

# *Frisian sociological language survey goes linguistic: Introduction to a new research component*

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## **1. Introduction**

In the course of 2015, a wide sociological language survey has been conducted in Fryslân. Unlike the previous sociological surveys held in this northern province of the Netherlands, the current survey includes a linguistic enquiry with the aim to shed more light on language use and language variation in Fryslân. This broadening of the research focus results from the combination of two projects into one extensive study: the sociological language survey and a (socio)linguistic PhD project.

The language situation in Fryslân has been the object of language sociological research for a long time. Fryslân is a bilingual province with both Dutch and Frisian as official languages. However, Dutch is dominant to Frisian in nearly all life domains and especially in public ones. As not every inhabitant of Fryslân is a (native) speaker of Frisian and almost everyone living in this province is a (native) speaker of Dutch, different language backgrounds as well as language attitudes shape Fryslân's language landscape. While virtually the whole Frisian population can understand, speak, read and write Dutch fluently, the average proficiency in Frisian is lower, even if Frisian is one's mother tongue. Mother tongue speakers of Frisian who are clearly dominant in Frisian and with a more limited proficiency in Dutch are nowadays presumably only found among people of the older generations. According to the most recent research conducted by the provincial government (*De Fryske taalatlas 2011*), a so called quick scan, more than 80% of the Frisian population can understand Frisian well, but only 2/3 understand it very well. While 2/3 of the inhabitants of Fryslân can speak Frisian well, less than half speak it fluently. For the two other language skills, the results are even more striking: ca. 18% can read Frisian very well and less than 5% can write it very well.

Besides the contrast in language proficiency, there is another big difference between Frisian and Dutch. Even though Dutch has many regional dialects and accents, almost all Dutch speakers can use the standard language in everyday life. For Frisian, this is not the case. Standard Frisian is almost exclusively used in writing, while spoken Frisian is a collec-

tion of dialects and is strongly influenced by Dutch (De Haan 1997: 64). In general, there are three main Frisian dialects: *Klaaifrysk* ‘Clay Frisian’, spoken in the western and northern part of Fryslân, *Wâldfrysk* ‘Wood Frisian’, a variety spoken in the eastern region and *Súdwesthoeksk* ‘South-Western’, spoken in the South West of the province (see Figure 1). Other than the name *Súdwesthoeksk*, referring to a geographical region in Fryslân (South West), *Klaaifrysk* points at the type of soil in the area where it is spoken (clay) and *Wâldfrysk* refers to a wooded area with sandy soils. The borders between these dialects are based on a number of isoglosses, but the transitions are gradual. These differences give rise to interesting linguistic variation, especially in combination with an external factor that affects the language use: the dominant Dutch language. Although there is quite a lot of information available on the Frisian dialects (e.g. Hof 1933; Van der Veen 1981, 1986, 1994; Heeringa 2005) and there is also literature referring to the influence of Dutch (e.g. Sjölin 1976; Breuker et al. 1984; De Haan 1995, 1997, 1998), the actual linguistic situation in Fryslân is not well known and its description is often of an anecdotic nature.

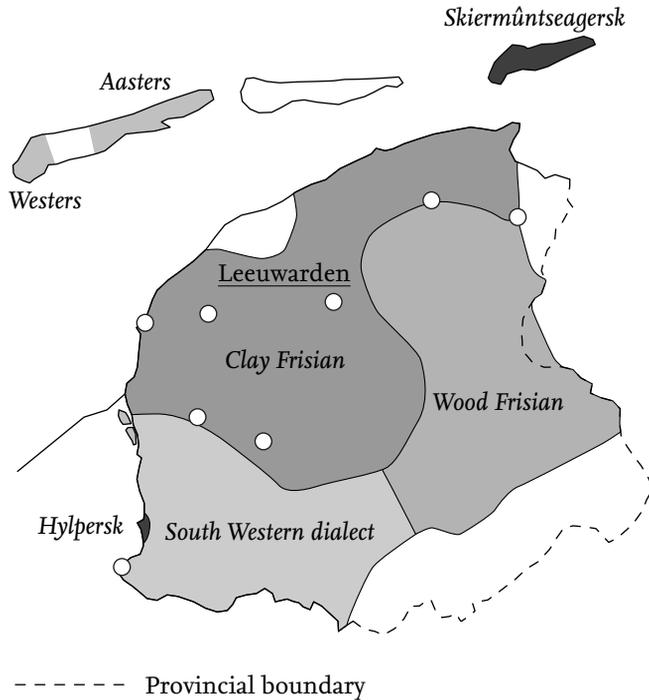


Figure 1: Frisian dialect map. Copyright: A.P. Versloot

The current Frisian language survey focuses on Fryslân and its inhabitants, especially on their (language) background, language use and proficiency, but also on the variation in spoken Frisian. In this way, both the sociological and linguistic fields of interest have been included. The new research consists of two parts: an online questionnaire, including a Frisian online language test, and in-depth interviews. In this article, the online language test will be presented, preceded by a short introduction of the new sociological language survey in Fryslân and the PhD project *Language preservation and language loss in Frisian: A sociolinguistic profile*.

