

**A STUDY OF THE VARIATION AND CHANGE  
IN THE VOWELS OF THE ACHTERHOEKS  
DIALECT**

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## Abstract

The Achterhoeks dialect, spoken in the eastern Dutch province of Gelderland near the German border, is a Low Saxon dialect that differs noticeably from Standard Dutch in all linguistic areas. Previous research has comprehensively covered the differences in lexicon (see, for example, Schaars, 1984; Van Prooijs, 2011), but less has been done on the phonology in this area (the most notable exception being Kloeke, 1927). There has been research conducted on the changes observed in other Dutch dialects, such as Brabants (Hagen, 1987; Swanenberg, 2009) and Limburgs (Hinskens, 1992), but not so much in Achterhoeks, and whether the trends observed in other dialects are also occurring in the Achterhoek area. It is claimed that the regional Dutch dialects are slowly converging towards the standard variety (Wieling, Nerbonne & Baayen, 2011), and this study aims to not only fill some of the gaps in Achterhoeks dialectology, but also to test to what extent the vowels are converging on the standard.

This research examines changes in six lexical sets from 1979 to 2015 in speakers' conscious representation of dialect. This conscious representation was an important aspect of the study, as what it means to speak in dialect may differ from person to person, and so the salience of vowels can be measured based on the number of their occurrences in self-described dialectal speech. Through a perception task, this research also presents a view of the typical Achterhoeks speaker as seen by other Dutch speakers, in order to provide a sociolinguistic explanation for the initial descriptive account of any vowel change observed in dialectal speech.

Subtle changes in the Achterhoeks vowels were observed, suggesting a lack of stability, but not yet at the stage of functional dialect loss. The most noticeable difference within the Achterhoek area occurs with the pronunciation of what we term the HUIS vowel when it appears after /r/, realised as either [u] or [y]. The lexical sets of PRAAT, KAART, and KAAS were presented in three groups: as front, Standard and back vowels, with pronunciation patterns attributed to post-Westphalian breaking processes, grammatical rules, and trajectories associated with the original West Germanic vowels. The accompanying perception study provided a partner to the main research, suggesting subconscious social information behind what it means to speak in dialect.

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## Declaration

I declare that this thesis is a presentation of original work and I am the sole author. This work has not previously been presented for an award at this, or any other, University. All sources are acknowledged as References. Some parts have been presented elsewhere at conferences and/or through publication in an online journal.

The findings from Chapter 6 will be published in an online journal:

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Pattison, M. (2016). *Different realisations of /a/ in Zelhem and Ruurlo* (oral presentation). CLUL-LingMe, University of Lisbon, Lisbon, Portugal.

Pattison, M. (2016). *Suburban and rural variation between [y] and [u] in Achterhoeks* (poster presentation). Germanic Linguistics Annual Conference 22 (GLAC 22), University of Iceland, Reykjavik, Iceland.

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# 1. Introduction

Achterhoeks is a Low Saxon dialect spoken in the east of the Dutch province of Gelderland, located on the border with Germany. Along with the other Low Saxon dialects of the provinces of Groningen, Drenthe and Overijssel, Achterhoeks contains a number of marked phonological, grammatical and lexical features which distinguish it from the dialects of the western provinces. The generally defined border of the Achterhoek area today in relation to the rest of the Netherlands is shown on the map in Figure 1, although debate about where this border really lies is further explored in Section 2.6.



Figure 1: Map of the Netherlands showing the location and boundary of the Achterhoek area. (Google)

Although there are a number of studies that describe linguistic and cultural features of the region (eg. Bloemhoff et al., 2013a; 2013b; Scholtmeijer, 2008; Schaars, 2008; Schut, 2012), there are fewer that provide data analyses specifically conducted within the region. Kloeke (1927), Broekhuysen (1950), Schaars (1987) and Van Prooije (2011) are some notable exceptions to this, yet fewer studies have been conducted in recent years. Studies of dialectology are common in the Netherlands, yet many tend to focus on other areas, especially Brabant (Hagen, 1987; Swanenberg, 2009), and the province of Limburg (Hinskens, 1992), the latter having had its dialect recognised as a minority language, according to the European Charter of Minority Languages (Public Foundation for European

Comparative Minority Research, 2006)<sup>1</sup>. The Meertens Instituut also holds a number of databases online which, among other topics, list morphological (MAND), phonological (FAND) and lexical (eg. PLAND, specifically considering plant names across the Netherlands and Belgium) information across all Dutch dialects with a view to recording dialectal variants, and helping to maintain their use.

Kloeke (1927), Broekhuysen (1950) and Gerritsen and Jansen (1979) have all studied change over time in this area of the Netherlands, but it has not been the subject of comprehensive research in more recent times, with the exception of work by researchers such as Van Reenen (2005, 2006) and Hamans (2008), who have revisited the earlier contributions by Kloeke. The intention of this study is to contribute an original and updated piece of research to the existing literature on Dutch dialectology that can be used as a basis for continued studies into the dialect of the Achterhoek by both the author and others.

In order to achieve these aims, some of the typical traditional Low Saxon vowels of Achterhoeks are researched using recordings made in 1979 by Leendert van Prooije of elderly men from the region, which are then compared to modern-day recordings of dialect speakers from 2015. Wieling, Nerbonne and Baayen (2011) have claimed that non-standard dialects are undergoing changes in the direction of Standard Dutch, and this study aims to investigate how true this is in the case of seven vowels in the Achterhoeks phonology. These include /a:/, /ɔ:/, /iə/, /e:/, /i/, /y/ and /u/, and correspond to lexical sets which are introduced and explained in Section 2.3.2. Typically, where these vowels appear in the Achterhoeks system, a speaker of Standard Dutch would have just three: /a:/, /ɛi/, and /œy/, and the aforementioned keywords are developed in order to display these differences. Speakers' realisations of these vowels are investigated in order to determine if there is interference from the Standard Dutch phonological system in their self-reported dialect use, and which may be suggestive of convergence. These Achterhoeks vowels were chosen as they are identifiable to speakers of Standard Dutch as well as dialect speakers in the sense that the use of any of these vowels by a speaker is likely to signal to their interlocutor that they come from a Low Saxon dialect speaking region. This research deals with these vowels, since it can be argued that they are the most distinctive in the dialect, differing markedly from Standard Dutch. It considers whether there is convergence to Standard Dutch, and takes a somewhat different

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<sup>1</sup> Both of these provinces lie to the south west of the Achterhoek, with Brabant bordering Belgium, and Limburg bordering Belgium and Germany.

approach to other sociolinguistic studies which tend to work with spontaneous speech data: in this study, both 1979 and 2015 speakers were asked to provide dialectal translations for sentences written in Standard Dutch. This ensures preservation of the dialect in recordings, but is also used to examine the salience of different dialect features as viewed by a number of self-reported dialect speakers. In this case, the salience of the aforementioned vowel groupings is investigated, in order to determine which are most marked, according to participants. This is achieved firstly through the participants' beliefs about their own speech production, and secondly through examining language attitudes of other Dutch speakers in an online perception study. This approach is expected to tell us something about the consciousness of dialect speech, and speakers' subsequent productive competence in the dialect.

Following the study of the perceivably marked vowels, I also investigate the type of /r/ used by speakers in relation to their realisation of the monophthongs [y] and [u], when preceding it, and whether the type has any bearing on the speakers' overall production of the vowel. As will be outlined in Section 2.4, the rhotic consonant is notoriously variable throughout the Netherlands, and so this part of the thesis also serves to consider what may be the usual /r/ predominantly used in onset position of this area of the Netherlands.

### **1.1. Research Questions**

The speakers in the 1979 recordings were older at the time of recordings than the 2015 speakers, and give us an insight into not only how speakers of that time perceived phonological, lexical and grammatical features of the dialect (because they talk about these features metalinguistically, and are asked to translate from written Standard Dutch), but are also representative of an older generation. These speakers perhaps represent the end of a diglossic situation in the Netherlands before it became more of a "standard with dialects" (Ferguson, 1959) language situation following the end of the First World War and Second World War. This diglossic situation of a distinction between a standard language and dialects has become increasingly restricted to past generations in the Netherlands, according to Swanenberg and Van Hout (2013). The objective of the study is to gain a representative picture of speakers' use of the chosen Achterhoeks vowels through their own speech, and how that awareness of forms has altered over the past 35 years. It should give an insight into which forms are more susceptible to convergence, and which ones have maintained their

status within the dialect, as well as considering different perceptions of what constitutes the dialect according to its own speakers. Thus, the main research questions can be broken down into the following questions:

- 1) What does it mean to speak in dialect in relation to the vowels used?
- 2) What differences exist between 1979 and 2015 in phonetic values that may be suggestive of convergence to Standard Dutch?

The speakers included in this study all come from this region of Eastern Gelderland, from close to the borders with Overijssel to the north, the Veluwe region of Gelderland to the west, and just south-west of the River Oude IJssel, which is the approximate location of where the Liemers region begins (see Section 2.6). Four towns featured in this study lie along that border; their dialects have been included under the broader term of “Achterhoeks” both for reasons of ease in describing the speech of this area of Gelderland, and also because of the towns’ inhabitants’ own identification of the dialect that they speak.

In addition to the major part of this study, which compares the speech of the 1979 and 2015 participants, a perception study was also undertaken during the summer of 2016. This was in order to gain greater insight into the sociolinguistic status of the Achterhoeks dialect, and others’ perceptions of who the typical speaker of this dialect might be. Through this, a third research question can be added:

- 3) What is the sociolinguistic profile of the typical Achterhoeks speaker according to other Dutch speakers?

This research is important to the field of dialectology in the Netherlands, as it uses a real-time, diachronic approach, and provides an updated overview of the status of some of the more marked vowels of the dialect at this point in time. It presents an original contribution to its field through its analysis of new data in a relatively understudied area of the Netherlands and focuses on the idea of how the dialect is perceived not just by others but also by its own speakers. In addition to the importance of this research to dialectology in the Netherlands, we can also consider how it fits within the wider field of sociolinguistic research. This consideration is particularly relevant within Europe, where the trend in language change in dialectological and sociolinguistic studies is towards uniformity, which does not always necessarily equate to standardisation. We will revisit the research questions, and assess how they have been answered, in the final chapter of this thesis.



## 1.2. Outline of Thesis

This study considers seven vowels, in total, of Achterhoeks, as well as /r/ in onset position (including word-initial clusters), and compares pronunciations between modern speakers and those from 1979, in a real-time study. Chapter 2 looks at the background of this study, considering the sociolinguistic status of the Achterhoeks dialect, and gives an outline of the sounds of Standard Dutch and Achterhoeks. A brief history of the area is also included, as well as a discussion on the importance of differentiating between the Achterhoeks and Liemers dialects, as well as where this differentiation should, or does, actually begin geographically.

Chapter 3 deals with studies of dialect levelling and standardisation, in order to gain an understanding of how these processes may or may not be occurring in this eastern area of the Netherlands. It also looks in detail at some relevant studies in Netherlands dialectology and the Achterhoek. It considers the Cone Model developed by Auer and Hinskens (1996), which is revisited later in the thesis in an attempt to determine where the dialect would be located on a continuum in the context of this model.

In Chapter 4, the results of a pilot study focussing on two marked Achterhoeks vowels, conducted in December 2014, are considered. This pilot study was conducted in order to test the validity of the research design and to obtain some preliminary findings, which are discussed throughout this chapter. The theoretical design is then modified and described in Chapter 5, alongside a perception study to complement the earlier findings. The results are presented in Chapter 6, and Chapter 7 brings together a summary of the major findings, and discusses implications for the future. Section 7.5 within Chapter 7 concludes with commentary on the current linguistic position of the dialect, and how the study has addressed the research findings.

## 1.3. Overview of Terms

The terms listed below will be referred to throughout this study, and will encompass the following definitions:

**Achterhoek:** A region of eastern Gelderland in the Netherlands, and the area of interest in this study. It will refer to the area from the border with Germany to the edge of the Veluwe

region, and the border with the northern province of Overijssel to just south-east of the River Oude-IJssel encompassing the municipality of Oude-IJsselstreek.

**Language:** The term “language” encompasses that of the Standard variety as well as any regional variations. For example, “Dutch” is the Standard language of the Netherlands, but also includes regional varieties such as “Achterhoeks”.

**Dialect:** This term refers to the regional varieties spoken in the Netherlands, which are rooted by, or heteronomous to, Dutch.

**Standard:** The term “Standard” refers to the language variety which has been codified as the official form of the language.

**Accent:** “Accent” refers to the differences in the sounds of speech, differing from “Dialect” in that it does not necessarily differ in its grammar and lexicon.

**Achterhoeks:** The major dialect spoken within the Achterhoek region as described above.

**Standard Dutch:** The term used to describe the standard language of the Netherlands, also commonly known as *Algemeen Beschaafd Nederlands* (ABN), or “General Civilised Dutch”. Throughout the thesis, this term will be used to refer only to the northern variety of Standard Dutch, ie. that spoken in the Netherlands, rather than the southern variety spoken in Belgium.

**Rural/Non-Rural:** Some speakers within this study will be referred to as living in either a rural or a non-rural area. For the purposes of this research, a rural area is defined as being outside of the Achterhoek “urban belt” area of the towns of Silvolde, Uft, Terborg, Etten, Gendringen and Doetinchem (Oude-IJsselstreek, 2016).

**PRAAT:** Lexical set keyword corresponding the use of the phoneme /a:/ in Standard Dutch, and /ɔ:/ in the Achterhoeks dialect.

**KAART:** Lexical set keyword which corresponds to the use of the phoneme /a:/ in both Standard Dutch and Achterhoeks.

**KAAS:** Lexical set keyword corresponding to the use of the phoneme /a:/ in Standard Dutch, and /e:/ or /i/ in Achterhoeks.

**PAARD:** Lexical set keyword corresponding to the use of the phoneme /a:/ in Standard Dutch, and the centring diphthong /iə/ in the Achterhoeks dialect.

**KIJK:** Lexical set keyword corresponding to the use of the diphthong /ɛi/ in Standard Dutch, and the monophthong /i/, or the lengthened [i:], in the Achterhoeks dialect.

**HUIS:** Lexical set keyword corresponding to the use of the diphthong /œy/ in Standard Dutch, and the monophthong /y/ (sometimes [u]) in the Achterhoeks dialect.

## 2. Literature Review: Background

### 2.1. Some History

The Achterhoeks dialect varies quite considerably from the standard variety of Dutch, which is known as Algemeen Beschaafd Nederlands (ABN). This term was introduced in the late 19<sup>th</sup> century (Willemyns, 2013) and is perhaps most commonly translated as “General Civilised Dutch” (Donaldson, 1983; Smakman, 2006), but other translations such as “Cultivated” and “Educated” are also used (Willemyns, 2013). It has since been referred to more generally as simply AN (“General Dutch”) at the behest of sociolinguists in the late 20<sup>th</sup> century (Willemyns, 2013). To avoid confusion between the different naming conventions and the connotations elicited by the term ABN, the standard variety will be referred to throughout the duration of this study as Standard Dutch. It will refer only to the northern variety of Standard Dutch, that spoken in the Netherlands, and not the southern variety as spoken in the north of Belgium (Booij, 1995).

The foundations of standardisation in the Netherlands were first evident in the 16<sup>th</sup> century, although the push for a standard language did not become really strong until the 19<sup>th</sup> and 20<sup>th</sup> centuries (Willemyns, 2013). In the case of Standard Dutch, Smakman (2006) states that although there is some disagreement in spelling rules, the language is perhaps as standardised as it could possibly be. This followed a long history of a process of standardisation. The dialect varieties of the Netherlands are classified as belonging to the Low Franconian, Low Saxon or Rhine-Franconian dialect areas (see Table 1), and it is from the Low Franconian varieties that Standard Dutch developed. It is derived mostly from the prestigious north-western sociolects and some south-western and central features evident in the Low Franconian areas. The eastern dialects did not influence the eventual standardisation of Dutch (Willemyns, 2013; Smakman & Van Bezooijen, 2002). Therefore, it is the eastern, rather than western, varieties that tend to be much more markedly different from Standard Dutch.

