. Traces of the southern speech are found in forms such as been [be:n] ‘leg’, blaik [blaik] ‘pale’ for North Hollandish bien [bin], Town Frisian (archaic) bien [bi.an], bleek [ble:k]. The diminutive endings in the Bilt dialect mostly resemble southern Hollandish and SD patterns, but have some northern features as well:

<table>
<thead>
<tr>
<th>Dutch</th>
<th>Town Frisian</th>
<th>Bilsk</th>
<th>Dutch</th>
<th>Town Frisian</th>
<th>Bilsk</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘tree’</td>
<td>boompte</td>
<td>boomke</td>
<td>boompt/boompte</td>
<td>‘man’</td>
<td>mannetje</td>
</tr>
<tr>
<td>‘wagon’</td>
<td>karretje</td>
<td>karke</td>
<td>karrechy</td>
<td>‘flower’</td>
<td>bloempte. bloemetje</td>
</tr>
</tbody>
</table>
38. Language varieties in the province of Fryslân

Of southern origin are the diminutive endings -py and especially -echy, which have parallels in the modern dialects of southern Holland, and the lack of -ke. The form mantsy without intermediate schwa (cf. the Dutch form) is very much northern.

In its phonetics, the Bilt dialect is clearly distinctive in its realisation of Dutch <ei> as [i] or even [yi] and of word-final -je as [i], as in the diminutive of ‘girl’: Dutch meisje, Bilt maisy [mu isi]. This is paralleled in the surrounding Frisian dialects, where the verb meitsje ‘to make’ is realised as [mu isi]. The pronunciation of <ei> has a parallel in North Hollandish, but it is probably not older than the nineteenth century and nothing is known about any specific relationship between the two regions, nor about the active or passive position of the Bilt dialect within the Frisian linguistic constellation.

As to the dialect of the island Amelân, there may be no Town Frisian dialect with so much Frisian substratum in the lexis (oral communication with Siebren Dyk (Fryske Akademy, editor of the second edition of Oud’s dictionary of the Amelân dialect). Just as in the Bilt dialect, the diminutives deviate most clearly from the rest of the Town Frisian dialects. The dialects of the western villages, which went through the language shift one or two centuries earlier than the eastern villages, show a rather archaic system with a lot of -(t)ke forms, even in instances where Frisian and Town Frisian have -tsje, such as balke ‘ball (dim.)’, stientke ‘stone (dim.)’. Frisian/Town Frisian baltsje, stientsje, eastern Amelân dialects baltje, stientje. In the eastern dialect -pie is also found, which is typical for southern Holland, including Amsterdam: boompje, western Amel./Town Frisian boomke ‘tree (dim.)’. The eastern dialect does not always have the form with schwa in pantje, SD pannetje ‘saucepan (dim.)’, mantje, SD mannetje ‘man (dim.)’, but karretje, SD idem ‘wagon (dim.)’.

With respect to the distribution of the -en/-e endings, the Amelân dialect matches the situation in northern Hollandish, since it has no -n in the plural of the past tense.

Midsân is the former capital of the island of Skylge. Its inhabitants and those of adjacent villages adopted a form of Dutch, while in the villages on the western and eastern tips of the island, Frisian remained in use. The most striking feature is the fact that Proto-West Germanic /a:/ (Germ. e₁) is regularly represented by [i:] and not [a:]. This realisation matches the situation in the northernmost parts of the province of North Holland. Skylge was part of the province of North Holland from the late Middle Ages until 1942, when it (again) became part of Fryslân.

Another feature worth noting is the phonetic realisation of word final <d> as [d], especially after long vowels, such as in dreêel [dr:id] ‘thread’, Town Frisian draad [drat]. Frisian tried [tr:i:t] (with Germ. e₁). This voiced realisation can also be found among older speakers of the Amelân dialect; see Goeman, Taeldeman and Van Reenen 1980–1995.