## 2. Sociological language survey

The Fryske Akademy has a long history of language sociological research by conducting face-to-face interviews with inhabitants of Fryslân. Three extended sociological language surveys have been carried out so far. The first survey focused particularly on the reading skills and habits of the Frisians (Pietersen 1967). The second sociological survey was more extensive (Gorter et al. 1984) and included following sections: social and demographic characteristics, language background, language behavior, language attitude, language proficiency. The same sections could also be found 11 years later, in the most recent sociological survey (Gorter & Jonkman 1995). The latter met some criticism, particularly related to language proficiency (see De Haan 2010). The participants self-reported proficiency in Frisian by judging their understanding, speaking, reading and writing skills. As there hasn't been any test which would verify the reliability of this evaluation or could provide any objective bench-marking, the test results only presented a self-reported language proficiency that possibly does not match the factual competence. It has previously been shown that people tend to overestimate their language skills (see Janssen-van Dieten 1992, 1993).

In the trend of the previous language sociological surveys, a new research is conducted in 2015. However, the new survey follows a different path. The first difference is the research method. In order to recruit more participants, the new survey is conducted mainly online, followed by in-depth interviews at a later time. Most of the research questions remain the same to enable a direct result comparison, but are formulated differently or merged together in order to suit an online examination. Some previous questions have been left out and new ones added to address the current situation, which has slightly changed in comparison with twenty years ago. For instance, the explosive growth of the Internet, and particularly the social media, has literally changed the life of many people as they communicate with their friends and make acquaintances online.

Another difference with the previous projects is extending the research field by adding a new component: a linguistic enquiry. The latter is part of a PhD project that has been linked to the new language survey in order to enrich the original sociological research with the information on the factual language use of the participants, besides their self-reported language proficiency. However, people's language level is not tested directly. The aim of the linguistic research is to give more information about the Frisian non-standardized, spoken language. Proficiency tests based on the knowledge of Standard Frisian would not indicate one's language proficiency properly as the Frisian standard is almost only limited to written language. This means that there is no language model that would illustrate the average proficiency of spoken Frisian.

### 3. Extension of the scope

The linguistic enquiry included in the new sociological language survey is part of the PhD project *Language preservation and language loss in Frisian: A sociolinguistic profile*. This project has been linked to the sociological language survey in order to examine the relationship between one's sociological and linguistic characteristics. Sociological, geographical and demographical variation in the Frisian society along with people's language background, proficiency and attitude are all factors that may affect one's language use. As the sociological and the linguistic research use the same participants, a direct comparison of the test results will be possible, allowing us to investigate whether and how these sociological aspects relate to spoken Frisian and its variation.

The **linguistic** part of the project is most extended and will provide information on language variation in spoken Frisian and its relation to the Frisian standard. Unlike the quite puristic standard language, spoken Frisian is characterized by rich dialect variation and is strongly influenced by Dutch, meaning that there are a lot of lexical and grammatical interferences. Therefore, spoken Frisian is often considered to be 'min Frysk' (bad Frisian; Sjölin 1976: 13). Furthermore, spoken Frisian undergoes changes that are not directly related to contact with Dutch. These changes will also be investigated in the linguistic part of the project, beside the dialect research and the examination of Dutch interferences (see also the description of "Frisian phenomena" in Section 4.2.2., pp. 248-249).

The linguistic research involves two stages: an online language test and in-depth interviews. Both stages are linked to the sociological language survey, meaning that the research participants are requested to answer both sociological and linguistic questions. For the online test, 30.000 inhabitants of Fryslân, spread over the whole province, have been addressed.

They received a letter with a login code, which they can use to complete an online questionnaire. The selection for the in-depth interviews will comprise a selected group of 250 participants who fully answered the questionnaire and agreed to participate in further research.

The aim of the **sociolinguistic part** of the project is to examine the relationships between different sociological factors (like age, education, language background or language attitude) and language use in Fryslân. Finally, in the **sociological part** of the research, the results of the previous sociological language surveys will be compared with the outcomes of the current investigation.

#### 4. Online language test

The main goal of the online language test is to give an impression of the variety in the language use of the speakers of Frisian. As spoken Frisian is not standardized, this is not a normative language test that would test one's proficiency of standard Frisian. Much attention is paid to dialect variation and language contact with Dutch, as these two factors are known to characterize the spoken language.