For example, consider the western dialect of the city of Haarlem in Noord-Holland. Haarlem is often upheld as the epicentre of standard language use (Smakman & Van Bezooijen, 1997; 2002), with its local variety being described as “the purest form of Dutch” (Van Oostendorp, 2013, p.443) or, as described by a participant in an earlier study, speaking in English, “where they speak the best Dutch” (Pattison, 2013, p.11). This view possibly arose from the claim made in 1874 by Winkler (cited in Daan, 1999) that “the present dialect of the city of

Haarlem is undoubtedly closer to the current Dutch language than any other dialect of Holland and therefore all of the Netherlands” (p.10). However, Van Oostendorp (2013) states that although Winkler’s statements corroborate the “urban myth” of Haarlem speech, he did not actually make the claim which is so often attributed to him, and it could be that he was simply writing about an idea that was already popularly believed by others in the Netherlands. Nevertheless, wherever the idea originally stemmed from, it has persisted through a folk linguistic attitude, and it suggests that the dialect of Haarlem was viewed as an exemplar dialect as the interest in language standardisation increased. Yet what constitutes a standard norm today may not be what was considered the norm in generations past, and speakers’ perceptions of whether a form is considered standard or dialectal has a bearing on their own language use (Jongenburger & Goeman, 2009). Additionally, what is considered to be usage of dialect forms may differ between older and younger speakers (Smakman & Van Bezooijen, 2006), and this is considered to an extent in the perception study which is part of the present research. Therefore, it is the continuation or suppression of these forms (and what they are being replaced with) that we can use to determine whether or not convergence, or even dialect levelling (the concept of which is described in Section 3.1), is taking place.

The Netherlands is a country that is historically home to a multitude of dialects. However, there are also variations within those dialects from town to town (Willemys, 2013; Brachin, 1985). Table 1, reproduced from Pattison (2013), shows the distribution of the major Dutch dialects, although it is important to remember that variations occur within these. In the province of Friesland there is also another language spoken, Frisian, which is not included in the table due to it being a separate language, and not a dialect of Dutch.

Low-Franconian (South, West, Central)		Low Saxon (North-East)		Rhine-Franconian (South-East)	
Dialect	Province	Dialect	Province	Dialect	Province
Brabants	Noord-Brabant	Gronings	Groningen	Limburgs	Limburg
East Flemish	Zeeland	Drents	Drenthe		
West Flemish	Zeeland	Achterhoeks	Gelderland		
Zeeuws	Zeeland	Veluws	Gelderland		
Westfries	Noord-Holland	Twents	Overijssel		
Hollands-Utrechts	Noord-Holland, Flevoland, Zuid-Holland, Utrecht	Sallands	Overijssel		
		Stellingwerfs	Friesland		

Table 1: Dutch Dialects Table. Compiled from information in Daan and Blok (1969), Pauwels (1982) and Zwart (2011).

The map in Figure 2 illustrates the major dialect areas within the Netherlands. Note that it does not show all dialects and dialect areas present in the Netherlands, but rather the major dialects, of which there can be subgroups present. A description of some differences occurring within the Achterhoek area follows. On this accompanying map (Figure 2), reproduced from the Meertens Instituut (2013-2016), I have labelled the provinces and approximate locations of the dialects listed in the table.



Figure 2: Major Dutch dialect areas. (Compiled from information provided in Daan & Blok, 1969). Map reproduced from the Meertens Instituut (2013-2016).

Variation, of course, exists within these dialect areas. In the case of Achterhoeks in particular, it would appear that there is a continuum from Standard Dutch through Dutch spoken with an Achterhoeks accent, to the traditional dialect of Achterhoeks, which differs from the former two in having distinctive phonological, lexical and grammatical markers (Schaars, 1987, 2008). The Twents and Sallands dialects of Overijssel, the province immediately to the North of Gelderland, exhibit similar phonological features (Smakman, 2006; Bloemhoff-de Bruijn, 2008). To a lesser extent, similar features are also found in the Low Saxon speaking areas of Drenthe and Groningen, which are situated geographically further north than Overijssel.

These provinces all have in common similar monophthongal realisations of vowels which are diphthongal in the Standard Dutch phonological system (see Section 2.3.2). Overall, the Achterhoek region is similar in its pronunciation to the other Low Saxon speaking areas in the provinces of Overijssel, Drenthe and Groningen north of it, yet the south of the area shows some small similarities to the Low Franconian areas (Spruit et al, 2009). This could be explained by the fact that this southern part of the Achterhoek represents a transition area for the Low Franconian dialect of Liemers (not listed in Table 1, but explored further in Section 2.6).

To consider one such example where variation exists within a specific dialect, Bloemhoff et al. (2013a) identify some divisions within the Achterhoeks dialect area which are characterised by vowel length<sup>2</sup>. These areas appear based on four groupings of vowels appearing in different phonetic environments: (Group A) /e:/ preceding voiced consonants, (Group B) /ɔ:/ preceding voiced consonants, (Group C) /e:/ preceding voiceless consonants, and (Group D) /ɔ:/ and /ø/ preceding voiceless consonants. According to Bloemhoff et al. (2013a), based on data from Broekhuysen (1950), these vowels tend to be distinguishable by length in the different “areas” of the Achterhoek. In area 1, which includes Groenlo and the immediately surrounding area, the vowels in each of the four groups appear almost always to be short. This contrasts immediately with the Standard Dutch pronunciation, where the vowels would be expected to be long (see Section 2.3). The speech of Groenlo in particular appears to be the oldest in the Achterhoek region, with short vowels from breaking diphthongs (Bloemhoff, 2008a, p.93). Bloemhoff thus refers to it as Phase I. In the Eastern (North) (Phase IIa) area, vowels before /p/, /t/ and /k/ are lengthened, although the rest remain short. There is more variation in length within the Central (Phase IIb) and Eastern (South) (Phase IIc) areas. In the Central area, vowels before /p/, /t/ and /k/ are short, but, as with the Eastern (South) area, there is lengthening of the vowels before /v/, /z/ and /g/. The last area (Phase III), which includes towns along the river IJssel, bordering on the Veluwe area, contrasts the most with the Groenlo area. Table 2, reproduced from Bloemhoff (2008a, p.93) shows these distributions concisely. All of these area divisions may be considered to be reflective of changes which occurred in some eastern dialects following Westphalian

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<sup>2</sup> Vowel length is not a concept which features heavily throughout this research, which is instead concerned with F1/F2 measurements to determine whether the dialectal vowel itself has changed or converged. However, as shown by Bloemhoff (2008a) and Bloemhoff et al. (2013a), and illustrated in Table 2, vowel length can be used to distinguish between certain areas of the Achterhoek (where the vowel quality itself does not vary, but its length does).

breaking (Bloemhoff, 2008a; Bloemhoff et al., 2013a), a concept we will return to in Section 2.3.2.

	<b>I Groenlo</b>	<b>IIa Oostelijke (Noord)</b>	<b>IIb Centraal</b>	<b>IIc Oostelijk (Zuid)</b>	<b>III Langs de IJssel</b>	<b>Gloss</b>
<b>A</b>	<i>leppel, etten, brekken</i>	<i>lèpel, èten, brèken</i>	<i>leppel, etten, brekken</i>	<i>lèpel, èten, brèken</i>	<i>lèpel, èten, brèken</i>	<i>spoon, eat/food, break</i>
<b>B</b>	<i>kòpper, pòtten, kòkken</i>	<i>kòpper, pòtten, kòkken</i>	<i>kòpper, pòtten, kòkken</i>	<i>kòpper, pòtten, kòkken</i>	<i>kòper, pòten, kòken</i>	<i>copper, pot, cook</i>
<b>C</b>	<i>gevvel, ezzel, kreggel</i>	<i>gevven, ezzel, kreggel</i>	<i>geven, ezel, kregel</i>	<i>gevel, ezel, kregel</i>	<i>gevel, ezel, kregel</i>	<i>façade, donkey, petulant</i>
<b>D</b>	<i>òvver, bòge, vlöggel</i>	<i>òvver, bògge, vlöggel</i>	<i>òver, bòge, vleugel</i>	<i>òver, bòge, vleugel</i>	<i>over, bòge, vleugel</i>	<i>about, bow, wing</i>

Table 2: Table showing differences in vowel length across Achterhoek area divisions (reproduced from Bloemhoff, 2008a, p.93).

Historically, the distribution of Achterhoeks extended over the border to include parts of North-Western Germany (Schaars, 2008). Although today a resemblance to this dialect may be found in some peripheral areas in the west of Germany, it is largely confined to the eastern part of Gelderland (see Figure 1). Achterhoeks' dialect boundary is accepted as being on and to the east of the River IJssel and extending to the border with Germany (Bloemhoff, 2008a), and including the Dutch province of Overijssel, although the area known as the Achterhoek encompasses a slightly larger area than this dialect boundary, leading to debate about where the borders should actually be located (see Section 2.6 for further explanation on this matter). As discussed earlier, the Achterhoeks dialect is considered to be of Low Saxon origin. The Low Saxon dialects descend from the Old Saxon branch of the Old West Germanic language family, located on a continuum between Old Dutch / Old Low Franconian (from which we now have Modern Dutch) and Old High German (Nijen Twilhaar, 2003); Achterhoeks itself is one of the designated “northeastern Middle Dutch” languages which branched out from Low German (Marynissen & Janssens, 2013). The Old Saxon branch is descended from the Ingvaenic group of West Germanic languages, in which we also find the precursors to Modern English (Van Bree, 2013), in contrast to Low Franconian and Dutch, which descended from the Istvaeonic group of West Germanic (see Figure 3, reproduced from Donaldson, 1983, p.118, which shows the relationship between the Dutch and Low German



languages; the branches of Old Saxon, Anglo-Saxon and Old Frisian can be considered Ingvaeonic languages). As with other dialects of the peripheral areas of the Netherlands, and because it is geographically further away than western varieties from where the most standardised Hollands-Utrechts dialect is spoken, Achterhoeks shows a substantial difference from Standard Dutch (Wieling, Nerbonne & Baayen, 2011). This is most likely because, as previously stated, the Low Saxon varieties of Dutch did not have much influence on the standardisation of the Dutch language, which probably started during the Middle Dutch era between the 12<sup>th</sup> and 16<sup>th</sup> centuries (Smakman, 2006; Brachin, 1985).

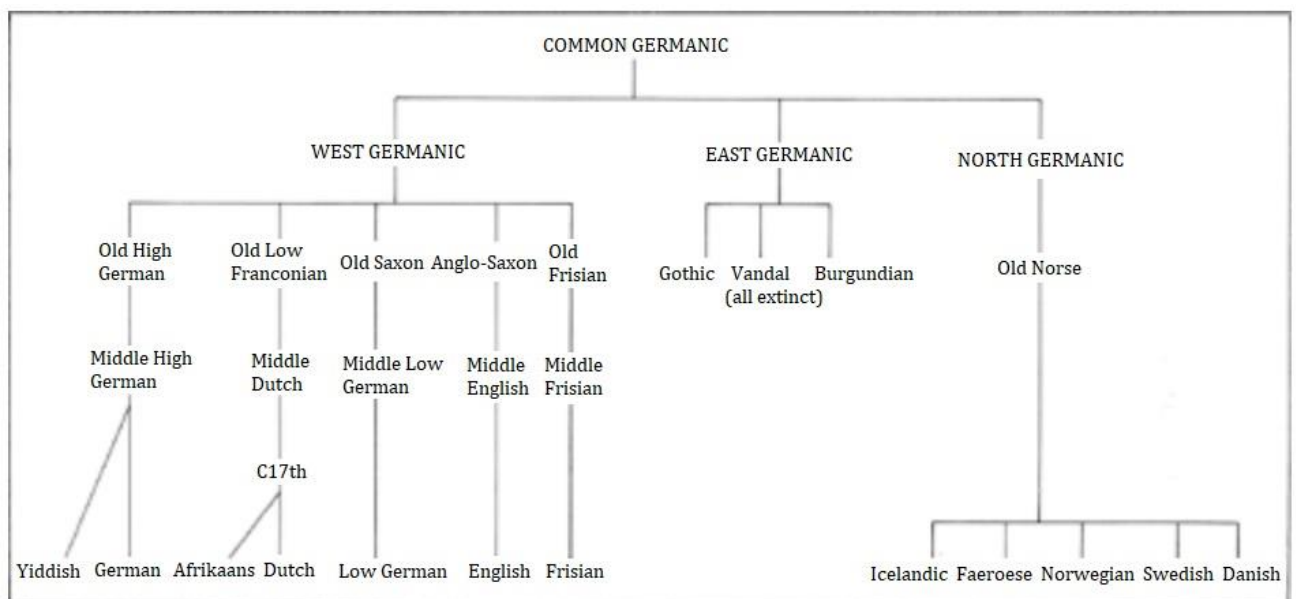


Figure 3: Germanic family tree, reproduced from Donaldson (1983, p.118).

The Low Saxon dialects on both sides of the Dutch / German border formed a continuum from Dutch through Low Saxon to Low German during the Middle Ages; this continuum is not particularly evident today due to the increased focus and permeation of the Dutch and German standard languages, resulting in the creation of two distinct language areas (Willemys, 2013). Following the breaking up of the dialect continuum, the current dialect border between Dutch and Low German coincides with national border (Auer, 2017; Kürschner, 2017). However, some relics survive within the dialects. Administrative borders often changed, but the border south of the river Rhine as it is today was created in 1830 (De Vriend et al., 2008). A dialect continuum was evident up until about the middle of the 20<sup>th</sup> century when more importance was placed on standardisation (Heeringa et al., 2000; Gooskens, Kürschner & Van Bezooijen, 2011). The political border north of the Rhine (see map in Figure 4), which encompasses most of Gelderland, was established in 1963 after a

bilateral agreement in which Germany reclaimed land which had become Dutch in 1949 (Strüver, 2005). The map below shows part of Gelderland north of the River Rhine. The border with Germany, as it has been since 1963, is shown in black.



Figure 4: Part of Gelderland north of the River Rhine (Map data: Google, n.d.).

The use of standard varieties of language further increased in both the Netherlands and Germany after the Second World War, prompting the Low Saxon dialects to converge more towards the respective standard languages on each side of the border. This has resulted in a noticeable difference between the dialects now spoken on either side, with the dialects on the Dutch side incorporating more standard Dutch features, and the dialects on the German side adopting more standard German features (Gooskens & Kurschner, 2009). It could therefore be hypothesised that an earlier version of Achterhoeks, the historical dialect boundary of which encompassed areas in both the Netherlands and Germany, was perhaps rather dissimilar to its contemporary form, and has since converged on Dutch on the west side of the border, while the speakers on the east side moved to a variety of Low German (Heeringa et al., 2000). Political borders thus exert a strong influence upon languages and dialects, and although they are not directly or solely responsible for convergence to or divergence from a standard language, they often become language boundaries (Auer, 2005; Watt et al., 2014; Llamas, Watt & Johnson, 2009). Geographical points which fell along some old dialect continua have now become borders or boundaries for dialects (Auer & Hinskens, 1996); this includes the Achterhoeks dialect, which, as stated above, used to be found not just in the

eastern Netherlands, but also continued over the border into Germany. Certainly in the case of Dutch and German, the dialects did tend to converge on their respective standard languages, representing a case of horizontal divergence coupled with vertical convergence (Auer & Hinskens, 1996). What this means is that dialects on one side of the border began to diverge away from other similar dialects on the other side, whilst at the same time converging on their standard languages.

The diagram in Figure 5 is reproduced from Auer and Hinskens (1996, p.17). It shows an example of a split in a dialect continuum where a political border is involved, and we see one side of the split converging on standard variety A, and the other side on standard variety B. If standard variety A is viewed as Dutch, and standard variety B is viewed as (Low) German, this is an accurate representation of the situation that occurred along the dialect continuum which included the Achterhoeks dialect, essentially dissolving the continuum and giving rise to two more standardised varieties. It shows that there is horizontal convergence between dialects on the same side of the continuum, each at the same time influenced by the corresponding standard variety. This then leads to horizontal divergence from related dialects which fall under the influence of a different standard variety. This diagram therefore provides a model of the language situation along the Dutch/German border.