3.4.7. Kollumerlânsk

The dialect of the town of Kollum belongs to the Town Frisian dialects, the dialect of the villages to the east, Boerum, Kollumerpomp, Muntsjesyl, Warfstermûne, and Gerrskleaster are different and bear some essentially Low Saxon traces. Consider the following examples, contrasting the dialects of Kollum and Boerum as recorded in the dialect survey of the Geographical Society (Aardrijkskundig Genootschap) from 1895.
IV. Dynamics of contact varieties of Dutch

<table>
<thead>
<tr>
<th>Kollum</th>
<th>Boerum</th>
<th>Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>phonology</td>
<td>oud</td>
<td>old</td>
</tr>
<tr>
<td>hewwe</td>
<td>hebb’n</td>
<td>‘to have’; the transition /b/ &gt; /v/ is common for Town Frisian, parts of West Frisian and northern Hollandish.</td>
</tr>
<tr>
<td>gaat</td>
<td>geit</td>
<td>‘(he) goes’; the infinitive is gaan, the vocalism /eːi/ is an eastern feature.</td>
</tr>
<tr>
<td>groen</td>
<td>groen</td>
<td>‘green’; the lack of i-mutation (e.g. further east []) is a western feature, also in Kollumerlânsk.</td>
</tr>
<tr>
<td>morphology</td>
<td>kienders</td>
<td>kiender</td>
</tr>
<tr>
<td>roepe</td>
<td>roep’m</td>
<td>‘to call’; Kollum has both a verbal and a nominal infinitive (gerund), just like Frisian and the rest of Town Frisian. Kollumerlânsk has only one, just like Dutch and Low Saxon.</td>
</tr>
<tr>
<td>lexicon</td>
<td>klein</td>
<td>lutje</td>
</tr>
<tr>
<td>heit/vader</td>
<td>vaje</td>
<td>‘father’; Kollum has a Frisian and a Dutch lexeme, Boerum has a local development of older vader.</td>
</tr>
</tbody>
</table>

3.4.8. Conclusions about Town Frisian from a language contact perspective

Modern Town Frisian can be understood as a result of Frisian speakers acquiring Dutch as their new language. The colloquial Dutch of North Holland constituted the main source, but definitely not the only one. The emerging standard language also formed an orientation point and continues to do so. The language shift was most advanced in the unstable parts of the language, such as primary lexicon and lexical phonology while stable elements such as prosody, secondary lexicon and syntax by and large matched the Frisian template of the speakers’ first language. Under this analysis, the origin of Town Frisian fits in with scenario 3, with some indications of scenario 2 as well (cf. section 3.2.).

Still, this contact situation did not create a creolised Frisian-Dutch mixed language, which would have been the result of exclusive operation of scenario 2. Most of the stable elements that were rooted in the Frisian substratum paralleled these parts of the grammar of the northern varieties of Hollandish. Therefore sixteenth century Town Frisian was a variety in the Hollandish linguistic continuum, strongly resembling the varieties in the northern part of Holland and not a new variety outside this continuum, foreign both to speakers of Dutch and Frisian. Of course, the variety will have been identifiable as ‘Frisian’ just like the varieties of Amsterdam, Enkhuizen or The Hague were distinguishable for contemporaneous speakers in the sixteenth and seventeenth century.

Dutch, Hollandish, Town Frisian and Frisian entered some Sprachbund-like symbiosis where innovations spread through the continuum, often without an identifiable origin in one of the languages involved. In the course of the seventeenth and eighteenth century, Hollandish became a regional vernacular and Town Frisian was placed in a bipolar field between an increasing impact of SD and continuous contact with Frisian through social interaction and migration towards the cities. This last phenomenon caused new individual instances of language shift from Frisian to Town Frisian, producing new or enforcing
existing substratum features in Town Frisian as a result of language learning. This led to a gradual elimination of typically Hollandish features and a redefinition of Town Frisian as an asymmetric compromise between contemporaneous Dutch and Frisian, more and more resembling a scenario 1 contact language.