##### 4.1. Type and number of questions

Similarly to the sociological questionnaire, the online language test uses a multiple-choice item format, which is reader-friendly and supports easy processing, analysis and comparison of the results. Depending on the type of questions, one or more answers can be selected. The test items are divided into four questionnaires containing approximately 30 various questions about one's language use and preference. Each questionnaire consists of a variant A and B, which results in eight different test versions (1A/B – 4 A/B). Variants A and B are in principle identical, the only difference being an opposite formulation (positively or negatively, see pp. 248). The participants are randomly assigned one of the eight test versions, provided that they have completed the sociological questionnaire and indicated that they can speak Frisian. The estimated completion time for the test was 10-15 minutes and the total time needed to fill out both questionnaires approximately 30 minutes. To make them easier to complete, test participants are able to save their progress and start again at a later time from where they stopped. Additionally, three iPads will be raffled off to test participants who completed the online research.

In order to increase the chance that one would actually choose the answers that correspond with their own language use, an extensive instruction has been provided to emphatically inform the participants that the

test is about their personal language use and preferences and not about their language proficiency. However, there is still a risk that the participants tend to choose the answers that are closer to standard Frisian than to Dutch (Dutch interference is often considered “bad Frisian”). As the influence of Dutch on Frisian is not the only subject included in the online language test, it is possible to make these questions less recognizable by embedding them among the other ones. In order to do that, all test questions are randomized. In this way, the participants would less likely focus on the question subjects as these vary. It is particularly important that the sensitive questions concerning language contact with Dutch are not asked within one question block, but rather put between less sensitive ones, for example those devoted to dialect variation (see also Dörnyei & Taguchi [2010: 45], who refer to Aiken 1997). This lowers the still existing risk that people select the standard Frisian form and not the one that they personally use in everyday life.

#### 4.2. Test content

The online language test doesn't measure language proficiency and therefore most answers should not be interpreted as right or wrong. The main focus is to obtain detailed information on language variation in spoken Frisian and to shed more light on its relation to Standard Frisian. It is designed to cover most aspects of spoken Frisian: vocabulary, grammar and phonology, together with the internal and external factors that influence them. The internal factor refers to language variation not (directly) affected by language contact, e.g. dialect variation. The dominant Dutch language is an external factor that affects spoken Frisian by replacing original Frisian words and grammatical constructions by Dutch ones as a result of an extensive linguistic borrowing.

The test consists of five different parts:

- ❑ Vocabulary (246-248);
- ❑ “Frisian phenomena” (248-249);
- ❑ Dialect variation (249-252);
- ❑ Lexical interferences (252-253);
- ❑ Grammatical interferences (253-254).

Prior to completing the sociological part of the research, the respondents can choose between Frisian and Dutch as the instruction language. As the target language of the linguistic test is Frisian, it contains Frisian vocabulary and sentences regardless of the participants' language choice. However, the Dutch version of the test is regularly provided with a Dutch

translation to make sure that speakers of Frisian with a limited Frisian reading proficiency are able to understand the questions properly. In this article, test examples from the Dutch version are presented, including a translation in English.

#### 4.2.1. Vocabulary

The goal of the first part of the test, **Vocabulary**, is to obtain information on Frisian vocabulary in the context of a language contact situation. Since virtually all speakers of Frisian are bilingual, implying that their proficiency of Dutch is as good or even better than their Frisian proficiency, the lexicons of both languages can affect each other (see also Dijkstra 2013). It is argued that bilinguals have a complex language repertoire at their disposal, rather than two separate language systems (see Matras 2009: 2-6). The fact that Frisian and Dutch are closely related, and thus many Dutch and Frisian words are similar, can strengthen the effect of a shared vocabulary. The question is how Frisian speakers deal with the language differences, like for example false friends, synonyms that are different for Frisian and Dutch or words with different meanings that not entirely match the meanings in the other language. The latter means that a Dutch word can for instance have only one meaning, while its Frisian equivalent has two or more meanings, or the other way round. Such words are selected for the *Vocabulary* part of the test, as in Test example 1. The selected items represent different lexical categories, because they are not equally susceptible to contact induced language changes (see Haugen 1950: 224; Muysken 1981; Winford 2003: 51; Matras 2007). Another factor we took into account is word frequency as infrequently used words tend to change quicker than words used with a high frequency if the word modification doesn't concern physiologically motivated sound changes (according to Kunnas [2011: 185], who refers to Hooper 1976: 95, 99, 101; Phillips 1984: 323; Nahkola 1986, 1987: 42-43; Nahkola & Saanilahti 1990). In order to check the item frequencies, Dutch lexical databases<sup>1</sup> have been consulted as no frequency lists are available for Frisian yet. However, Frisian and Dutch are closely related to each other and the primary information needed for the online test was how often people spoke and wrote about particular things, events or phenomena, rather than exact frequencies of a particular word form. Therefore, the frequencies as indicated for Dutch words can be considered sufficient for the test purpose.