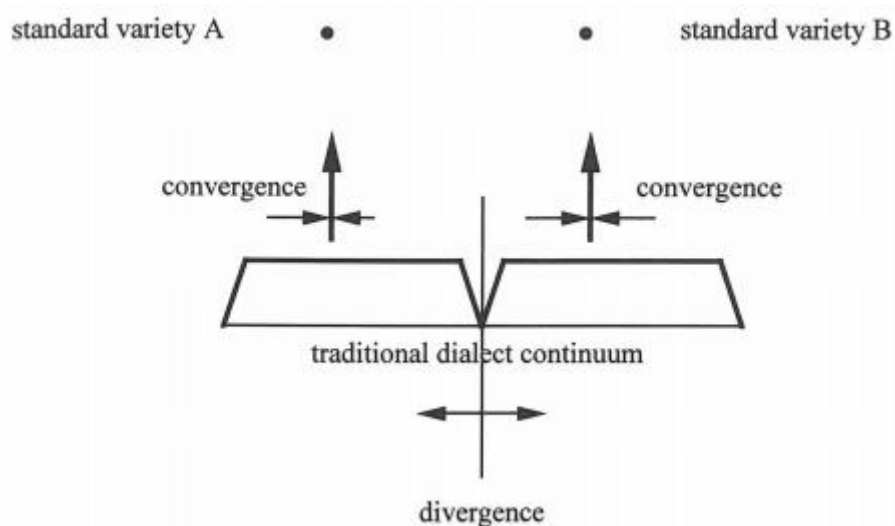


Figure 5: Divergence and convergence along a dialect continuum (reproduced from Auer and Hinskens, 1996, p.17)

As previously mentioned, the Dutch standard language was determined by the western dialects rather than the eastern ones, and these still continue to exert an influence on the standard today (Smakman & Van Bezooijen, 2002), leaving less room for variability among the western dialects, and more of it among the eastern ones. Essentially, the eastern dialects

have further to go with respect to standardisation, and we can observe perhaps more variability in them as this process happens (which is not to assume it is always inevitable!). Despite this, according to Kremer (1999), there is considerable structural similarity between the regional Dutch dialects and Standard Dutch. Kremer (1999) also points out that this similarity has probably resulted in the Dutch dialects of the eastern area showing “a higher level of transference from the standard language” (p.35) than German dialects found in the same region. Trudgill (1974, p.) states that while we can often find out where particular language features or innovations have begun, we cannot always explain why they have spread or stopped. This could possibly be applied to the Achterhoeks case (due to the existence of the old dialect continuum, and the convergence that must have occurred following the establishment of the political borders and push for national standardisation of Dutch), although in many cases, we can see that dialect isoglosses tend to show a relationship with territorial and political borders (Watt et al., 2014; Hinskens, Auer & Kerswill, 2008; Woolhiser, 2008; Trudgill, 1974). We can consider here the case of the Scottish/English border, which shows linguistic diversity within the towns along the border. Certain linguistic variables (such as whether coda /r/ is realised) that are perceived as indexical of “Scottishness” or “Englishness” were observed more frequently in the speech of speakers who identified with the corresponding national identity (Watt et al., 2014; Llamas, Watt & Johnson, 2009).

Regarding intelligibility between varieties of Dutch and German, speakers of Standard Dutch tend to have a better understanding of High German than they do of Low German, and speakers from the northeast border area of the Netherlands understand more Low German than do Standard Dutch speakers (Gooskens, Kürschner & Van Bezooijen, 2011). The border area that was studied is geographically more northerly than the Achterhoek, but as these areas exhibit similarities in their dialects it is reasonable to expect that Achterhoek speakers also have a good knowledge of Low German. Although Dutch is linguistically closer to Low German than it is to High German, the northeast speakers’ better understanding of High German could be a result of more widespread exposure to this type of German through the media and formal school instruction (Gooskens, Kürschner & Van Bezooijen, 2011). This can be related back to the influence of Standard Dutch on dialects – with such widespread exposure, particularly within schools, the standard form is likely to have an effect on these dialects. Auer (2017) states that the Dutch standard language has, in general, had a much

larger effect on dialects than the High German standard has within Germany, thus leading to standard convergence within the Dutch dialects.

Within the Achterhoeks dialect there has not been a lot of standardisation. Although an unofficial orthographic system exists, there are disputes over spelling rules, resulting in two or more spellings for the same words (see Section 2.5). Additionally, pronunciations and lexical items can differ from town to town (see Van Prooijs, 2011), so there is not always an agreed-upon term for a specific word which encompasses the whole region.

## **2.2. Sociolinguistic Attitudes in the Achterhoek**

The AN (General Dutch) variety is the standard variety of Dutch and, as such, the prestige dialect. The fact that Achterhoeks differs from it so strongly (particularly in its phonology) may indicate Achterhoeks' possible subjection to the more critical attitudes reserved for non-standard dialects (but, rather than simply speculating, a perception task described in Section 5.4 explores Dutch speakers' actual views of the dialect and its speakers). However, the east-west oppositions notwithstanding, it is the non-standard urban dialects that tend to be regarded more negatively, rather than the regional, rural varieties such as Achterhoeks (Willemys, 2013). Additionally, Achterhoeks speakers retain a certain pride in their dialect and maintain it at least when in conversation with their peers. Signs in Achterhoeks are seen throughout towns and on houses, suggesting the desire to retain a dialect that may be beginning to die out following the increasing changes in the language due to perhaps both standardisation and levelling.

The attitude of the Achterhoek area in general, or rather, (some of) the people who live there, may be related to its agricultural history (this is explored more thoroughly through the perception study). Non-Achterhoek residents tend to view the area as still being a farming area, and while agriculture remains to be a large industry, it has nevertheless declined over time (Hinskens, Auer and Kerswill, 2008). One participant who was asked to speak in Achterhoeks as part of the study switched to Dutch (despite Achterhoeks being his vernacular) because he thought he "should speak Dutch in front of a lady". This shows that perhaps even the Achterhoeks residents, despite having pride in their dialect, feel that it should be restricted to the area and to others within the same dialectal community, and indeed when they are in other parts of the Netherlands they make a concerted effort to speak Standard Dutch rather than Achterhoeks (thus showing that for many speakers their repertoire

contains features of both Standard Dutch and Achterhoeks). Certainly, local dialects are rarely used in areas other than their own home territories (Willemyns, 2013). A quote from an informant in a study by Hinskens (1992)<sup>3</sup> on the Limburgs dialect shows a similar attitude within speakers of other regional dialects towards Standard Dutch use:

“...we [were] also talking Dutch<sup>4</sup> because I said to myself: you’d better speak Dutch rather than dialect, because otherwise you might get beaten up” (from Hinskens, 1992, p.27).

The examples given above from both this research and that of Hinskens display an outlook that almost certainly results from the older attitudes seen in the Low Countries (and elsewhere) that varieties diverging from the standard language were seen as inferior forms that were met with negative responses (Taeldeman & Niebaum, 2013). A study of the dialect in Vorden by Boers (in Bloemhoff, 2008b) revealed that speakers will tend to use their regional variety (and in the case of Vorden, it is Achterhoeks) in informal situations, but almost never use it in formal situations. This view is echoed by another of this study’s participants (F39Terborg), who stated that she will speak Achterhoeks with her friends and family, but not if she is going to be interacting with people she doesn’t know, or if she is involved in a professional situation, such as being at work:

“It depends on who I am talking to. I speak Achterhoeks to family members, but Dutch to teachers, doctors or people I don't know in person.”

Therefore, this also shows that Achterhoeks speakers may have, to a certain extent, taken on the supposed attitudes of non-Achterhoeks speakers that the dialect is not as highly socially regarded as Standard Dutch or those (predominantly western) dialects that are more similar to Standard Dutch. This links back to a situation which also occurred in the province of Limburg (see Section 3.1), where in such domains the traditional dialect had been ousted in favour of a wholesale shift to the standard (Hinskens, 1992). There remains in Limburg a diglossic situation where both the local dialect and the standard language are used (Swanenberg, 2011). This, however, is a slightly different situation to what we see occurring in the Achterhoek due to the recognition of Limburgs as a minority language, whereas

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<sup>3</sup> The findings of this study are described in more detail in Section 3.1.

<sup>4</sup> A note by Hinskens indicates that this refers to the standard variety spoken in the Netherlands.

Achterhoeks is not officially recognised as such. This is not to say that it still could not become so in the future, as it does appear in the linguistic landscape of the country. The linguistic landscape, as defined by Landry and Bourhis (1997), is made up of the languages used in public visual information, such as street signs or billboards, and “serves as a distinctive marker of the geographical territory inhabited by a given language community” (p.25). As mentioned earlier in this section, signs written in Achterhoeks can be seen throughout the region; these signs, however, are likely to be private signs used for local businesses or displayed outside of homes. Official public signs, such as street signs or those used by government authorities (Landry & Bourhis, 1997), are written in Dutch within the Achterhoek region.

Bloemhoff (2008b) introduced a census study based on the responses of self-reporting participants. This study showed that 73% of 285 Achterhoekers surveyed believed they can speak their dialect. Of these, 60% would speak it mainly at home, perhaps if necessary in combination with Dutch. 28% spoke only their dialect at home. 88% were able to read in their dialect, and 45% frequently read in their dialect. These figures show that there was a high awareness of the dialect and its differences, but also that there were fewer speakers who actually used it regularly. Perhaps importantly, only 28% spoke Achterhoeks without any switches to Dutch. However, according to the figures in Bloemhoff’s (2008b) study, the percentages of Achterhoek residents who spoke their dialect at home made it the third most frequently spoken Low Saxon dialect in the Netherlands at the time of the study. Interestingly, it ranked behind only West-Overijssel and Twente, which are neighbouring areas, and share many features with Achterhoeks. Conversely, the Veluws dialect spoken to the west of the River IJssel ranked considerably lower in its residents’ knowledge and usage (Bloemhoff, 2008b).

There are now overall fewer younger speakers than older speakers of the Low Saxon dialects (Bloemhoff, 2008b). Unfortunately we cannot tell from Bloemhoff’s data what percentage of those are Achterhoeks speakers, but we are seeing a reduction in the number of people speaking a dialect at home. This therefore is likely to apply to Achterhoeks speakers too. Within Bloemhoff’s data, 40% of respondents who spoke only their dialect were aged 61 or over, 30% were aged between 40 and 60, and just 17% were aged between 18 and 39. Despite this, the number of those who were able to speak both Standard Dutch and their own regional dialect had *increased*. Only 12% of those aged 61 or over spoke both Dutch and their dialect,

with 35% speaking only Dutch. This suggests that there may have been the tendency to just speak one or the other, with codeswitching generally not viewed as an option. At the time of Bloemhoff's study, 22% of 18-39 year olds would speak both dialect and standard at home, but the trend was to use Dutch (at 53%) as the only spoken language at home, whereas in the 61+ group, the dialect was favoured over the standard. This trend does need to be considered alongside the fact that the idea of what constitutes a dialect may differ from person to person (Jongenburger & Goeman, 2009; Smakman & Van Bezooijen, 2002). The figures have certainly declined, yet the actual use of traditional dialect features may be even less than it was, based on participants' awareness and perception of what constitutes a dialect feature. Overall, the results of this study appear to imply a kind of code-switching within diglossia, with evidence of a gradual shift to standard usage only. We might reasonably infer that similar figures would be obtained if attention were focused solely on the Achterhoeks dialect.

### 2.3. Vowels in Standard Dutch and the Achterhoek

The Standard Dutch vowels in the Netherlands are sub-classified into short vowels (/ɪ/, /ɛ/, /ɔ/, /ʏ/ and /ɑ/), long vowels (/i:/, /y:/, /u:/, /e:/:, /ø:/:, /o:/: and /a:/:), schwa (/ə/) and diphthongs (/ɛi/, /œy/, /ɔu/ and /ʌu/) (Booij, 1995; Gussenhoven, 1992). Although classified by the aforementioned authors as long vowels, /i/, /y/ and /u/ are usually only phonetically lengthened before /r/ when /r/ occurs tautosyllabically, but are short in other conditions when transcribed phonetically (Booij, 1995; Gussenhoven, 1992; Moulton, 1962).

The distribution of vowels in Achterhoeks differs from the situation in Standard Dutch. While it appears as there are some correspondences, what actually exists are two separate phonological systems. The distribution of vowel variants across the two phonologies is in many cases predictable, and it is these cases which are the focus of this thesis. More information on the vowel systems is provided in Section 2.3.2. Represented throughout this study as the lexical set keyword PRAAT, the Dutch open front /a:/: is most commonly realised in Achterhoeks as the more retracted /ɔ:/: (Schaars, 2008); this is widely found across almost all Low Saxon dialects, not just in Achterhoeks (Bloemhoff et al., 2013a). Other lexical examples include the words *schaap* ('sheep'), *gaan* ('go'), and *allemaal* ('everyone'). Represented as HUIS and KIIJK respectively, the Dutch diphthongs /œy/ and /ɛi/ are usually realised in Achterhoeks as the monophthongs /y/ and /i/ respectively (Willemyns, 2013; Bosman & Van Orden, 1997; Van Bree, 2013; Taeldeman & Hinskens, 2013), and /œy/



sometimes corresponds lexically to /u/ in Achterhoeks following rhotics. These Achterhoek variants are also characteristic of the old dialect, as they did not undergo a process of diphthongisation as Standard Dutch did (Gooskens & Kurschner, 2009; Van Bree, 2013; Taeldeman & Hinskens, 2013). Therefore, while these forms may be the non-standard variants, they are also considered to be the older forms (Kloeke, 1927; Van Haeringen, 1960), which is often true of dialectal variants in general. It is the influence of Brabantish in particular that is said to have played a role in the eventual diphthongisation of these vowels during the process of standardisation (Kloeke, 1927; Van Haeringen, 1960), but Ryckeboer (1973) suggests that /œy/ as in *uit* ('out') could have resulted from more than one centre of diphthongisation. The first of these, completed by the end of the 16<sup>th</sup> century, was from the south of the Netherlands, where a diphthongal vowel was realised. Later, a diphthong was evident in the Hollandic area, and a separate, distinct area of diphthongisation occurred in Limburg in the south-east (Ryckeboer, 1973; Hamans, 2008).

The information in Table 3 lists dialect features as being classed as either tertiary, secondary or primary; it shows the criteria present for a dialect feature to be classed under one of these labels. Taeldeman (2006) refers to tertiary dialect features as being a "regional accent" (p.246). Tertiary features occur in rather large areas, and due to the rather low level of speakers' linguistic awareness of these features, they are difficult to suppress in speech. These features tend to be very stable, but may be subject to gradual transitions. Secondary dialect features have a higher level of linguistic awareness amongst speakers, and are distributed across a smaller geographical area, but not as small an area as primary dialect features would be. We could explain the dialectal pronunciations of the vowels in this study as being secondary features, as they cover the entire Low Saxon-speaking area, and they can be suppressed by speakers when they switch to Standard Dutch. Primary dialect features, according to Taeldeman (2006) are most susceptible to change, are found within a relatively small area, and are associated with a high degree of awareness. Taeldeman (2006, p.247) lists shibboleths as being examples of primary dialect features. Within the Achterhoek, an example of primary dialect feature may be a lexical item specific to a certain area; this feature would be easy for speakers to suppress when conversing with others from a different area of the Achterhoek, or the Netherlands as a whole.

Overall, these classifications differ depending upon the size of the geographical area where the feature is used, speakers' degrees of awareness, the potential for linguistic change, and

the difficulty or ease of suppression of the feature. Tertiary dialect features cover the largest area, speakers have a low degree of awareness, there are few changes, and features are difficult to suppress. Conversely, primary dialect features cover a small area, speakers have a high degree of awareness, there is a strong likelihood of linguistic change, and features are easy to suppress.