4. Stellingwerfs

4.1. Language area and survey of the literature

Stellingwerfs is the Low Saxon language of the municipalities of East and West Stellingwerf. The related varieties of the municipality of Steenwijkerland in Overijssel, the northern part of the municipality of Westerveld and the village of Smilde in Drenthe are also classified as Stellingwerfs (following Daan and Blok 1969). The main difference from other Low Saxon varieties is the vowel /æː/, which stems from earlier /æ:/, as in waeter ‘water’, laete ‘late’. This /æː/ came about through raising and fronting of an /a:/ from short /a/ which was lengthened in open syllables, or of an /aː/ in relatively late borrowings. The dialect of Vollenhove and surroundings in Steenwijkerland is, contra Daan and Blok (1969), a Salland dialect. It does not have the characteristic /ɛ/ and shows more signs of Westphalian breaking (Bloemhoff 2002, 2008a). In neighbouring Blokzijl, a non-Stellingwerf variety with /ɛː/ instead of /æː/ is spoken. In Blankenham and Kuijre, also located on the old Zuiderzee coast, /æː/ takes the place of /ɛː/, but with respect to vocabulary and other aspects these varieties are quite similar to Stellingwerfs, with which they are therefore usually grouped together. They also share features with the Westhoek dialect (see also section 4.3.), which is the special Stellingwerf dialect of four villages near the mouths of the rivers Lende and Kuunder or Tsjonger (these are the Stellingwerf and Frisian names, respectively; Tsjonger shows the characteristic Frisian /tsj/ < /k/). This river is traditionally regarded as the boundary between the Stellingwerf and Frisian language areas (see e.g. Hof 1933), although Stellingwerf dialects are, or were, also spoken north and west of the river (Boelens 1956, Bloemhoff 2002, Jonkman and Versloot 2008). Frisian is traditionally spoken in Haulerwijk and Waskemeer in East Stellingwerf.

Here we focus on Stellingwerf dialects in Fryslân. Sassen (1953) paid ample attention to phonological structure and vocabulary. Bloemhoff (1977) and (1980) are relatively early generative monographs in the fields of syntax and (morpho)phonology, respectively. Bloemhoff (1991) investigates the descriptive and explanatory merits of natural generative phonology on the basis of (morpho)phonological phenomena in the varieties of some forty villages. Also important are the description of the vocabulary — including fixed collocations — in the Stellingwarfs Woordenboek (Bloemhoff 1994–2004), the presentation of insights into the interaction of phonology and syntax in Bloemhoff (1994) and the summarizing description of grammatical structure in Bloemhoff (2008b). Boelens (1956) contains the first detailed linguistic survey. A fairly recent survey of use and command of Stellingwerfs in East and West Stellingwerf and Steenwijkerland was part of the so-called Taaltelling Nedersaksisch (Linguistic Survey Low Saxon; cf. Bloemhoff 2006).
4.2. Linguistic structure: Phonological and syntactic patterns

The Stellingwerf dialects show the same vowels as the Salland dialect of Ommen (compare Table 24.4 in chapter 24 in this volume), apart from /œ:/, which occurs in some eastern Stellingwerf varieties. The Ommen dialect has short vowels in e.g. /εtn/ 'to eat' and /hεpm/ 'to hope' as a continuation of Westphalian breaking. These words contain /ɛ:/ and /o:/, respectively, in Stellingwerf through lengthening and raising (Bloemhoff 2008a, 2009). Stellingwerfs shows few traces of Westphalian breaking. It is found in e.g. /brεntεl/ 'nettle' and /stεn:/ 'to groan', both with non-lengthened /ɛ/, and, as a result of lengthening, as /lɛ:/ in /mεl/ 'flour, meal' (from /mæ:l/, which succeeded /mjæl/ produced after Westphalian breaking).

The differences with Frisian are much larger than those between Stellingwerfs and the other Low Saxon varieties. Only a few can be mentioned here. Proto-Germanic ɛ¹ ultimately became /ɛ:/ in Stellingwerfs and the Salland and Drenthe dialects, but in Frisian it developed into an /iː/ sound. Unlike Frisian, Stellingwerfs does not have diphthongs with rising prominence, but it does have falling ones, both of the centralizing (cf. Bloemhoff 1991: 23) and the non-centralizing type: /yi, yi, ei, ei, ei, oi, oi, i, i, i, a, a, a, i, i, u, ou, ou, aːl/. The consonants correspond closely to those in Dutch. But unlike Dutch, the Stellingwerfs nasals, and /l/ and /r/ (which is nearly always apical), may form the syllabic nucleus of a weak syllable that follows a stressed one, cf. /ˈbytə/ ‘outside’. In /ˈloːpm/ ‘to walk’ and /ˈworkən/ ‘to work’ /n/ undergoes progressive place assimilation too. In the case of non-syllabic nasals, assimilation is regressive, cf. /ˈmpaːris/ ‘in Paris’, /ˈŋkəndə/ ‘in Canada’. Progressive assimilation is not cancelled by regressive assimilation, cf. /pɑkŋpɑːn/ ‘get a pan’. Schwa usually remains the nucleus in a second weak syllable, cf. /ˈbawɔːpmən/ ‘to arm’.