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1 WebCelex, Corpus Gesproken Nederlands, SUBTLEX-NL.

## Test example 1

20%

  
**FRYSKE AKADEMY**

**Wat vindt u het goede Nederlandse woord voor het Friese “útstel”?**

- afstel
- uitstel
- voorstel
- opstel
- Ik ken het woord “útstel” niet.

**meerdere antwoorden mogelijk**

Verder

What is in your opinion the right Dutch word for the Frisian “útstel” [delay/suggestion]?

- afstel [adjustment]
- uitstel [delay]
- voorstel [suggestion]
- opstel [composition/essay]
- All words are right.
- I am not familiar with the word “útstel”.

**[multiple answers possible]**

The Frisian word “útstel” has two meanings: “delay” or “suggestion”. In terms of form, it is similar to the Dutch word “uitstel”. “Utstel” and “uitstel” also share a meaning, namely that of a “delay”. However, the second meaning of “útstel”, a “proposal”, doesn’t match the Dutch “uitstel”. The Dutch word for “proposal” is “voorstel”, which matches another Frisian word both in form and meaning: “foarstel”. This raises the question whether speakers of Frisian still know the second meaning of “útstel” (proposal) or only the one that matches the meaning of the Dutch “uitstel”. The latter would mean that one of the original meanings has been lost as a result of language contact with Dutch. However, if both meanings of “útstel” are still (well) known, the second question is, which of the two Frisian words is preferred in the meaning of a “suggestion”: “útstel”, which cannot be associated with Dutch, or “foarstel”, which is very similar to the Dutch “voorstel”. Thus, there are two aspects to the vocabulary questionnaire: word

knowledge and preference / acceptance. The questions are formulated in two ways that are randomly generated: *What is in your opinion the right Dutch/Frisian word for Frisian/Dutch...* (positive questions) and *What is in your opinion NOT the right Dutch word for...* (negative question). Research has shown that participants respond differently to positive and negative questions as they are more likely to disagree with a negative question than to agree with a positive one (see Rugg 1941; Clark & Schober 1992; Kamoen 2012; Kamoen, Holleman & Van den Bergh 2013). When asked about the right word, test participants are likely to select only a word/words that they personally use and thus that they prefer to other ones. In case of the other formulation, when asked to point out words that are not right, they will possibly ignore all words that they do accept (= disagree with the suggestion that they are wrong), even if they wouldn't use them themselves. Additional questions about vocabulary knowledge, preference and acceptance will be asked in the in-depth interviews based on the given answers.

#### 4.2.2. “Frisian phenomena”

The “**Frisian phenomena**” section includes grammatical variation and grammatical features that are characteristic for Frisian and different for Dutch (Popkema [2006] and Tiersma [1999] often point at those differences), as well as shifts not necessarily related to language contact with Dutch. The test item selection is based on a literature study and observations of linguists at the Fryske Akademy. One of the most typically Frisian morpho-phonological phenomena is the so-called Frisian breaking (see Visser 2002). This phonological feature indicates that falling (unbroken) and rising (broken) diphthongs alternate in spoken Frisian (see: Tiersma 1999: 17-20, Popkema 2006: 73-76). Breaking is common in noun plurals and diminutives, which replace the fallen diphthong in a word's root by a corresponding rising diphthong, e.g. *oa* [oə] (falling) -> *wa* (rising; *doar* ‘door’ [doər] -> *doarren* ‘doors’ [dwarən] / *doarke* ‘small door’ [dwarəkə]). However, in some cases the realization of a falling or a rising diphthong depends on the speaker and can vary across Fryslân. So can the word *moaier* ‘more beautiful’ be pronounced as [moïər] or [mwaïər]. Other examples of Frisian grammatical phenomena are the different forms of the past participle, e.g. *fergetten* or *ferjitten* ‘forgotten’, alternative constructions, e.g. *do of ik* / *do as ik*, both meaning ‘you or me’, or alternative plural forms, e.g. *feroarigen* or *feroarings* ‘changes’ (see Test example 2). Various shifts in the Frisian language refer to phonological and to morphological changes, such as the change in the pronunciation of the word *tiid* ‘time’: *tiid* [ti:t] (long vowel) -> *tied* [tiət] (diphthong) or the transition of one-syllable strong past participles into two-syllable ones: *praat* ‘spoken’ -> *pratən*.

## Test example 2

20%

  
**FRYSKE AKADEMY**

**Hoe zou u de volgende zin aanvullen?**

Takom jier komme der \_\_\_\_\_ op ús ôf.