TERTIARY (accent)	SECONDARY	PRIMARY
– a relatively big area	– intermediate	– a relatively small area
– gradual transitions	– intermediate	– sharp transitions
– very stable	– changes are possible	– strong liability to change
– if any changes, then very slowly, gradually in all respects (distance, lexically, intermediate forms)	– changes are more gradual in nature	– changes are absolute in all respects (distance may be big, no intermediate forms)
– a very low degree of awareness (if any)	– an intermediate degree of awareness	– a very high degree of awareness
– no attitudinal engagement with respect to the home form	– no attitudinal engagement with respect to the home form	– a high attitudinal markedness
– no <i>Ortsloyalität</i>	– (almost) no <i>Ortsloyalität</i>	– high (chance of) <i>Ortsloyalität</i>
↓	↓	↓
difficult to suppress	not difficult to suppress	easy to suppress

Table 3: Distinction between Primary, Secondary and Tertiary dialect features. Based on these descriptions, the vowels being studied would be considered secondary dialect features. Table reproduced from Taeldeman (2006, p.247).

Regarding the vowels in the Achterhoek that are being considered in this study, Table 3, reproduced from Taeldeman (2006, p.247), explains them as being secondary dialect features (as stated above) which although noticeable to both speakers and non-speakers of the dialect, may possess less salience than primary dialect features. This is because, despite their degree of attitudinal markedness (see Section 6.7), the vowels are indicative of a speech variety that is not Standard Dutch but is also not confined to only the area of the Achterhoek, being marked features of other Low Saxon and some Low Franconian dialects as well. What this suggests is that they may be more resistant to change than other dialect features, this being dependent on many external factors (Taeldeman, 2006). Therefore, they represent an interesting field in which to ascertain the extent of levelling or standardisation processes (see Sections 3.1 and 3.3 for further descriptions of these processes) occurring in this area of the Netherlands.

We have seen, then, that Achterhoeks has a number of vowels which differ from, but are still linked to, the vowels of Standard Dutch. The next section introduces the Hollandse Expansie Theory (Kloeker, 1927), which further explains some of these links.

### **2.3.1. The Hollandse Expansie Theory**

The work of Kloeker (1927) is important, as little research had been done into the north-eastern dialect area previously, although there existed a description by Bosworth in 1848 of Achterhoeks as being the closest Dutch dialect to German. Kloeker's work is especially relevant to this current research, as he made observations of how the older monophthongal vowels [i] and [u] became [ɛi] and [œy] respectively in Standard Dutch. Kloeker's theory is known as the Hollandse Expansie Theory (or Dutch/Hollandish Expansion), where he details two possible expansions which resulted in the diphthongal Standard Dutch variants of the older forms.

To begin with, it is noted by Van Haeringen (1960) that the diphthong [ɛi] is found in the south-east and the north-west dialects of the Netherlands, but the monophthong [i], from which [ɛi] was derived by diphthongisation, has been preserved elsewhere. This includes the north-east Low Saxon-speaking areas, of which the Achterhoek is a part. This diphthong, as it is represented in Standard Dutch, originally developed from the West Germanic monophthong [i], which is still found in the eastern dialects today (Goeman & Wattel, 2006). The other diphthong relevant to Kloeker's theory is [œy] (as transcribed by Kloeker), which today would be transcribed as [œy] in Standard Dutch. This vowel tends to be found in the same areas as [ɛi] (Van Haeringen, 1960; Bloemhoff et al., 2013a), but its dialectal counterparts have a more complicated relationship and history, as this section will explore.

Kloeker's (1927) theory, known as the Hollandse Expansie theory, suggests two expansions, and states that the changes in vowels did not happen for phonetic reasons, but rather as the consequence of a social factor: prestige or perceived superiority. There are a number of ideas about where the change could have spread from (Van Reenen, 2006), yet Flanders and Brabant tend to be common suggestions (Kloeker, 1927; Bloomfield, 1933; Van Haeringen, 1960; Hamans, 2008). Under the Hollandse Expansie theory, there are two expansions that eventually resulted in the diphthongisation of the West Germanic /u/ vowel in the Hollandic area, the first of which perhaps invites more scepticism than the second. The first expansion consisted of a group of sailors from Dutch provinces to the west of the capital, who brought a

fronted version<sup>5</sup> of the back vowel /u/ in to the centre and east of the country. This group came from the Hollandic parts of the country, but all were “not necessarily from Amsterdam” (Hamans, 2008, p.373). They held some form of prestige, which is Kloeke’s explanation for why their language features spread across to the central and eastern parts of the country; however, they did not hold as much prestige as those responsible for the second expansion: upper class merchants from the city of Antwerp, who came to Holland around the end of the 16<sup>th</sup> century. They spoke a prestigious upper-class Brabantine dialect, in which diphthongisation of [i] and [u] was already a common feature (Hamans, 2008). These people settled in and around Amsterdam, and other larger towns in Noord-Holland, and the Hollanders adapted their pronunciations to those of the new arrivals, perhaps perceiving the newcomers’ speech to be more prestigious than their own local ways of speaking (Van Haeringen, 1960). Although [y] had previously been the prestige form, it was being succeeded by [œy] throughout the 16<sup>th</sup> and 17<sup>th</sup> centuries. As the eastern dialects began to take up [y] instead of [u] in the 20<sup>th</sup> century, Bloomfield (1933) wrote:

“...the more remote local dialects are taking up a feature, the [y:] pronunciation, which in more central districts, and in the more privileged class of speakers, has long ago been superseded by a still newer fashion.” (p.331).

Kloeke uses the examples of the words *huis* and *muís* to show how (during his time of writing in 1927) there was varied use of variants of the standard [œy], including areas where both [y] and [u] were found. Kloeke attributes the differences between the vowel in these words to frequency of use, in that *huis* is used more regularly in conversation than *muís*<sup>6</sup>. In his map of the vowels in *muís* and *huis* in Figure 6 (reproduced from Bloomfield, 1933, and obtained from the Meertens Instituut), it is shown that in this area of the Netherlands this vowel [u] was previously being used in the Low Saxon dialect speaking areas as the usual pronunciation<sup>7</sup>. Most of the Dutch-speaking area, however, had moved to the diphthongised

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<sup>5</sup> The vowel [y] or [y:] (Kloeke, 1927; Hamans, 2008).

<sup>6</sup> However, it should also be noted that other researchers, such as Wieling, Nerbonne and Baayen (2011) found the opposite to be true: that more frequent use led to less change.

<sup>7</sup> Some words, such as *muís* (‘mouse’) retained the older [u] vowel in the eastern Netherlands for longer than others, such as *huis* (‘house’). However, where [y] eventually diphthongised to [œy] in Standard Dutch, a version of the monophthong remained in the east

pronunciation. The map shows four different areas of interest, to use the description provided by Hamans (2008):

- “1. a western – central area where both words have a diphthong (*muīs/huīs* [mœys]/[hœys])
2. an eastern area where both forms still show the original Wgm. û<sup>8</sup> (*moes, hoes*)
3. a central part where both forms have a so called palatalized [y:] (*muus, huus*)
4. an intermediate area in the eastern part of the country where it still is *moes*, with an unshifted Wgm. û, but where *huus* has been palatalized to [y:].” (p.370).

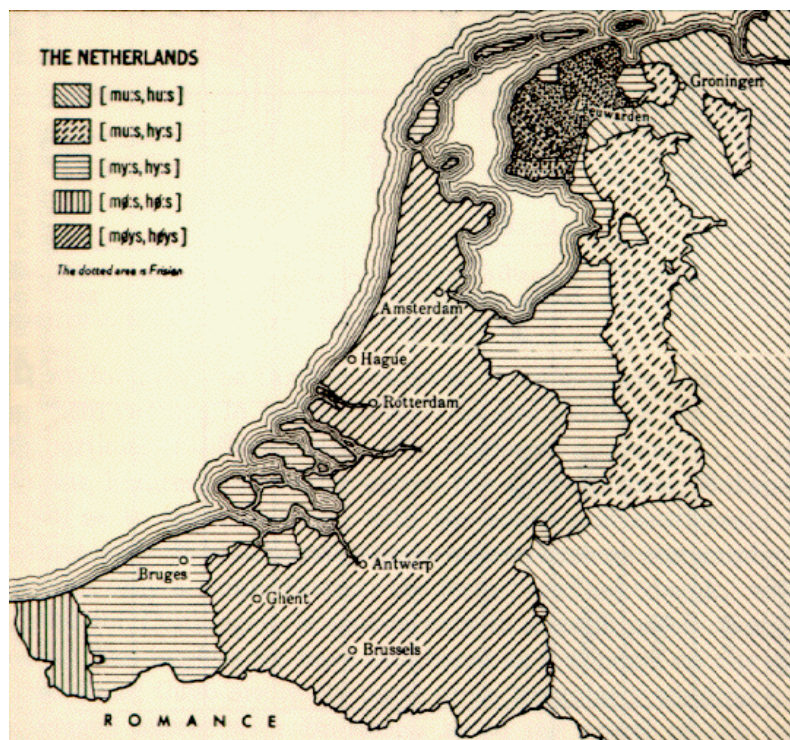


Figure 6: Kloeke's map of pronunciations of the vowel in "huis" and "muīs" in the Netherlands and Belgium (reproduced from Bloomfield, 1933, obtained from the Meertens Instituut, 2013-2016)

From the 16<sup>th</sup> and 17<sup>th</sup> centuries, the west and the immediate areas around Amsterdam had thus become the centre of prestigious speech, according to the Hollandse Expansie theory.

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<sup>8</sup> “Wgm.” is used to mean “West Germanic”.

Bloomfield (1933) suggests that the change from [u] to [y] possibly originated in Flanders, and thus spread across a large area of the country, which now recognises a diphthong as its standard variant. Yet its spread to the east was hampered by a similar change occurring over the border in Germany at the same time. Bloomfield (1933) explains:

“Whoever was impressed by the Hollandisch official or merchant, learned to speak [y:]; whoever saw his superiors in the Hanseatic upper class, retained the old [u:]. The part of the population which made no pretensions to elegance, must also have long retained the [u:], but in the course of time the [y:] filtered down even to this class.” (p.330).

There have, of course, been critics of Kloeke’s *Hollandse Expansie* theory, and proponents of new ideas. Van der Sijs (2004) states that the diphthong [ɛi] in Antwerp had actually been lowered to [ai] by the time of the migration of inhabitants of that area to Holland in the late 16<sup>th</sup> century. This means that the speech of these migrants could not have formed the basis for the standard diphthong, as the vowel they would have brought with them had already changed from its earlier pronunciation (on which the Dutch diphthong is said to be based, according to the earlier theories). Hamans (2008) cites ideas from which it is suggested that the provinces of Holland underwent quite rapid urbanisation during the 17<sup>th</sup> century, and so this created a mass contact situation between a number of dialects. This subsequently led to a process similar to that occurring in English towns such as Milton Keynes (see also Kerswill, 2002; Williams and Kerswill, 1999), rather than a clear-cut prestige vs. non-prestige variant. And, while not criticising the original work, Van Reenen (2006) instead suggests the variation was patterned across religious differences (rather than class, as outlined above by Bloomfield, 1933). He found that, during the 17th century, some 100 or so years after Protestantism had arrived from Germany and France to the Netherlands under the influence of Martin Luther and John Calvin (Marynissens & Jansen, 2013), Catholics were retaining the use of the older [u], whereas Protestants had moved towards the newer [y]. It should be noted, however, that the religious and class differences may not have been mutually exclusive.

Nevertheless, while researchers do not necessarily agree with every aspect of Kloeke’s work, his studies and theories are universally regarded as important in analysing the history of the Dutch language and its many dialects. His research was among the first of its kind in the area of Dutch sociolinguistics, and will likely be referred to (and debated) for a long time to come.

### 2.3.2. Vowel Systems and History

As the research in Sections 2.3 and 2.3.1 shows, the vowels of Achterhoeks are perhaps the most recognisable features of the dialect, which easily distinguish it from the standard variety of Dutch. This study will focus on the vowels described in Chapter 2.3 above, and how they are realised in Achterhoeks today. Table 4 lists some of the more common differences between the Standard Dutch and Achterhoeks phonological systems but it does not claim to be an exhaustive list. Collins and Mees (2003) have developed keywords similar to Wells' (1982) lexical sets, in order to describe the vowels in question. These keywords, where they have been developed, are included in Table 4. Due to the differing vowel system of Achterhoeks to Standard Dutch, however, some of these keywords are not applicable in describing certain Achterhoeks vowels (which vary in different phonological and syntactic environments in the way Standard Dutch vowels do not). Here, I have therefore developed my own keywords to be used alongside those from Collins and Mees which show the difference between the distributions of vowels within the two phonological systems. A gloss is included alongside these keywords. It is important to consider that the table is conceptualising two dialects with separate systems, and does not suggest that each time a sound occurs in one dialect, that it will always correspond to the same sound in the other dialect. Rather, it represents the sounds in each dialect for the keywords supplied by me, and while we can expect some degree of parallel similarities, this does not occur every time due to lexical and orthographical variation, and it is therefore not possible to list every instance of situations where the vowels of each system will differ.

Keyword (Collins and Mees, 2003)	Keyword (Pattison)	Dutch	Achterhoeks
LA	KAART* (map, card)	/a:/	/a:/
-	PRAAT* (talk)		/ɔ:/
-	KAAS* (cheese)		/e:/, /i/
-	PAARD* (horse)		/iə/ <sup>9</sup>
ZEE	LEPEL (spoon)	/e:/	/ɛ:/ ; /ɛ/ <sup>10</sup>
MEI	KIJK* (look, watch)	/ɛi/	/i/
ZIE	FIETS (bicycle)	/i/	/i/ ; /ɪ/
LUI	HUIS* (house)	/œy/	/y/ ; /u/ <sup>11</sup>
NU	VUUR (fire)	/y/	/y/
MOE	KOE (cow)	/u/	/u/
ZOT	VOS (fox)	/ɔ/	/ø/
-	DORP (village)	/ɔ:/	/a/ ; /ɑ/
-	VOOR (for)	/ɔ:/ <sup>12</sup>	/ø:/
-	LOOP (walk)	/o:/	/ø:/
ZET	WERK (work)	/ɛ/	/ɑ/ <sup>13</sup>
KOU	GOUD (gold)	/ʌu/ ; /au/	/ɔ/

Table 4: This table shows common vowel correspondences in the separate phonologies of Standard Dutch and Achterhoeks (Collins and Mees, 2003; Groeneveld et al., 2015).

<sup>9</sup> When preceding /r/, otherwise /i/ or /e:/ as in KAAS.

<sup>10</sup> May be realised as either long or short.



When describing the relationship between the Dutch and Achterhoek vowels considered within this study, we find that the Achterhoeks /ɔ:/ is usually pronounced in words where Standard Dutch uses /a:/ (these vowels fall within the PRAAT lexical set), but the two systems are separate. The largely shared lexicon is distributed across the systems in often predictable (but sometimes unpredictable) ways. As such, /e:/ or a higher /i:/ is also found in Achterhoeks where one may expect to hear /a:/ in Standard Dutch pronunciations (the KAAS lexical set), and the Achterhoeks lexical items may use different vowels for the same word (for example, variation in the height of the vowel in *kaas*). An example of a predictable distribution is found in the KIJK lexical set where the Achterhoeks /i/ will always (presumably) match the Standard Dutch /ɛi/. Similarly, the Achterhoeks /u/ or /y/ are used where Standard Dutch has /œy/. The vowel /u/ exists in Standard Dutch as well, in words such as *koe* ('cow') and *bloem* ('flower'), as does /y/ in words such as *duur* ('dear', 'expensive'). However, the Achterhoeks /u/ and the Standard Dutch /u/ are not the 'same' phoneme, even though they sound similar, since they mainly belong to different lexical sets. The history of the back vowel in Standard Dutch is considered later on in this chapter. Thus, in the discussion of the results of the study, the keywords developed will be used to describe the vowels in question (those being PRAAT, KAART, KAAS, PAARD, KIJK, and HUIS).

It is useful to refer to Weinreich's (1953) theory on interference to determine the relationship between the two language systems, and why some speakers may on occasion use Standard Dutch vowels, rather than Achterhoeks vowels. By Weinreich's definition, the two language systems are in contact with one another; with speakers who alternate between Standard Dutch and Achterhoeks pronunciations, there may be interference from one system on the other. This could manifest as, for example, an altered vowel.