The coronals /t d s z n/ have slightly retroflex variants when they are preceded by an /r/ (or once were so) and also when preceded by a long vowel with a (light) schwa, cf. /boːːt/ ‘boat’ (for details on /t/ and subtypes, see Bloemhoff [1991: 23–24]). /ɡ/ only occurs through assimilation of /x/, cf. /məydat/ ‘is that allowed’, or as intervocalic (free) variant of /ɡl/ in inlaut (onset), cf. /lɛɡəl, lɛɣəl/ ‘(I) lay’; likewise between vowel and liquid, cf. /mɛːɣl, mɛːɣl/ ‘thin, lean’. In inlaut, /ɡ/ also occurs before /ɡ/ and has no fricative variant in this position, cf. /sɛɡn/ ‘to say’ /ɡ/ also occurs in inlaut, cf. /ɡut/ ‘good’, but this is found only in East Stellingwerf and a limited number of villages north of the river Lende in West Stellingwerf. /h/ only occurs at the beginning of a syllable. Only in Blesdijkje and Scherpenzeel it is deleted by some speakers, as in Steenwijkerland.

The order in verb clusters is mainly the same as in Frisian and neighbouring Low Saxon, cf. the construction … omdat hij/’j verhuizen kunnen zol as opposed to the reverse order in Dutch verbal clusters, cf. … omdat hij zou kunnen verhuizen ‘because he could move house’. In the case of verba sentiendi, this order is also possible in Stellingwerfs, as in the Drenthe dialect of Ruinen and surroundings, cf. Ik heb heur wel heur zingen /ˈiːhər heur heur zingen/ ‘I have heard her sing’, while Ik heb heur wel zingen heurd is also grammatical. None of these V-clusters display the Infinitivus-pro-Participio Effect. This even applies to clusters of three or more verbs, like in Frisian but unlike in Dutch, cf. e.g. the Stellingwerf phrases Ik had d’r henne gaon kund and … omda’k d’r henne gaon kund had with Dutch Ik had er heen kunnen gaan, … omdat ik er heen had kunnen gaan (‘I could have gone there, … because I could have gone there’). Like in Frisian, we find constructions with double participles, cf. Ik zol dat maegien wel zingen heurd hebben wild, ‘I would have liked
to have heard that girl sing’. The use of infinitive forms *willen* and *heuren* is impossible in such clusters (Bloemhoff 1979, Zwart 1995).

Verbs preceded by *te* are positioned to the right of the finite verb, cf. … *omdat hi’j dat niet hoeft te doen* ‘… because he doesn’t have to do that’. If *te* is absent, the order is different from Dutch, cf. … *omdat hi’j dat niet doen hoeft*, not *… hoeft doen*. This second possibility does not exist in the case of … *omdat hi’j naost mi’j zeten het te lezen* ‘because he was sitting reading next to me’. But it is possible to say *Naodat we henne te kieken west hadden* ‘after we went there to look’.

The subordinate clause has SOV order as well as main clause order SVO, i.e. in certain types. This is particularly the case when clauses start with the conjunction *dat* ‘that’. Cf. for example *Et greep heur slim an, dat ze begon te goelen* ‘it moved her deeply, so that she started to cry’ (Bloemhoff 2003). The ‘Frisian’ *imperativus pro infinitivo* also occurs, alongside the infinitive construction, cf. *Ie kun mar beter naor de zoolder gaon en vang* (imperative) *die moes* ‘you’d better go to the attic to catch that mouse’. Many examples are presented in Bloemhoff (1994–2004), under the headword *en*.

### 4.3. Geographical differences

Especially north of the river Lende, the diphthongs /iːl/ and /viːl/ have widened to /ɛiːl/ and /œiːl/ in West Stellingwerf, cf. e.g. /hœiːl/ ‘new’, /bœjæl/ ‘rain shower’ with /niːl/ and /briejæl/ elsewhere. Diphthongs due to cliticisation, e.g. /kviːl/ from /kyniːl/ ‘can you’, /bniːl/ from /bniːl/ ‘are you’ are not widened. (This is a reason to regard them not as lexical but as derived [Bloemhoff 1991: 139–144]). In Nijeholtpa (partly), Noordwolde and East Stellingwerf /iːr/ occurs before tautosyllabic /r/, whereas elsewhere /ɛːr/ is found, but Westhoek has /aːr/. More characteristics of the Westhoek variety are found in Bloemhoff (2005).