*[Volgend jaar komen er \_\_\_\_\_ op ons af.]*

feroarings  
 feroaringen

**Verder**

*How would you complete the following sentence?*

Takom jier komme der \_\_\_\_\_ op ús ôf. [Frisian sentence]

*[Next year, \_changes\_ are coming towards us.]* [Dutch translation]

- feroarings  
 feroaringen

### 4.2.3. Dialect variation

The third section of the online language test, the “**Dialect variation**”, addresses the regional differences in spoken Frisian. As this short dialect research is only a part of the whole project, it is mostly limited to the well-known phenomena in spoken Frisian. These are often related to pronunciation (see Hof 1933; Van der Veen 1981). A good example of such a variation is the Frisian pronunciation of the word ‘Sunday’ as *snain*, *snein*, *snoin* or *sneen* or ‘to have’ as *hawwe/ha*, *hewwe/he*, *habbe/ha* or *hebbe/he* (see Test example 3). The distribution of these variants can vary, as some of them grow more or less popular over time (as in case of ‘to have’; see Figure 2). The goal of this examination is to give a picture of the present dialect differentiation and to see whether the dialect borders have become more vague as a result of increased mobility.

Test example 3<sup>2</sup>

20%



**FRYSKE** **AKADEMY**

**Hebben**

- hawwe/ha
- hewwe/he
- habbe/ha
- hebbe/he

Fierder

Dialectvormen van 'hawwe', 1886 - 1986

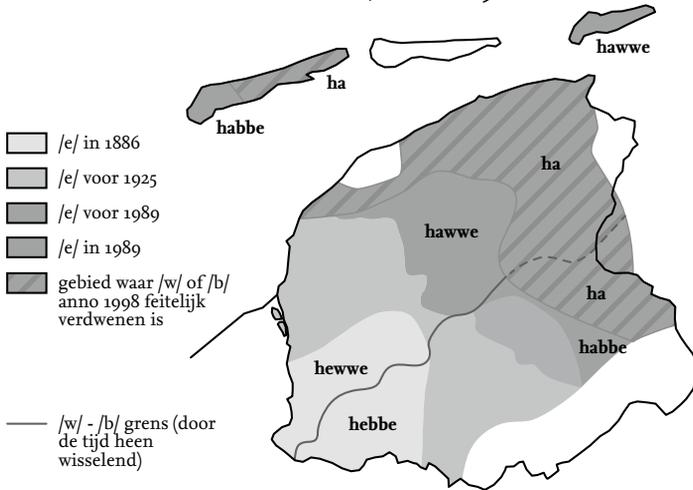


Figure 2: Dialect variants of *hawwe* 'to have', 1886-1989.

Copyright: A.P. Versloot

<sup>2</sup> Most questions including differences in pronunciation are preceded by a short instruction that the participants are expected to choose the alternative closest to their own articulation.

Each of the four test versions contains one question about language variation on the so-called micro level. The selected items are common words that have multiple variants in spoken Frisian and occur all over Fryslân rather than being bound to a particular dialect or region. This variation is of a particularly interesting nature as it involves Frisian vocabulary, morphology and phonology (see Test example 4 and Figure 3). A language's lexicon is claimed to be the least and phonology one of the most stable elements of a language (see Van Coetsem 1988: 34; Thomason & Kaufman 1991: 74–76). It is interesting to see what happens if a language variation involves various linguistic levels at the same time. Furthermore, including these micro level questions will provide comparative information on the (in)stability of the geographical-bounded and the cross-area variation. The item selection is based on the written dialect surveys carried out by the Fryske Akademy in the years 1978-1996 (not published).

#### Test example 4

20%


**FRYSKE AKADEMY**

**Meeuw**

<input type="radio"/> kob	<input type="radio"/> seefoegel [oe zoals in het Nederlandse woord "soepel"]
<input type="radio"/> kobbe	<input type="radio"/> seekob
<input type="radio"/> meeuw	<input type="radio"/> seekobbe
<input type="radio"/> miuw	<input type="radio"/> seemeeuw
<input type="radio"/> mok	<input type="radio"/> seemok
<input type="radio"/> seefeugel	

#### *Seagull*

- |                                    |   |
|------------------------------------|---|
| <input type="checkbox"/> kob       | <input type="checkbox"/> seefoegel [oe as in the Dutch word "soepel"] |
| <input type="checkbox"/> kobbe     | <input type="checkbox"/> seekob                                       |
| <input type="checkbox"/> meeuw     | <input type="checkbox"/> seekobbe                                     |
| <input type="checkbox"/> miuw      | <input type="checkbox"/> seemeeuw                                     |
| <input type="checkbox"/> mok       | <input type="checkbox"/> seemok                                       |
| <input type="checkbox"/> seefeugel |   |