As defined by Weinreich, when a speaker has regular conversions between two languages or varieties to subconsciously refer to, there is likely to be less interference from one language (or variety) to the other. However, problems may be presented where irregular correspondences exist. For example, consider the KIJK vowel: in Achterhoeks, most occurrences of /i/ will correspond to /ɛi/ in Standard Dutch, making switching between the

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<sup>11</sup> (Usually) when following /r/, but may also be found in other positions.

<sup>12</sup> No keyword available, described as a marginal vowel used in loanwords (Collins & Mees, 2003).

<sup>13</sup> When preceding /r/, otherwise /y/.

two systems straightforward; however the /a:/ of Standard Dutch presents as less regular in Achterhoeks, where it patterns across four different lexical sets (PRAAT, KAART, KAAS and PAARD). It cannot always be predicted which conversion will occur (although the PRAAT set appears to be more common than KAART, KAAS or PAARD), although phonological or syntactic features (which are described later on) often govern the Achterhoeks realisations, and so a further knowledge of these is required.

This vowel variation within the Achterhoek has similarly been noted by Bloemhoff et al. (2013a) who explain that:

“Most vowels show some examples of deviant distribution, which are either context sensitive or can be ascribed to special local or regional developments” (p.463)

The results from the series of recordings from 1979 by Leendert van Prooije (which were later used for the basis of his book *De Vakleu en et Vak*, translated as *The Professionals and their Profession*) show an example of one of the above anomalies, if we are to follow the assumption that (when considering Standard Dutch /a:/) vowels corresponding to the PRAAT set are more common in Achterhoeks than those in the other sets. This is observed, for example, in the word *paard* (‘horse’), or *peerd* as it is written in the dialect. In traditional Achterhoeks the word is, predictably, found in the PAARD lexical set; it is pronounced /pi:ət/ (although /r/-insertion may also be heard due to variability in the rhotic consonant in Dutch). Here we see Achterhoeks’ similarity to German in that this pronunciation is more consistent with its High German equivalent *Pferd*<sup>14</sup>, rather than the Standard Dutch *paard*. This pronunciation is perhaps a leftover remnant of the older German-Dutch continuum (where Achterhoeks fits as a Low Saxon dialect; see Section 2.1), such that the vowel is unrelated to those which follow either Dutch /a:/ or the Achterhoeks /ɔ:/ pronunciation (in words which belong to the PRAAT lexical set). However, it is noted by Scholtmeijer (2008) that when this [iə] pronunciation occurs it tends to be when the vowel precedes a rhotic, such as in *kaars* (‘candle’). Donaldson (1983) mentions the noun *aarde* (‘earth’) and the prefix *aarts-* (‘arch-’), in addition to *paard* (all of which could be expected to be pronounced [iə] in

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<sup>14</sup> The /pf/ and /f/ of German correspond to /p/ in both Dutch and the Low Saxon dialects, a result of the High German Sound Shift, or Grimm’s Law (Nijen Twilhaar, 2003; Willemyns, 2013; Brachin, 1985).

Achterhoeks), as cognate with the German *Erde* and *Erz-* respectively. As such, these words are included in the lexical set PAARD.

One explanation for the pronunciations of these words is that they descended from a different older (perhaps Germanic) vowel: this is perhaps *ĕ* (a short mid front vowel) as opposed to *â* (a long open central vowel) (Donaldson, 1983). The vowel *â* is from which we find the vowel /a:/ in words such as *schaap* ('sheep'), which are pronounced in Low Saxon dialects with a back vowel /ɔ:/ (ie. the PRAAT set). Yet we do not find this with all /a:/ vowels preceding rhotics: the vowel in *kaart* is pronounced in Achterhoeks as it would be in Standard Dutch, although this is more likely attributed to the fact that it is a loanword originally from the Latin *carta*<sup>15</sup> (Van der Krogt, 2015), and so these words belong in a different lexical set. There do exist in the Achterhoek words which use what we may consider to be the Standard Dutch vowel, rather than the dialectal vowel, and these tend to be loanwords (Bloemhoff et al., 2013a). Words such as *maar* and *naar* also use the more well-known Achterhoeks back variant /ɔ:/ (corresponding to the PRAAT lexical set), regardless of whether the final /r/ is overtly pronounced. To build on Scholtmeijer's observation, we could hypothesise that the vowel is more likely to be realised as the fronted and diphthongised variant (corresponding to the PAARD lexical set) if rhoticity is more likely to occur, but it could also go as far back to a split in pronunciation within the Old Saxon vowels of its ancestral language.

Another example can be observed in the lexical set KAAS. In Standard Dutch, the vowel is realised as [a:], but is raised to [e:] or [i:] in Achterhoeks, as mentioned earlier. This could perhaps be caused by contact and influence with neighbouring dialects. Words such as this that exhibit *ae* in the orthography (realised close to [æ], a vowel which does not typically occur in Standard Dutch) in the neighbouring northern dialect of Twents tend to be raised to *ee*<sup>16</sup> ([e:]) in Achterhoeks (Broekhuysen, 1950), and this could account for the deviation from the norm here. These raised examples, as seen in *kaas*, could also be attributed to the process of Westphalian breaking, which refers to the slight diphthongisation of some short vowels

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<sup>15</sup> It may not have entered the language directly from Latin, however. It may have come in via French and from there via Low German or Old Saxon.

<sup>16</sup> Here I have replicated the orthography as represented in the original reference.

into short diphthongs<sup>17</sup> (Lass, 1994), and then a further de-Westphalianisation process to a more close vowel, as suggested by Heeroma (1963). Bloemhoff et al. (2013a) describe this process of de-Westphalianisation as occurring in different phases following the introduction of the short diphthongs created by breaking:

“(1) monophthongisation of short diphthongs, resulting in very short open vowels; (2) a merger of these open vowels with somewhat more close vowels; (3) lengthening; (4) further closing” (p. 467)

De-Westphalianisation could account for the dialectal vowel in *kaas*, whereby it can be seen as a leftover remnant from this process. Bloemhoff et al (2013a) further illustrate this hypothesis with an example from Stellingwerfs, another Low Saxon dialect, which is found in the province of Overijssel: the dialect word *waeke* (‘guard’; *waak* in Standard Dutch) is pronounced [vɛ:kə] which would historically have been [vi:əkə]. Changes can also be seen in the word for *cheese*: for example, from the Old Saxon *kesi*, to *keisi* after the breaking process, to *kees/e* after going through de-Westphalianisation. It needs to be noted, however, that this theory should be considered alongside the assumption of the diphthongised vowels (such as *paard* / *peerd*) originating from a different West Germanic vowel or borrowing, and therefore not undergoing the process. Also, i-umlaut is present in the German cognate for *kaas*, which is *Käse* (Donaldson, 1983); this is a pronunciation which we hear within the Achterhoek. Both of these considerations could further suggest a German influence on these vowels. Of course, the German cognate would have also resulted from the same process.

The process of de-Westphalianisation, as described above by Bloemhoff et al. (2013a), does not account for the back vowel in Achterhoeks, nor the centralised diphthong, due to its association with front vowels. However, taking into account the fact that Achterhoeks did not contribute to the standardisation of Dutch, it is more likely that these differences from Standard Dutch (the back vowel and centralised diphthong) are related to the Old Saxon ancestor vowel. An example of how some of these vowels developed is given later in this chapter. Therefore, it is also necessary to spend a short time examining the differences that the Achterhoeks orthography exhibits from Standard Dutch (see Section 2.5). These words

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<sup>17</sup> Bloemhoff et al. (2013a, p.464) give the example of *i:ë*, as found in neighbouring Twente. This diphthong developed from the short /ɛ/ of Old Saxon, so that Old Saxon *esil* (donkey) became *i:ëzel* [‘iezəl] in south-eastern Twents.

are descended from Old Saxon and Low German, which are cousins to but not direct ancestors of Modern Dutch, so it cannot be said that one influenced the other, unless this influence had occurred by contact. Any moves towards Standard Dutch vowels over the course of this real-time study would indicate the more recent advances towards standardisation.

The difference between the Standard Dutch /œy/ and a monophthongal /y/ or /u/ (the HUIS lexical set) has already been covered in Section 2.3.1, with the discussion of Kloeke's (1927) *Hollandse Expansie* theory. It is, as previously noted, viewed as an east-west distinction, with the eastern realisations connected to Old Germanic forms. The diphthongisation to [œy] in Standard Dutch began later. Van Bree (2013), referring to the *Hollandse Expansie* Theory, says of its spread:

“It is assumed that the *uu*<sup>18</sup> in *huus* and comparable words penetrated into the west from the south and that it spread from the west, especially from Amsterdam, to the east across the *Zuiderzee* (the present *IJsselmeer*) under influence of maritime contacts (*bargemen*; *Holland expansion*)” (p.107).

We should now also look further at the vowel in words such as *koe* or *moeder*, as it becomes relevant in the comparison with the use of the back vowel in *Achterhoeks* where the diphthongisation to [œy] is observed in Standard Dutch. This vowel was already briefly considered; however, some of its earlier history needs to be explained. The vowel which eventually became the Standard Dutch diphthong [œy] (orthographically *ui*) developed from original Germanic vowel *û* which became *ÿ* – phonetically [y] – through the Middle Dutch era (Donaldson, 1983), but the words orthographically represented with the grapheme *oe* – phonetically [u] – took somewhat of a different historical path. These words originally developed from the older Germanic *ô*, which became *û* after the original Germanic *û* had been fronted from [u] to [y] in the Hollandic dialects, in a process which was complete by the tenth century (Donaldson, 1983). These words originating from the Germanic vowel *ô* (which we could think of as the “new /u/ words” following the shift) did not then undergo further vowel change to [y], even as the process of diphthongisation was taking place across the Netherlands. Although it is possible that these words containing the grapheme *oe* may have been borrowed into Standard Dutch from the eastern dialects of the Netherlands (Donaldson,

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<sup>18</sup> Phonetically [y].

1983), it is suggested by Kloeke (1927), and also by Van Haeringen (1960), that these words do not exist as borrowings from the east but rather that the vowel is a relic of a time when [u] was used more frequently in the Hollandic area. Thus, the vowel [u] in Dutch, which corresponds with the spelling *oe* and the lexical set KOE, is not related to the [u] of the eastern dialects, the latter corresponding to the lexical set HUIS in words with the spelling *ui* (*uu* or *oe* in the eastern dialects such as Achterhoeks). It continues to be pronounced as the back vowel [u] both in Standard Dutch and the dialects; they do not make any obvious distinctions. The HUIS vowel therefore has been fronted to [y] in Achterhoeks, diphthongised to [œy] in Standard Dutch, and remains unchanged in Low German.

We can also consider the i-umlaut, briefly mentioned above in relation to the German *Käse*, which is the fronting of a back vowel, or the raising of a diphthong usually due to /i/ or /j/ in the following syllable, and which came in to the dialect from the east, from beyond what is now the border with Germany. It is so-named because the stressed vowel in a word is pulled in the direction of the following /i/ (Donaldson, 1983). The umlaut as a linguistic feature is not commonly seen in Standard Dutch, but is retained in some words in the eastern dialects, including Achterhoeks in some limited cases. It is perhaps most apparent in the Twents dialect of Overijssel, north of Gelderland and the Achterhoek. It is most evident in diminutives: consider the diminutive *pöältje* ['pøltjə] from *poal* ('pole'), which exists in Achterhoeks, and which would be written as *paaltje* in Standard Dutch (Van Bree, 2013). The diminutive version shows umlauting due to the presence of /j/ in the following syllable.

The Dutch diphthong [ou] is realised as [ol] in the eastern dialects; this realisation is a preservation of the older form. It is a marked dialect feature of this region that occurs before dental consonants, and is reflected in Van Bree's (2013, p.103) isogloss map, reproduced in Figure 7. This difference is not considered as part of the study, but is another recognisable feature of Achterhoeks.

The map shows a number of isoglosses, including the monophthong and diphthong distinction in the orthographic Standard *ij* (which is associated with the KIJK lexical set). This isogloss can be clearly seen along line 3 separating the eastern dialects' monophthong from the western and central Netherlands' diphthong. Interestingly, we also see the same monophthongisation in Zeeland and the south-west of the Netherlands, occurring in some south-western dialects, along line 4 (which perhaps gives further support to the Hollandse Expansie theory of the diphthong entering into the central area of Amsterdam, and spreading

from there). But we also see the [ou] / [ol] isogloss (which I have referred to as the GOUD set), along lines 6, 7 and 8, which sees the latter pronunciation heavily concentrated in the east, and a further distinction seen within the Achterhoek area itself where there is always /l/-retention, but the vowel itself differs between [a] and [o]. While the northern Achterhoeks speakers are likely to use [ol], in the southern Achterhoek the vowel can be lowered, giving [al] (Van Bree, 2013). Therefore, there is a split in Achterhoeks speakers pronouncing *koud* as either *kold* or *kald*, but there remains still the consistency in the use of the following /l/ as an eastern dialect feature.

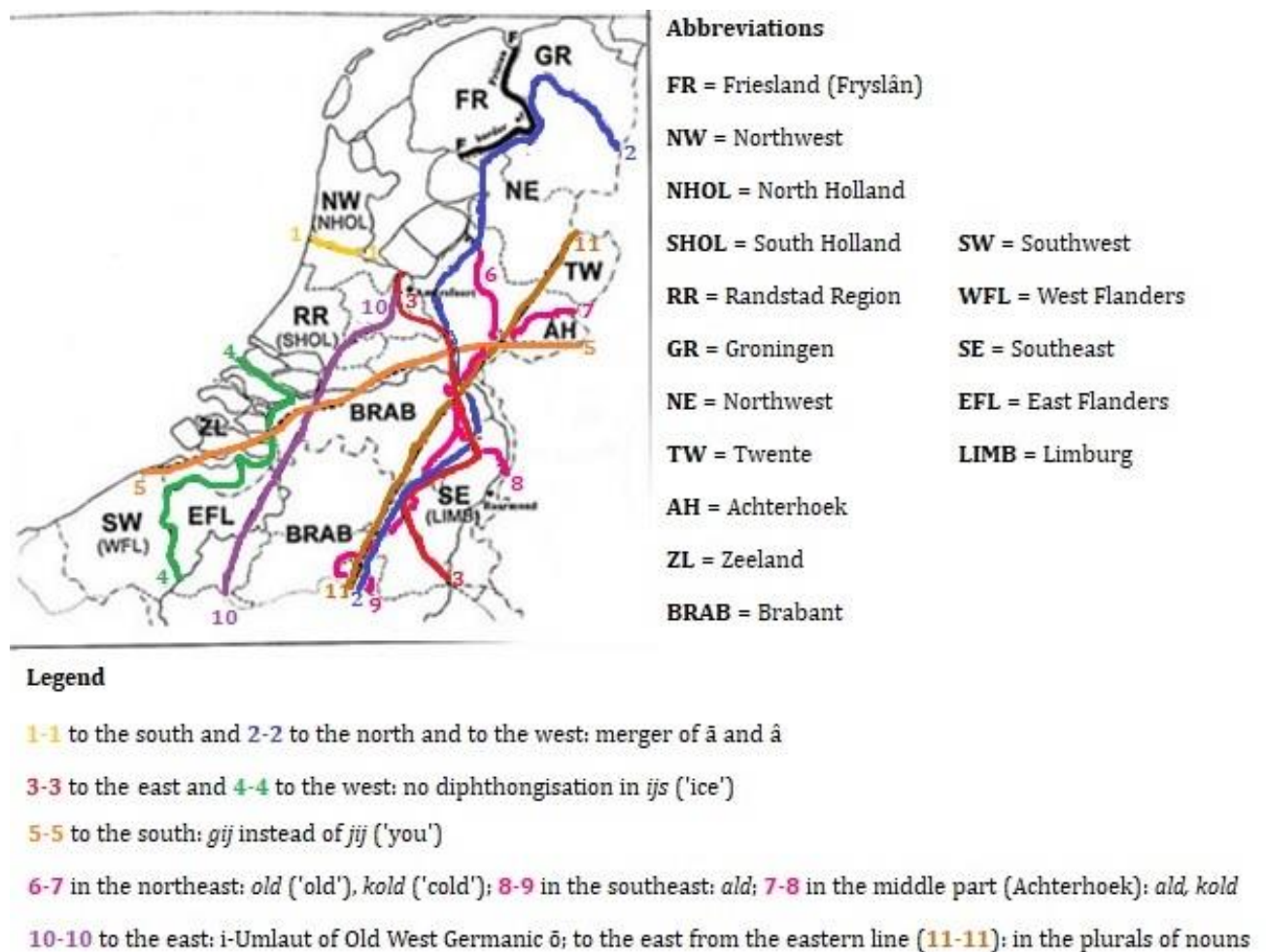


Figure 7: Isoglosses of phonological and morphological features of different regions in the Netherlands (reproduced from Van Bree, 2013, p.103)

This pronunciation is in fact of Old Germanic origin, which we see in German and English, but it developed into [ou] in the western dialects of the Netherlands (Nijen Twilhaar, 2003; Bloemhoff et al., 2013a). Therefore, like [i] and [u], it is an older pronunciation than the one we hear in Standard Dutch. The vowel tends to be shorter in the Achterhoeks dialect, realised

as [ɔ] or [o], whereas there is likely to be a lengthened variant in the northern Low Saxon-speaking provinces (Bloemhoff et al., 2013a).