Some phonological peculiarities may but need not have a Frisian origin, such as the Ingvaeonism of *n*-deletion in words like /ɛːr/, /ɛːr/ ‘other’, alongside Frisian *oar*. There are a number of probably rather recent borrowings from Frisian, such as *jister* ‘enclosed milking space in a pasture’ (Sassen 1953). Conversely, north of the river Tsjonger or Kuunder, Frisian has the loan translation *wiːzebeam* from Stellingwerf /wiːzəboːm/, /wiːzəboːm/ ‘hay-pole’ (Hoekema 1979). There are other examples as well. Such words may have been adopted from earlier local Stellingwerf varieties (see also section 4.1.).

### 4.4. Position, use and command; influence of Dutch

The ‘Stellingwarver Schrieversronte’ (lit. Stellingwerf Writers’ Circle, the language centre of the Stellingwerf region) in Oldeberkoop develops linguistic aids and course material, publishes four to eight books annually and a bimonthly periodical, and organizes many activities. Every week Stellingwerf texts appear in regional newspapers. Some 25 writers are active.

Bloemhoff (2006) shows that in West Stellingwerf 64.6% of the people are able to speak the regional language, and 53.2% still use the language at home. In East Stellingwerf these figures are 47.5 and 29.5%, respectively. Use and command are declining
IV. Dynamics of contact varieties of Dutch among younger generations. Lexicon, phonology and grammar of the dialects are changing too. For instance, the monophthongs /iː/, /oː/ and /ɛː/ are often replaced among the younger speakers by slightly diphthongal vowels like in Dutch, initial /g/ is disappearing and the rigid order of final verb clusters is relaxed by incorporating aspects of the order of Dutch clusters. Importantly, orders which do not belong to (standard) Dutch nor to traditional Stellingwerfs have also been observed. On the other hand, many speakers consciously try to use Stellingwerfs in a correct way. They are guided by the examples of the written form in newspapers, the work of the author Johan Veenstra, the periodical De Ovend and the four-volume Stellingwarfs Woordeboek (Bloemhoff 1994–2004). The spelling established in 1974 is regarded as normative. Variants resembling Dutch are sometimes avoided.

5. Atlases and grammars

ANS · FAND

6. References

Bloemhoff, Henk

Bloemhoff, Henk

Bloemhoff, Henk

Bloemhoff, Henk

Bloemhoff, Henk

Bloemhoff, Henk

Bloemhoff, Henk

Bloemhoff, Henk

Bloemhoff, Henk

Bloemhoff, Henk
Bloomhoff, Henk

Bloomhoff, Henk

Bloomhoff, Henk

Boelens, Krine

Breuker, Pieter

Buwalda, Hotze S., (†), Sytse H. Buwalda and A. C. B. van der Burg

Daan, Jo and Dirk P. Blok

De Haan, German J.

De Haan, German J.

De Haan, German J.
1997 Contact-induced changes in Modern West Frisian. Us Wurk 46: 61–89. (Dedicated to Bo Sjölin).

Duijff, Pieter

Feitsma, Anthonia, R. Ferwerda et al.

Fokkema, Klaas
1937 Het Stadsfries; een bijdrage tot de geschiedenis en de grammaatika van het dialect van Leeuwarden. Assen: Van Gorcum.

Gerbenzon, Pieter (ed.)

Hjaltatsoni, J[ørgen] Hj[ludde]

Hoekema, Teake

Hoekstra, Jarich

Hof, Jan J.
Jansen, Mathilde M.  

Jeltema, Anne  

Jonkman, Reitze  

Jonkman, Reitze J. and Arjen P. Versloot  

Koldijk, Jan D.  

Oud, Anton G.  

Provinsje Fryslân  

Sassen, Albert  

Sjölin, Bo  

Sjölin, Bo  

Van Bezooijen, Renée  

Van Bree, Cor and Arjen P. Versloot  

Van der Burg, Anne C. B.  

Van der Veen, Klaas F.  

Versloot, Arjen et al.  

Winkler, Johan  

Winkler, Johan  

Zwart, Jan-Wouter  

*Henk Bloemhoff, Oosterwolde (The Netherlands)*  
*Germen J. de Haan, Hilversum (The Netherlands)*  
*Arjen P. Versloot, Leeuwarden (The Netherlands)*