⊙ kôve	(1)	* seefeugel	(3)
● kob	(12)	× seefûgel	(190)
◀ kobbe	(31)	○ seekob	(7)
➤ meeuw	(20)	○ seekobbe	(5)
□ miuw	(6)	▽ seemeeuw	(3)
△ mok	(15)	△ seemok	(15)

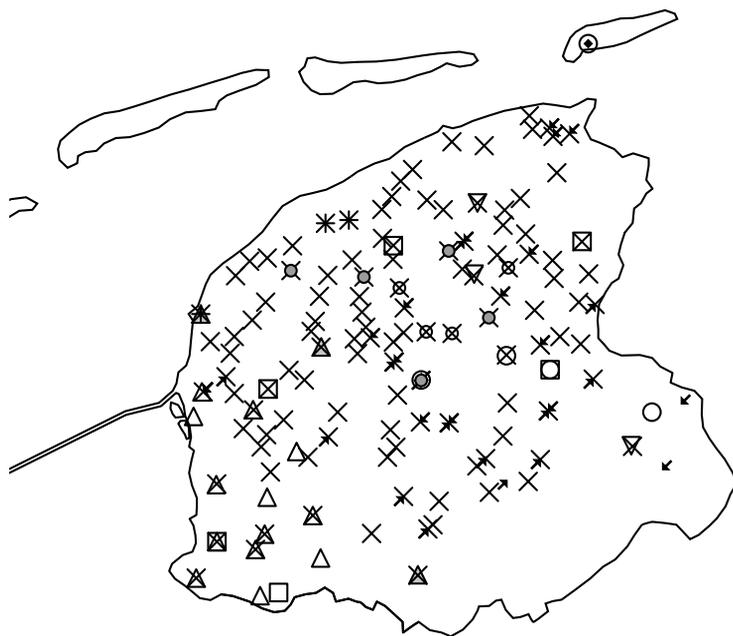


Figure 3: “Seagull” in spoken Frisian.

Written dialect surveys, Fryske Akademy 1978-1996

#### 4.2.4. Lexical interferences

The fourth part of the online language test, “**Lexical interferences**”, contains questions related to Dutch words that are known to replace the original Frisian words (see Sjölin 1976; Breuker et al. 1984; De Haan 1997, 1998). As in case of the “Vocabulary” section, the item selection is based on lexical categories and word frequency. The goal of this research part is to investigate the speakers’ preference for an original Frisian word or a Dutch interference and to see what kind of Dutch words have a greater chance to be imbedded into Frisian.

## Test example 5

20%

  
**FRYSKE AKADEMY**

**Hoe zou u de volgende zin aanvullen?**

Jim moatte der net te folle tiid oan \_\_\_\_\_.

*[Jullie moeten er niet te veel tijd aan \_\_\_\_\_.]*

- besteegje
- bestege
- bestede

*How would you complete the following sentence?*

Jim moatte der net te folle tiid oan \_\_\_\_\_. [Frisian sentence]

*[You mustn't \_spend\_ too much time on it.]* [Dutch translation]

besteegje [original Frisian word]

bestege [grammatical modification]

bestede [Dutch interference]

### 4.2.5. Grammatical interferences

The fifth and final part of the test, “**Grammatical interferences**”, addresses Dutch grammatical constructions as a common phenomenon in spoken Frisian, e.g. inverted verb order in a verb cluster (like in Test example 6), using another diminutive suffix (mostly *-t(s)je* instead of *-ke*) or another article than prescribed by the standard Frisian grammar rules (common *de* instead of neuter *it* or the other way round). This examination must show which of the grammatical interferences are more likely to be taken over and whether and how they relate to the lexical interferences and the internal language variation in spoken Frisian.

## Test example 6

20%

  
**FRYSKE AKADEMY**

**Hoe zou u de volgende zin aanvullen?**

Dat hiest wol \_\_\_\_\_.

[*Dat had je wel \_\_\_\_\_.*]

- dwaan moatten
- dwaan moatte
- moatte dwaan
- moatten dwaan

Verder

*How would you complete the following sentence?*

Dat hiest wol \_\_\_\_\_ . [Frisian sentence]  
[*You should have done this.*] [Dutch translation]

- |  |                            |
|--|----------------------------|
| <input type="checkbox"/> dwaan moatten | [Frisian order]            |
| <input type="checkbox"/> dwaan moatte  | [grammatical modification] |
| <input type="checkbox"/> moatte dwaan  | [Dutch interference]       |
| <input type="checkbox"/> moatten dwaan | [grammatical modification] |

The online sociological language survey, including the linguistic part, was officially published on 9th February 2015. The first test results are expected in the second half of 2015 and will be followed by in-depth interviews.