It is noted by Goeman and Wattel (2006) that /i/ as in KIJK diphthongised in many dialects (such as its realisation in Standard Dutch) following the Hollandse Expansie theory, yet it has remained a monophthong in others. As briefly described above, an isogloss descending from the west of Amersfoort down to the south of Limburg forms an east-west boundary, where to the east the vowel [ɛi] (such as in *ijs*) is not diphthongised (Van Bree, 2013; Bloemhoff et al., 2013a). The area around Nijmegen (marked as a cross on the map in Figure 8) in the Achterhoek/Liemers region (see Section 2.6 for a further explanation of this) is also involved in this isogloss boundary (Van den Berg & Van Oostendorp, 2012). This is evident in the Achterhoek (and other eastern border dialects) realisation of [ɛi] as [i], as described above. The map in Figure 8, reproduced from Donaldson (1983, p.147), and originally designed by Weijnen in 1966, shows the areas where the vowel has not diphthongised (in grey). I have marked with a circle the approximate region of the Achterhoek within the province of Gelderland.

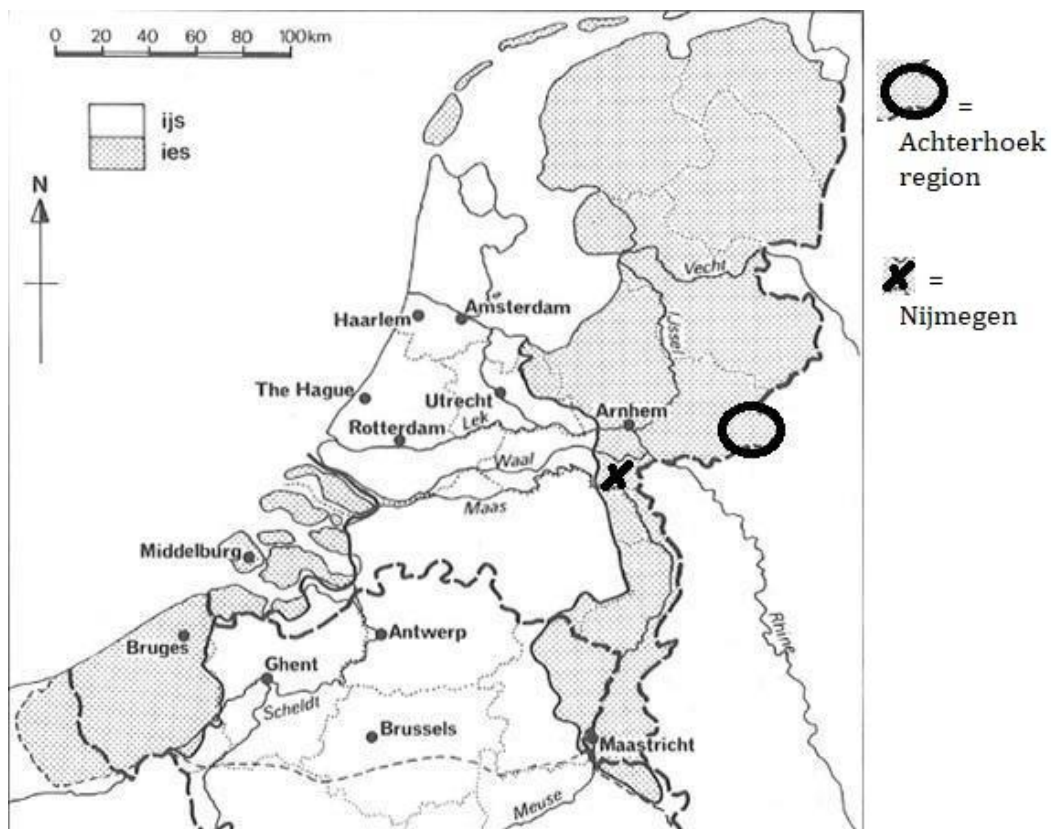


Figure 8: Map showing where [i:] has diphthongised (areas shown in grey). The cross indicates the location of the town of Nijmegen, and the circle indicates the location of the Achterhoek region. Reproduced from Donaldson (1983, p.147).



It of course then needs to be noted that /i/ exists in Standard Dutch as well, but these can be traced back to separate historical developments, and consequently a different lexical set (referred to as FIETS). Bloemhoff et al. (2013a) describe this phenomenon, and how the differences can be related back to the original Old Saxon sounds. Firstly, in the KIJK lexical set, where the vowel is realised as [i] in the Low Saxon dialects, including Achterhoeks, we see that in Standard Dutch it has diphthongised to [ɛi]. However, where the vowel occurs before the consonants /v/, /z/, /ɣ/ and (in some cases) /r/, it is represented as a long [i:] in Low Saxon, and has diphthongised in Standard Dutch into a longer diphthong. There is an exception to this, however. Due to the variable nature of /r/, there are also some instances where there is no difference between the Low Saxon and Standard Dutch vowels preceding /r/, such as in the word *bier* (where both exhibit a long [i:]). In these cases, it is reflected in the orthography of Standard Dutch as *ie*. These vowels can be traced back to the Old Saxon vowel *î*, a historically long vowel.

However, Bloemhoff et al. (2013a) write that the short [i] in Standard Dutch (as in FIETS), also represented orthographically as *ie*, did not develop from the Old Saxon *î*. This is also supported by the fact that Standard Dutch developed from the Franconian, not Saxon, dialects. Therefore, the [i] of Standard Dutch (as in FIETS) cannot be considered to be related to the [i] of Achterhoeks or other Low Saxon dialects (as in KIJK), as they did not develop from the same Old Saxon vowels. The same vowel does also occur before the rhotic consonant in both Standard Dutch and the Low Saxon dialects; this does not suggest a historical relationship, however, but rather just the use of the same vowel pronunciation. However, as shown in Table 4, there is a relation between the [i] of the Low Saxon dialects and the diphthongised variant in Standard Dutch (the KIJK vowel), but these vowels developed from different Old Saxon vowels in different positions. As stated earlier, /i/ in Standard Dutch is categorised as a long vowel, but is only really lengthened when it precedes /r/, such as in *bier* (followed by a schwa off-glide in order to form the diphthong which we also observe in *peerd*<sup>19</sup>, the Achterhoeks realisation of *paard*). In other contexts, it is usually short, so this represents the majority of /i/ occurrences in Standard Dutch. Here, it is said to develop from the Old Saxon *io*, which was raised from the West Germanic *eo*, or in the case of loans, from the Old Saxon *ē* (Bloemhoff et al., 2013a). The Low Saxon counterparts here exhibit various pronunciations, including that of a more lowered /ɪ/, but perhaps the most

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<sup>19</sup> Unofficial dialect spelling

common realisation in Achterhoeks would be something similar to /e:/, such as in *brief* (letter), represented orthographically as *breef*. A full table explaining the relationship between these vowels, and an accompanying map, both reproduced from Bloemhoff et al. (2013a, p.459), are included as Table 5. It should additionally be noted here that although the /i/ (or FIETS) vowel of Standard Dutch is not being considered as part of this research, it is important to have explored it here due to its different relationship to the KIIJK vowel, also pronounced as [i] in Achterhoeks.

Old Saxon	Low Saxon <sup>20</sup>	Low Saxon <sup>21</sup>	Standard Dutch	Gloss	SD Spelling
<i>î + r</i>	/bi:ər/	/bi:ər/	/bi:ər/	beer	<i>ie</i>
<i>î + stops</i>	/bitn/ , /ɣripn/	/bitn/ , /ɣripn/	/bɛitə(n)/ , /ɣrɛipə(n)/	bite, grip, catch	<i>ij</i>
<i>î + v, z, g, r, and (dropped) d</i>	/wi:zn/	/wi:zn/	/wɛi:zə(n)/	point out, show	<i>ij</i>
<i>io (&lt; WGm. eo)</i>	/di:p(ə)/	/dɪ:p(ə)/ , /daip/ , etc	/dip/	deep	<i>ie</i>
<i>ē (in loans and elsewhere)</i>	/bri:f/	/brɪ:f/ , /brɪ:if/ , /brai:f/ , etc	/brif/	letter	<i>ie</i>

Table 5: The development of different Old Saxon vowels in Low Saxon and Standard Dutch (table reproduced from Bloemhoff et al., 2013a, p.459).

<sup>20</sup> Includes areas to the west of Line 2 on the accompanying map, such as Eastern Veluwe, Stellingwerf, South-west Drenthe and West Overijssel

<sup>21</sup> Includes areas to the east of Line 2 on the accompanying map, including the Achterhoek.

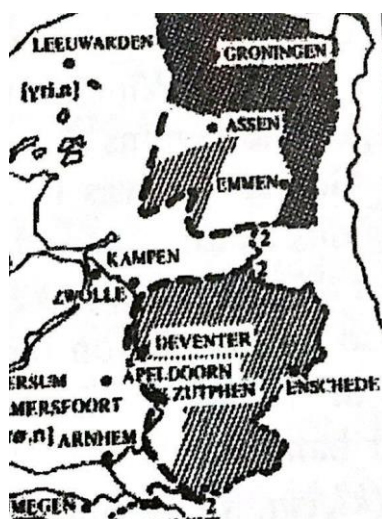


Figure 9: Accompanying map for Table 5, showing the location of Low Saxon demarcation referred to in the table and corresponding footnotes. Reproduced from Bloemhoff et al. (2013a, p.459)

## 2.4. The Rhotic Consonant

As stated by Sebregts (2015), phonological literature considers the Dutch language to have only one /r/ phoneme. However, as detailed throughout his study, and others detailed below, there is large allophonic variation observed in this consonant. Many studies of the Dutch language and its dialects have focussed on its various pronunciations of the rhotic consonant, mostly when in the post-vocalic position, and in this section, I will consider some of these studies and their results. Although my research is focussed predominantly on vowels, rather than consonants, it is important to include this section as a large proportion of literature on Dutch sociophonetics is devoted to the study of /r/, and this consonant becomes relevant when associated with the pronunciations of the vowels [u] and [y] (corresponding to the HUIS lexical set) in Achterhoeks.

According to Voortman (1994), there are four accepted realisations of /r/ in Standard Dutch, these being the voiced alveolar tap, voiced uvular fricative, retroflex realisations, and a number of vocalic variants. These realisations do not appear to be in complementary distribution. Yet the rhotic consonant has an interesting history, as described by Smakman (2006), which leads to present uncertainty surrounding which realisation of /r/ constitutes its most prestigious variant. In the 19<sup>th</sup> century, /r/ was considered to have only one standard pronunciation, although it is possible that this was based on its occurrence in the onset position. Its standard, and most common, pronunciation was alveolar, specifically [r] (Smakman, 2006; Van Bezooijen, 2005; Verstraeten and Van de Velde, 2001), and according

to Smakman (2006), other realisations were either dismissed or not detected in speech. However, by the early 20<sup>th</sup> century, realisations other than the alveolar trill [r] were becoming accepted, and even more frequent, in standard speech. These included uvular pronunciations (usually a trill, but also a fricative), which were considered as a type of new standard, with the alveolar pronunciations representing a more traditional standard (Smakman, 2006). By the end of the 20<sup>th</sup> century, the uvular pronunciation was even more widely used, in conjunction with the alveolar. This led to more confusion over what was the accepted standard. It has been suggested that the uvular /r/ spread throughout the Netherlands under Parisian influence, diffusing first from Paris to other urban centres, and then to smaller cities and towns throughout the Netherlands and north-western Europe (Kloeke, 1927; Donaldson, 1983; Gooskens et al., 2013). The use of this type of /r/ is often cited by Dutch speakers as a means of identifying those who live in a city or an urban area (Gooskens et al., 2013). Today, the uvular trill is perhaps most commonly used in Standard Dutch in onset position (Scobbie, Sebregts & Stuart-Smith, 2009) but as with the final position /r/, there is considerable variation regarding this (Plug, 2010).

Although the uvular trill may be the most common, the Dutch /r/ has many realisations (whether or not these are considered standard) which vary based on a number of factors (Cucchiaroni & Van den Heuvel, 1998; Van de Velde & Van Hout, 1999). These factors may include its position - /r/ in intervocalic, onset and coda positions may be articulated differently, with differing variants often used in the same position – as well as regional dialect (Scobbie, Sebregts & Stuart-Smith, 2009; Booij, 1995; Verstraeten & Van de Velde, 2001). It is also common for speakers to use more than one /r/ variant (Plug, 2010). The unpredictable nature and variability of /r/ in Dutch is an accepted part of Dutch sociophonetic research, and so it is possible that the place and manner of articulation of /r/ is not thought to have a bearing on the surrounding sounds, or is not considered in studies due to its accepted variability. Smakman (2006) describes /r/ as “an obscure sound” (p.222), due to its susceptibility to wide inter- and intra-speaker variation, and the fact that many variants exist in modern Netherlandic Dutch.

As stated earlier, the most commonly recognised forms of /r/ in Standard Dutch today include the alveolar trill [r] and the uvular trill [R], although more allophonic variations are beginning to be seen as acceptable in Standard Dutch, and there is a considerable amount of both inter-speaker and intra-speaker variation (Van de Velde & Van Hout, 1999; Plug, 2010). The

alveolar realisation of [r], as a trill, is generally seen to be the most correct in Standard Dutch, prescriptively speaking (Smakman, 2006), although Van de Velde and Van Hout (1999) note that the uvular trill is becoming more frequent and has come to be regarded with more prestige than it had been previously. It should also be noted here that the voiced fricative or approximant [ʀ] is another uvular realisation heard in Dutch which is treated as a rhotic consonant (Wiese, 2001a; 2001b). These may be listed together as being more or less the same sound, despite the approximant representing a lowered fricative – although some studies, such as Sebregts (2015), list them separately, and Van de Velde and Van Hout (1999) encompass fricative realisations under the symbol [χ]. However, allophonic variations of Dutch /r/ may also encompass retroflex pronunciations (Van de Velde & Van Hout, 1999; Booij, 1995). There are also cases of /r/-deletion, which are detailed by Hinskens (2012) as often occurring before coronal obstruents; this is a phenomenon seen less in Standard Dutch and the Hollandic dialects, and is more common in other dialects – in addition to this, the frequency of /r/-deletion has increased over time in the north-eastern (Low Saxon) dialect speaking areas.

Although it is generally accepted amongst the literature that trills are common, there is not necessarily a lot of consensus regarding which realisations are found most frequently, and this could depend on the geographical region studied, or the speaking style. For example, Collins and Mees (2003) and Gussenhoven (1992) have stated that taps are actually more common than trills, despite the trill – especially alveolar – generally being viewed as the most standard type of pronunciation of /r/. However, in a separate study, Verstraeten and Van de Velde (2001) found little use of alveolar taps, which they attributed to a different classification system of taps and trills. They also found the use of the uvular trill to be far more common than previously observed.

Nevertheless, Table 6, reproduced from Van de Velde and Van Hout (1999), shows some of the variants of /r/ in both Northern and Southern Standard Dutch, accompanied by their frequency of use when in word final position, or followed by a word final plosive, and with a preceding stressed vowel. I have reproduced their table showing coda /r/ realisations in Dutch, although it should be noted that this thesis will deal only with some onset /r/ realisations instead (See Section 6.2.2).

Description	IPA	Frequency (%)
no realisation	deletion of /r/	5.9
schwa	[ə]	8.7
uvular trill	[ʀ]	8.7
back approximant	[ʍ] , [ʁ] <sup>22</sup>	3.9
alveolar trill	[r]	34.7
alveolar tap	[ɾ]	21.9
front approximant	[ɹ] , [ɻ] <sup>23</sup>	11.5
retroflex	[ɽ]	3.7
fricative	[x] , [χ]	0.3
palatal glide	[j]	0.2

Table 6: Variants of /r/ in Standard Dutch in word final position as described by Van de Velde and Van Hout (1999).

Van de Velde and Van Hout (1999) found that when /r/ occurs in postvocalic position, the alveolar trill and alveolar tap were the most common in Standard Dutch (which encompassed both the Northern, Netherlandic, variety as well as the Southern, Flemish, variety). This is both confirmed and contradicted by a similar, later study by Verstraeten and Van de Velde (2001), who also found frequent usage of the trill, but less usage of the tap. This may be attributed to the first study having focussed on spontaneous spoken Dutch, and the later study on formal, scripted Dutch. Plug (2010) also states that /r/-deletion is common in a post-vocalic position preceding the plosives /t/ and /d/.

<sup>22</sup> It should be noted that Van de Velde and Van Hout recorded [ʁ] only as the approximant [ʁ]; in some speakers it may be the fricative [χ]. There may be little difference, but in a discussion about the varieties of /r/ found in Dutch it is important to note that there are these two allophones of the broader uvular sound [ʁ].

<sup>23</sup> A retroflex approximant. For the purposes of Van de Velde and Van Hout's study it is recorded as one of the front approximants, in contrast to the velar and uvular back approximants. The retroflex [ɽ] differs in that it is a flap, yet is recorded simply as "retroflex".

What is termed as the front approximant (comprising alveolar and retroflex articulations) was also commonly observed in Van de Velde and Van Hout's (1999) study, which is linked to the finding that there exists an approximant /r/ (such as a retroflex approximant; see below for further discussion on its properties) being found only in coda positions (Van Bezooijen, 2005, 2007), and although Van de Velde and Van Hout (1999) state that uvular realisations are becoming more frequent, the results show that it was not yet as common as the other variants. Other studies and descriptions of Dutch (Collins & Mees, 2003; Daan, 1999; Taeldeman, 2010), however, have stated that uvular articulations are more common in Modern Dutch, especially in the central Randstad area, which tallies with the history of these pronunciations becoming more common and accepted throughout the years (Smakman, 2006). Here it can be noted that these studies are from the same time as, or later than, the Van de Velde and Van Hout study (1999), which, it should also be considered, focused on /r/ in the word-final position and when followed by a dental plosive, and did not look at /r/ in intervocalic or onset positions. However, the aforementioned study by Verstraeten and Van de Velde (2001) analysed the appearance of /r/ in various other positions, and in their study the alveolar trill was used most frequently, followed by the uvular trill. In fact, speakers in the southern part of the Netherlands almost exclusively used uvular articulations. Taking all of this into account, there is strong evidence to support the increase in uvular /r/, as well as the frequency of trills of both sorts.

While the frequency of different /r/ articulations is one thing to consider, the other is that in the Van de Velde and Van Hout (1999) study referred to above, all of the Northern Standard Dutch speakers (those from the Netherlands) showed variation in which /r/ they used, and the researchers reported that the only speakers who did not show any variation used either the alveolar trill or the uvular trill, and these speakers were all Flemish. This finding is in line with the commonly-held view that there tends to be less /r/ variation amongst the southern speakers (Verstraeten & Van de Velde, 2001).

Similarly, Scobbie, Sebregts and Stuart-Smith (2009), and Collins and Mees (2003) found evidence for the use of a schwa or total deletion in word-final or coda position. This shows that there is constant variation in /r/ in these final positions, and determining a definitive pattern is difficult. Vieregge and Broeders (1993) also found that coda articulations of /r/ tend not to be particularly homogeneous between different speakers. In studies of postvocalic /r/-deletion, Van den Heuvel and Cucchiari (1998, 2001) found that deletion is more likely if

the preceding vowel is a schwa rather than a full vowel; in the latter case an audible /r/ variant is more often present. In addition, /r/ can significantly lengthen preceding vowels (Cucchiaroni & Van den Heuvel, 1998).

A study by Sebregts (2015) found that realisation of the rhotic consonant in coda position was more common in the western Netherlands than in the eastern, where it tended to be deleted. In Nijmegen, the easternmost locality included in the study, usage of the coda /r/ was only at 7.4%. Additionally, Sebregts suggested that certain rhotics may be considered by speakers as being in an onset rather than coda position, due to schwa insertion. We may then predict that a realised coda /r/ in the Achterhoek region is not particularly strong, as schwa insertion is common there and any rhoticity may then occur as a result of being regarded as in the onset position (Sebregts, 2015). Furthermore, the usage of this type of rhotic consonant decreases from west to east, so although Sebregts' research stops at Nijmegen, we can predict that the /r/ usage would follow the same pattern further eastwards.

Also in the case of Achterhoeks, there is varying information as to what the so-called “expected” /r/ pronunciation would be. Collins and Mees (2003) state that a strong uvular fricative is used in Gelderland, the province in which the Achterhoek is located. However, Verstraeten and Van de Velde (2001) found that front and back articulations were quite evenly split in this area (although they did not specifically consider the Achterhoek, focusing on the more western parts of Gelderland, which would not necessarily fall under the Low Saxon dialect classification). Gussenhoven (1999) states that /r/ is usually alveolar in the north-east of the Netherlands, where the Low Saxon dialects exist. The Goeman-Taeldeman-Reenen Project (GTRP) shows that Dutch dialects in general are more likely to contain uvular realisations of /r/ (which is perhaps expected if historically the alveolar trill has been considered the most standard), and Goeman and Van de Velde (2001) specifically pinpoint uvular trills as commonly occurring along the River IJssel and in the east in general. This is also supported by Van Reenen (1994), who documented uvular realisations occurring in the eastern Netherlands. Finally, another study by Van Bezooijen (2007) found that, in the post-vocalic position, there was advanced usage of what is simply termed an approximant in places within Gelderland, although this study also did not include any towns from within the Achterhoek region.

This approximant type of /r/ is commonly referred to as the “Gooise r” (Van Bezooijen, 2005; Van de Velde and Van Hout, 1999). Van Bezooijen (2005) notes that there is not much



definitively known about its articulatory properties, and that there is debate over its place of articulation (see also Sebregts, 2015). In addition, she notes that there are stronger and weaker variants of the “Gooise r”, with the stronger ones being retroflex. This type of approximant is observed only in coda position, and has probably been around in the Dutch language since the early 20<sup>th</sup> century, before it began to be used more frequently (Van Bezooijen, 2005). It is perhaps most commonly termed a retroflex approximant (Van de Velde and Van Hout, 1999), but, as noted by Sebregts (2015), may also be velar or uvular in its place of articulation. Sebregts (2015) also details an alveolar approximant, which is most common in intervocalic positions. It should also be noted that alveolar realisations of /r/ are more regularly presented as trills or taps, although the approximant can be heard in onset only commonly in the Limburgs dialect (Collins and Mees, 2003).

Overall, the Dutch /r/ is complex, and consists of many allophonic variants. Considering the studies mentioned, and taking into account geographical proximity to the Achterhoek region, we can assume that the uvular articulations of /r/ may be more common in onset positions in Gelderland, although Verstraeten and Van de Velde (2001) also mapped alveolar realisations in this area. In coda or postvocalic positions, an alveolar trill or schwa/deletion may be expected. Yet these assumptions and findings need to be considered along with the previous studies mentioned, in which it was found that /r/ tends to behave differently even when being used by the same speaker in the same positions. What we can also learn from this is that there really is no definitive expected /r/ for the Gelderland area, and especially the Achterhoek, and variation in both place and manner of articulation will occur. It would, however, be expected that the results will be in line with the rest of the Netherlands, where there is frequent intra- and inter-speaker variation (Verstraeten and Van de Velde, 2001).

## **2.5. Orthography and Grammar in Dutch and Achterhoeks**

Achterhoeks differs from Dutch in its orthography, and although the dialect of Achterhoeks is not official or standardised, it is easily recognisable. It is still said to have mainly Dutch characteristics, but it was only around the 1400s that the eastern dialect areas switched to a written language form resembling the dialect as it is today (Marynissen & Janssens, 2013). The *schrijf zoals je spreekt* (‘write as you speak’) movement of the 19<sup>th</sup> century, originally designed in order to promote a standard written language (Willemyns, 2013), may have contributed to how the written language is today. Mediaeval texts from the northeastern

language area (encompassing both Germany and the Netherlands, and of which Achterhoeks is a part) reveal some characteristics of Low German, and it was around the 15th century, but not before, that the written language came to use mainly Dutch features (Marynissen & Janssen, 2013). However, the need for a national standard language became more widespread after the creation of the printing press, the spread of the Reformation and the increased feeling of national identity, which led to the eventual development of Standard Dutch in the 16<sup>th</sup> or 17<sup>th</sup> century and finalisation in the late 19<sup>th</sup> century (Marynissen & Janssen, 2013). The use of standard varieties of language further increased in both the Netherlands and Germany after the Second World War, prompting the Low Saxon dialects to converge more towards the standard language on their side of the border. It is the Dutch varieties that have converged more strongly to their national standard language than the German varieties (Giesbers, 2008), although both Dutch and German varieties have been found to converge on their respective standards (Heeringa et al., 2000; Heeringa & Hinskens, 2015). There is most convergence at the lexical and phonological levels, yet, interestingly, the German dialects in the Kleverlands (just south of the Achterhoek region) were found to have retained more lexical features of the old dialects than have their Dutch equivalents (Giesbers, 2008). This perhaps could account for the vast lexical variation observed within the eastern Dutch dialects, and that some variants may be the result of horizontal levelling, while there is also some retention of traditional forms as well as convergence to the standard.

Wiggers (2006) uses the example of *hebben* ('to have') to demonstrate some similarities and differences between the eastern Dutch dialects and Low German. When we look at the High German forms of *wir haben*, *ihr habt* and *sie haben* (which correspond in English to 'we have', 'you have' (pl) and 'they have', respectively), the East Low German dialects tend to form the plural as *hebben* for all three, while the West Low German dialects form it as *hebbt*. Wiggers (2006) states that this shows that East Low German dialects have more in common with High German than the West Low German dialects. However, we can also see the similarity that the Low German dialects have with Standard Dutch. The West Low German plural form matches with what is commonly seen in some Netherlands border dialects, including Achterhoeks in Gelderland, and Twents in Overijssel, where speakers may use the second person form of *hebben* in *wij hebt*, for example, whereas the Standard Dutch version would be *wij hebben* (Heerink, 2014). It is appropriate to note here that Low German is distinguishable from High German due to the fact that it did not undergo the High Germanic consonant shift (Gooskens & Kurschner, 2009).

Many dialects of the Low Saxon-speaking areas show variation from Standard Dutch in the structure of their verb conjugation. These dialects do not use the *-en* ending of Standard Dutch for plural forms, but rather *-t*, which is the standard ending for the second and third person in Standard Dutch. Consider the following examples (also see Bloemhoff et al., 2013b, p.487):

Standard Dutch	Low Saxon	Gloss
wij lopen <u>n</u>	wi-j loopt <u>t</u>	we walk
wij gaan <u>n</u>	wi-j gaot <u>t</u>	we go
wij kij <u>k</u> en	wi-j kiek <u>t</u>	we look
wij grij <u>p</u> en	wi-j griep <u>t</u>	we grab

Table 7: Verb conjugation differences in Standard Dutch and Low Saxon

According to Bloemhoff et al. (2013b), these forms are found within the dialects of the Achterhoek, Twente, Salland, Drenthe and the eastern Veluwe, but the dialects of Stellingwerfs, Gronings and those of the north of Overijssel use the plural form *-en* (where /n/ is not pronounced) as in Standard Dutch. However, while most Low Saxon conjugations involve the addition of *-t*, and not *-en*, the third person singular present tense of strong verbs can see some vowel alternation (Bloemhoff et al., 2013b). We return to this idea later when discussing the results in Section 4 and in Section 6.

Just as Achterhoeks and Standard Dutch have different yet corresponding vowels where the lexical sets are the same (see Section 2.3), this is reflected in the orthography as well. The Dutch spelling *ij* (phonetically [ɛi])<sup>24</sup> is represented in Achterhoeks (and, indeed, other Low Saxon dialects) as *ie* (phonetically [i]) (Van Haeringen, 1960). The spellings *oe* and *uu* represent the monophthongs [u] and [y] respectively (Van Haeringen, 1960); *ui* (phonetically [œy]) is used in Standard Dutch. The two dialectal orthographic representations exist due to the sound change that occurred in Low Saxon-speaking areas, where [u] was largely fronted to [y]. Van Haeringen (1960, p.100) stated that [u] was retained in some eastern dialects, yet

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<sup>24</sup> Additionally, orthographically, *ei* in German corresponds to *ij* in Dutch in a number of instances, such as *Eijs/ijs* (Van Bree, 2013).

today we see it may be surviving only in certain phonological environments (such as after /r/), which is discussed later in this thesis (Pattison, 2016). Additionally, it is [y] that is mentioned by Hamans (2008) as surviving in some Dutch dialects today, suggesting an overwhelming loss of [u], and so, by association, also *oe* as a modern dialectal orthographic representation. Where this spelling exists in both Standard Dutch and Achterhoeks, it is likely to be the result of the trajectory of a different older vowel, as was explored in Section 2.3.2. Just as there is variation in Achterhoeks phonology where the Standard Dutch equivalent vowel is /a:/, it exists in the orthography as well. While the fronted pronunciation is represented as *ee*, there is disagreement over whether the spelling of the back variant should be *ao* or *oa*, and both representations can be seen in dialect orthography. In this research, for the purpose of consistency, the spelling *ao* will be used, as it is by Schaars (1987) and Groeneveld et al. (2015).

Actual usage of the orthography varies. Although there has not been formal standardisation of the dialect's orthography as there has been for Standard Dutch, signs written in dialect orthography can be found around the area. Additionally, dialect speakers may communicate on social media using dialect spellings. Dialect preservation groups, such as those found on Facebook, will also use these spellings in their advertisements and communications. As noted above, there may be variations within spellings, such as whether *ao* or *oa* is used in the dialectal spelling of words which contain the PRAAT vowel, but also whether the HUIS vowel is represented by *uu* (indicating the front vowel) or *oe* (indicating the back vowel).

## **2.6. Achterhoeks or Liemers?**

At this point, it should be noted that the region classified as the Achterhoek (as seen in Figure 1 in Section 1) is technically home to two regional dialects: Achterhoeks and Liemers. These dialects are often spoken of in conjunction with one another when describing regional and dialectal boundaries, so it is necessary to include this section in order to detail how they will be approached throughout this thesis, which is dealing with the speech of the area categorised simply as “Achterhoeks”.