The response to the online survey was rather low during the first months of the research, namely 9%. In order to increase the participation, a reminder was sent in May 2015. As a result, 13% of all people who had previously received an invitation letter completed the survey. Roughly 65% of the respondents who filled in both the sociological and the linguistic questionnaire are willing to participate in the further research (in-depth interviews).

The average completion time was 12 minutes for the linguistic test and 29 minutes for both questionnaires, which corresponds to the estimated completion time (respectively 10-15 and 30 minutes; see pp. 244).

## 5. References

- Aiken, L. (1997). Questionnaires and inventories. Surveying opinions and assessing personality. New York: John Wiley.
- Breuker, P., Dyksma-Hogeveen, M.G., Hiemstra, S.T., Scholten, K.C., Visser, W., Zantema, A. (1984). Foar de taalspegel: Koart oersjoch fan Hollânske ynslûpsels yn it Frysk [In front of the language mirror: Brief overview of Dutch interferences in Frisian]. Ljouwert/Leeuwarden: Afûk.
- Clark, H.H., Schober, M.F. (1992). Asking questions and influencing answers. In: Tanur, J.M. (ed.), *Questions about questions: Inquiries into the cognitive bases of surveys*. New York: Russell Sage Foundation.
- Coetsem, F. van (1988). Loan phonology and the two transfer types in language contact. Dordrecht: Foris.
- Dijkstra, J.E. (2013). Growing up with Frisian and Dutch. The role of language input in the early development of Frisian and Dutch among preschool children in Friesland (Doctoral dissertation). Amsterdam: University of Amsterdam, Ljouwert/Leeuwarden: Fryske Akademy.
- Dörnyei, Z., Taguchi, T. (2010). Questionnaires in Second Language Research. Construction, Administration, and Processing (2nd ed.). New York: Routledge.
- Gorter, D., Jelsma, G.H., Plank, P.H. van der, Vos, K. de (1984). Taal yn Fryslân: Undersyk nei taalgedrach en taalhâlding yn Fryslân [Language in Fryslân: Research into language behaviour and language attitude in Fryslân]. Ljouwert/Leeuwarden: Fryske Akademy.
- Gorter, D., Jonkman, R.J. (1995). Taal yn Fryslân op 'e nij besjoen [Language in Fryslân revisited]. Ljouwert/Leeuwarden: Fryske Akademy.
- Haan, G.J. de (1995). Friese taalveranderingen [Frisian language changes]. In: Belemans, R., Wijngaard H.H.A. van de (eds.), *Het dialectenboek: Dialect in Beweging. 100 jaar na de enquêtes van Willems en Aardrijkskundig Genootschap* (= Het dialectenboek; 3). Groesbeek: Stichting Nederlandse Dialecten, 64-78.
- Haan, G.J. de (1997). Contact-induced changes in modern West Frisian. In: Haan, G.J. de, Vries, O., *Dedicated to Bo Sjölin* (= Us Wurk 46), 61-89.
- Haan, G.J. de (1998). Taalferoaring troch taalkontakt [Language change through language contact]. *Philologia Frisica anno 1996*. Ljouwert/Leeuwarden: Fryske Akademy, 93-116.
- Haan, G.J. de (2010). The (in)stability of Frisian. In: Hoekstra, J., Visser, W., Jensma, G.T. (eds.), *Studies in West Frisian Grammar. Selected papers by Germen J. de Haan*. Amsterdam/Philadelphia, John Benjamins (Linguistik Aktuell / Linguistics Today, nr. 161).
- Haugen, E. (1950). The analysis of linguistic borrowing. *Language* 26, 210-231.
- Heeringa, W. (2005). Dialect variation in and around Frisia: Classification and relationships. *Us Wurk* 54, 125-167.

- Hof, J.J. (1933). *Friesche Dialectgeographie* [Frisian Dialect Geography]. 's-Gravenhage: Nijhoff.
- Hooper, J.B. (1976). Word frequency in lexical diffusion and the source of morphophonological change. In: Christie, W. (ed.) *Current progress in historical linguistics*. Amsterdam: North Holland, 95-105.
- Janssen-van Dieten, J.M. (1992). *Zelfbeoordeling en tweede-taalleren. Een empirisch onderzoek naar zelfbeoordeling bij volwassen leeders van het Nederlands* [Self-assessment and second language learning. An empirical study of self-assessment in adult learners of Dutch. (Doctoral dissertation)]. Nijmegen: University of Nijmegen.
- Janssen-van Dieten, J.M. (1993). Self-assessment and adult second language learning. *Dutch contributions to AILA '93. Selected in honour of Johan Matter* (= Toegepaste Taalwetenschap in Artikelen 46/47), 131-139.
- Kamoen, N. (2012). *Positive versus Negative: A cognitive perspective on wording effects for contrastive questions in attitude surveys*. Utrecht: LOT dissertation series.
- Kamoen, N., Holleman, B.C., Bergh, H. van den (2013). Positive, negative, and bipolar questions: The effect of question polarity on ratings of text readability. *Survey Research Methods* volume 7/3, 181-189.
- Kunnas, N. (2011). The role of morphology in phonological change: Rethinking diffusion theory. In: Gregersen, F., Parrott, J.K., Quist, P. (eds.), *Language Variation - European perspectives III. Selected papers from the 5th International Conference on Language Variation in Europe (ICLaVE 5), Copenhagen, June 2009*. 185-199. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Matras, Y. (2007). The borrowability of grammatical categories. In: Matras, Y., Sakel, J. (eds.), *Grammatical borrowing in cross-linguistic perspective*. Berlin: Mouton de Gruyter, 31-74.
- Matras, Y. (2009). *Language contact*. Cambridge: Cambridge University Press.
- Muysken, P. (1981). Halfway between Quechua and Spanish: the case for relexification. In: Highfield, A., Valdman, A. (eds.), *Historicity and variation in Creole studies*. Ann Arbor: Karoma, 52-78.
- Nahkola, K. (1986). Kielienmuutos ja yleinen diffuusioteoria [Language change and general diffusion theory]. In: Nahkola, K. (ed.), *Esitelmiä ja tutkielmia*. (= Folia Fennistica & Linguistica 13). Tampere: Department of Finnish and General Linguistics at the University of Tampere, 67-77.
- Nahkola, K. (1987). Yleisgeminatio: Ääntenmuutoksen synty ja vaiheet kielisysteemissä erityisesti Tampereen seudun hämäläismurteiden kannalta [General gemination: The birth and stages of a sound change in a linguistic system especially from the perspective of the Häme dialects in the region of Tampere]. Helsinki: Proceedings of the Finnish Literature Society 457.

- Nahkola, K., Saanilahti, M. (1990). Lekseemin esiintymistaajuuden vaikutus kielenmuutoksen leksikaaliseen diffuusioon [The influence of the frequency of occurrence of a lexeme on the lexical diffusion of a language change]. *Virittäjä* 94, 196-217.
- Phillips, B.S. (1984). Word frequency and the actuation of sound change. *Language* 60, 320-342.
- Pietersen, L. (1969). De Friezen en hun taal: Een onderzoek naar de leesen spreekgewoonten in Fryslân en naar de houding ten aanzien van het Fries [The Frisians and their language: A research into the reading and speaking habits in Fryslân and into the attitude with respect to Frisian]. Drachten: Laverman.
- Popkema, J. (2006). Grammatica Fries: De regels van het Fries [Grammar Frisian: The rules of Frisian]. Utrecht: Het Spectrum, Leeuwarden: Fryske Akademy.
- Provinsje Fryslân (2011). De Fryske taal atlas 2011: De Fryske taal yn byld [The Frisian language atlas: Illustration of the Frisian language]. Ljouwert/Leeuwarden: Provinsje Fryslân.
- Rugg, D. (1941). Experiments in wording questions. *Public opinion quarterly* 5, 91-92.
- Sjölin, B. (1976). 'Min Frysk': Een onderzoek naar het ontstaan van transfer en 'code-switching' in gesproken Fries ['Bad Frisian': An inquiry into the origin of transfer and code-switching in spoken Frisian]. Groningen/Grins: Frysk Ynstitút.
- Tiersma, P.M. (1999). Frisian Reference Grammar (2nd ed.). Leeuwarden: Fryske Akademy.
- Thomason, S. G., Kaufman, T. (1991). Language contact, creolization, and genetic linguistics. Berkeley and Oxford: University of California Press.
- Veen, K.F. van der (1981). De frekwinsjefêrhâlding fan inkele dialektyske farianten [The frequency ratio of a few dialect variants]. *It Beaken* 43, 30-53.
- Veen, K.F. van der (1986). Yndieling en relative ôfstân fan Fryske plattelânsdialekten [Classification and relative distance of Frisian rural dialects]. *Philologia Frisica anno 1984*. Ljouwert/Leeuwarden: Fryske Akademy, 10-60.
- Veen, K.F. van der (1994). Yndielingskaarten fan Fryske plattelânsdialekten [Classification maps of Frisian rural dialects]. *It Beaken* 56, 1-23.
- Visser, W. (2002). Brekking as ferkoarting: in diagroane analyze [Breaking as shortening: a diachronic analysis]. *It Beaken* 64, 187-246.
- Winford, D. (2003). *An introduction to contact linguistics*. Oxford: Blackwell.