There is controversy as to the position of the boundaries of the two areas, as reported in the regional newspaper “De Gelderlander” (2011, 2015), and a study by Schut (2012) showed that many residents of the region had differing opinions about where the Achterhoek area begins and ends. What is commonly reported, although not necessarily by those who live

there, is that the boundary of the Liemers area begins south west of the River Oude IJssel in the municipality of Oude IJsselstreek, whereas north east of the river is considered to be the Achterhoek (Bloemhoff et al., 2008). This means that, under this definition, four of the towns studied in this research – Etten, Veldhunten, Gendringen and Ulft (points 1, 2, 3 and 4 on the map in Figure 10) – could technically fall into the Liemers dialect category, rather than Achterhoeks, as they are located right on the boundary and immediately south west of the river. As the town of Ulft in particular features quite heavily in the 2015 corpus, it is important to address these facts. Silvolde and Terborg, labelled as points 5 and 6 in Figure 10, lie on the other side of the river, and so would be considered in the Achterhoek. Point 7, the town of ‘s-Heerenberg, is not included in this study’s data, but is located further from the river’s boundary, and is more often regarded as being part of the Liemers area.

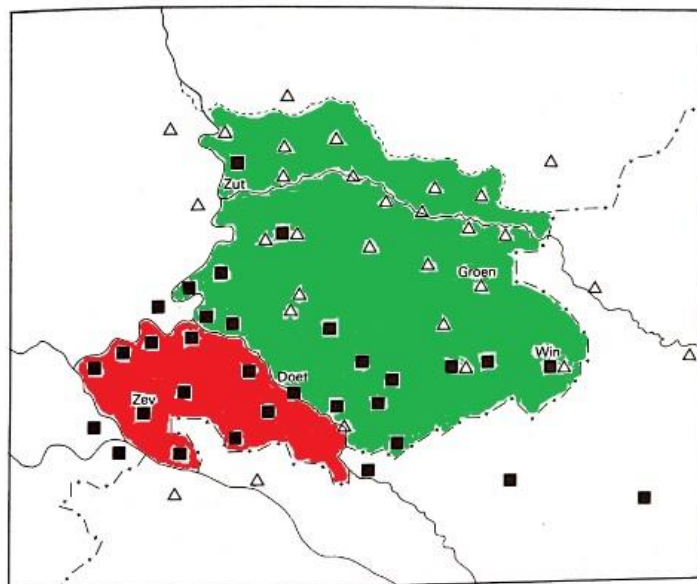


Figure 10: Map of towns bordering the Achterhoeks and Liemers dialect areas. The towns which are numbered and circled are those which are important to the discussion of what constitutes Achterhoeks or Liemers. (Map data: Google, n.d).

These towns will be considered to belong to the broader area of “Achterhoeks”, and will not necessarily be discussed separately due to the reasons outlined below.

These regional, non-political boundaries are subject to change, and the proximity of the towns in question to the given suggested boundary (Bloemhoff et al., 2008) is too close for speakers from these places to be discounted. Additionally, dialect boundaries are not necessarily fixed, and we cannot expect that because the River Oude IJssel has been chosen as the area (but not necessarily dialect) boundary, nearby towns on either side will differ

markedly. My own examination of Schaars' *Woordenboek* (1987) found that the Oude IJssel marked only a tentative isogloss for lexical items, with the same forms being used on both sides, and different forms beginning much further away from it (see some examples in Figures 11 and 12), while in other cases a pattern was not evident at all. Furthermore, differences between north and south Achterhoek regions are also seen, yet there is no isogloss boundary for these areas posited by Schaars. The examples in Figures 11 and 12 for *laag* ('low') and *starre* ('rigid') reproduced from Schaars (1987) show pronunciation differences within the region. For *laag* (Standard Dutch spelling), we see that variation starts to occur considerably further north of the Oude IJssel border. For *starre*, there is more variation, yet there tends to be the same pronunciation along both sides of the Oude IJssel, which suggests it is an indication of a boundary only, and not necessarily secure as such. But perhaps what is most interesting about these maps is that what they indicate overall is what many people from the area have been informally saying (throughout the course of this research): that there will be variation within the entire region despite the fact they are said to speak the same dialect. It should be accepted, then, throughout this research, that the earlier dialectal pronunciations of vowels may vary slightly (and furthermore, the underlying interest of this thesis lies in whether the modern vowels have converged on the Standard Dutch variety).

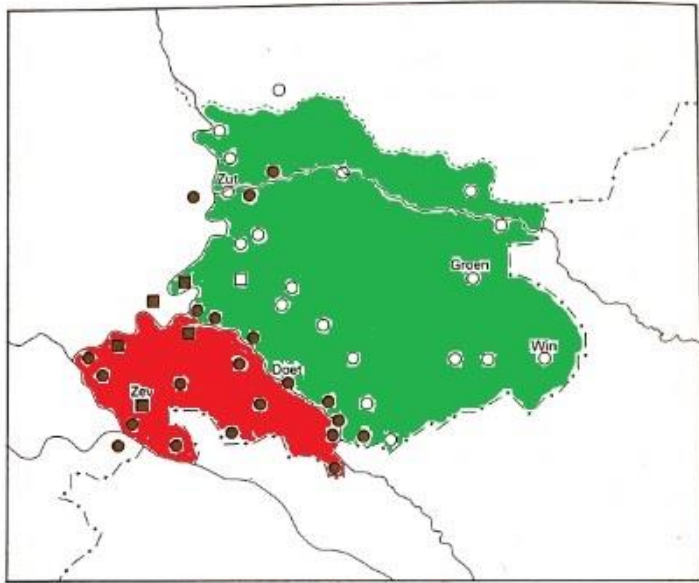


■ *laeg* 01

△ *leeg* 02

Figure 11: Map reproduced and modified from Schaars (1987, p.25) showing dialectal pronunciations of "laag" within the region. The Achterhoek area (above and below the River Berkel) is coloured in green, with the Liemers area (south-west of

the River Oude-IJssel) coloured in red. Above the Achterhoek is the province of Overijssel. The squares show “laag” as “laeg” (phonetically similar to /æ/, while the circles show “laag” as “leeg”, phonetically similar to /e:/.



- *sterre* (enkv.)
- *ster* (enkv.)
- *starre* (enkv.)
- *star* (enkv.)

Figure 12: Map reproduced and modified from Schaars (1987, p.108) showing dialectal pronunciations of "starre" within the region (as outlined in Figure 11).

What creates a difficulty in determining where to locate the cut-off between dialects is that a lot of the controversy stems from the boundary of the region, but not necessarily the boundary of the dialect: regarding dialect boundaries, according to Rensink (1999), maps with “fixed, sharp boundaries create the wrong impression” (p. 4). To use his dialect perception map of the Netherlands (Figure 13), we can see that according to participants, a dialect of Overijssel extends into Gelderland, and the Achterhoeks dialect itself can be noted to cover a small corner of Overijssel. This indicates then that those localities which lie along the boundary should not be discounted, as they are not likely to be vastly different. In his participant-informed map, the Liemers dialect boundary is indicated at the exact point where the region is said to separate: along the Oude IJssel, while the west of the region is separated along the IJssel, also traditionally said to be where the Veluwe region (and its dialect of Veluws) begins. The towns in question lie along that boundary, not far enough away for their inhabitants to definitively be regarded as speakers of a different dialect. And yet, today’s

participants from that area indicate they are speakers of Achterhoeks, not Liemers. So perhaps it would be more accurate to formulate a dialect boundary based on the isoglosses that occur around Nijmegen (much further to the south-west), those of the *alt-oud* [ɔlt]-[aud]- and *ies-ijs* [i:s]-[ɛis] isoglosses (Van den Berg & Van Oostendorp, 2012), where the marked pronunciations of East Gelderland begin to sound more like Standard Dutch or Low Franconian forms. It is at the dialect border with the Veluwe region (and Veluws dialect) where a *huus-huis* [hy:s]-[hœys] isogloss begins, so for the purpose of consistency as well as relevance to the current study, the boundary should be placed along another phonological isogloss.



Figure 13: Map of dialect areas in the Netherlands, reproduced from Rensink (1999, p.6). The area of interest is indicated in green.

Additionally, Rensink's map can be compared with a dialect perception map (see Figure 14) by Daan and Blok (1969), and reproduced from Spruit, Heeringa and Nerbonne (2009). This map depicts dialect similarities on horizontal and vertical levels, comparing dialect distance, yet there are different demarcations within the Achterhoek area from those on Rensink's map in Figure 13. What this indicates is that the dialect boundaries are subjective, and likely to vary, so when we talk of the Achterhoeks dialect, it is important to remember these variations. It has already been mentioned that differences do occur within the dialect as one



travels even from town to town, and so we can only reference the wider area with knowledge of these differences.



Figure 14: Perception map from Daan and Blok (1969) of dialect area judgments. Reproduced from Spruit, Heeringa and Nerbonne (2009). The Achterhoek area is indicated with a circle.

As reported in the regional newspaper “De Gelderlander” (2011), residents of towns along the border are being told they are in the Liemers region as indicated by council authorities, yet they themselves consider themselves to be “Achterhoekers”, and there is, of course, no political border as with Germany or the other Dutch provinces. Another article from “De Gelderlander” in 2014 reports that having the River Oude IJssel as the place of the unofficial border (as well as in dialect maps such as Rensink’s, reproduced in Figure 13) does not satisfy all residents of the area – certainly, while many inhabitants of towns further west consider themselves to be residents and speakers of Liemers (as it is generally accepted that the more western municipality of Montferland falls within Liemers territory) rather than Achterhoeks, the same is not necessarily said of those who reside closer to the Oude IJssel.

As the later results of this study will show, we see that the dialect in Ulft in particular shares similarities with the neighbouring towns of Silvolde and Terborg (labelled as 5 and 6 on the map in Figure 10) north east of the river. In addition, the participants interviewed in that town classified themselves as speakers of Achterhoeks. Perhaps more tellingly, the results also showed the tendency of the speakers to use the grammatical forms common to Achterhoeks (and the other Low Saxon dialect areas), rather than Liemers. These forms are discussed in more detail below.

Thus, I am confident in including these towns under the broad descriptive label of “Achterhoeks” in a way that I would not be for a town such as ‘s-Heerenberg (point 7 on the map in Figure 10), which is located in the municipality of Montferland, further from the boundary, and mentioned by participants as the location of a vastly different dialect from the one they themselves speak. Their assertions here would bear scrutiny, as Montferland is located more centrally within the Liemers dialect territory than the area immediately south west of the Oude IJssel. Consequently, while the towns such as Ulft may technically belong to the Liemers dialect area if the Oude IJssel is considered to be the border, the East Gelderland dialect areas are commonly grouped together (Schaars, 1987; Van Prooije, 2011). Thus, all could be included under the “Achterhoeks” label as they lie within the region of the “Achterhoek”, as it is perceived by many to encompass the Liemers area as well. However, for the purposes of this research only those towns that lie close to the current suggested boundary will be included, as those that lie further west under this division (for example, ‘s-Heerenberg) do seem to be regarded differently by the participants in the study (M52Ulft and M59Ulft, who claim it is home to a “completely different” language and people). For this reason, I am including all municipalities in eastern Gelderland aside from the Veluwe and west of the Oude IJsselstreek municipality (beginning at Montferland) as the Achterhoek, in order to provide a more well-defined area in which to analyse data. Furthermore, there is less controversy over the Liemers status of residents of these municipalities beginning at Montferland (Schut, 2012; De Gelderlander, 2015).

Additionally, and as mentioned above, it is notable that during the course of the data collection in 2015 and the perception study in 2016, the participants from Ulft all identified themselves as Achterhoeks, rather than Liemers, speakers. In including these towns under the broad description of “Achterhoeks”, it is not in any way an attempt to ignore the identities of other residents who may consider themselves Liemers rather than Achterhoeks speakers, but

instead to use (and provide a justification for doing so) the term that popularly encompasses more of the area as well as participants' own interpretations of the dialect that they themselves speak. It is not a judgment on where the region itself should lie, as that is a question for the municipalities themselves, but rather what I am including within a dialect boundary. Therefore, any mention of the terms "Achterhoek" or "Achterhoeks" throughout this research can be assumed to encompass the towns and speakers situated along the River Oude IJssel, unless stated otherwise.

It is still, however, necessary to detail some of the differences between Achterhoeks and Liemers. Historically, the Liemers dialect is a Low Franconian, rather than Low Saxon, dialect, yet as it lies in a transition area, there are elements of both Low Franconian and Low Saxon in the dialect today. As a Low Franconian dialect, there is more structural similarity in Liemers to Standard Dutch, although perhaps less so than the Franconian dialects located further west. Nevertheless, a significant difference between the Low Franconian and Low Saxon dialects is found in the conjugation of verbs in their morphological structure. While Liemers speakers tend to use the same conventions as Standard Dutch, Achterhoeks speakers follow the subject-verb conventions of a number of Low Saxon dialects, in which, if we were to follow Standard prescriptions, we could say there is an absence of agreement (See Section 2.5).

It is notable that inhabitants along the River Oude IJssel do tend to use the Low Saxon structure when they are consciously speaking in dialect, and so it is reasonable to suggest (although it is not yet tested) that the Low Franconian structure does not start to be used until the municipality of Montferland, where residents more strongly identify as belonging to Liemers, is reached.

Bloemhoff et al (2013a) note some similarities to Low Saxon in the phonology and lexicon of Liemers, which could perhaps be attributed to its transition area status. Most notable is the use of the monophthongs [i] and [y], which have not diphthongised to the Standard Dutch [ei] and [œy], and the fact that the dialect exhibits the results of Westphalian breaking (see Sections 2.3.2, 6.3 and 7.1). This places Liemers slightly apart from the other Low Franconian dialects such as Brabants and Limburgs, as it exhibits variants not found in these dialects. Lexically, Bloemhoff et al. (2013a) cite the examples of the pronunciation and orthographic representations of *gras* ('grass') as *gres*, and *dorp* ('village') as *darp*, which are Low Saxon in origin.

## 2.7. Summary

This chapter has introduced some previous research on Dutch dialectology, and provided an overview of the history of the Dutch language and its relationship with the Low Saxon dialects of the Netherlands. As stated, the Standard Dutch language today did not grow out of influence from the eastern dialects, and so dialectal differences are noticeable to speakers. Many Achterhoeks speakers include both Achterhoeks and a version of Standard Dutch in their repertoires, and domains of use of the dialect have decreased over time. Nevertheless, there remains to be a sense of dialect pride amongst Achterhoeks speakers, and the dialect is routinely celebrated throughout festivals in the regions.

Achterhoeks differs from Standard Dutch in a number of ways. Perhaps the most notable difference between Achterhoeks and Standard Dutch, and the focus of this thesis, is the pronunciation of vowels. Kloeke's Hollandse Expansie theory (1927), although disputed in more recent times, attempts to explain the diphthongisation of the HUIS and KIJK vowels in Standard Dutch to /œy/ and /ei/ respectively, while they remained as monophthongs in the eastern dialects. Other notable vowels include the PRAAT vowel which is realised as /a:/ in Standard Dutch, but as the back vowel /ɔ:/ in Achterhoeks, and the PAARD vowel, where /a:/ appears before /r/ and is raised and diphthongised to /iə/ in Achterhoeks. Differences from Standard Dutch in the orthography are also noticed, a potential result of the *schrijf zoals je spreekt* ('write as you speak') movement which occurred during the 19<sup>th</sup> century (Willemyns, 2013). Morphologically, within this area, dialects also use the *-t* ending for plural forms, which differs from the *-en* ending of Standard Dutch (refer to Table 7 on page 67).

The possible influence of the rhotic consonant has been briefly discussed. Section 2.4. Throughout the Netherlands, /r/ pronunciations vary considerably; studies have suggested that uvular pronunciations are common in the province of Gelderland, where the Achterhoek region is located (Collins & Mees, 2003; Goeman & Van de Velde, 2001; Van Reenen, 1994). However, alveolar pronunciations have also been found to occur in this area (Verstraeten & Van de Velde, 2001; Gussenhoven, 1999).

Finally, this chapter provided a discussion on distinguishing between Achterhoeks and the nearby Liemers dialect. It was important to consider this differentiation due to the fact that some of the towns included in this research lie along the River Oude IJssel, which is said to form the regional boundary between the Achterhoek and Liemers areas (Bloemhoff et al.,

2008). However, residents of this area have been found to differ in their opinions as to where the boundary should really begin and end (Schut, 2012). For the purpose of this research, the towns which lay along the River Oude IJssel were deemed to belong to the Achterhoeks-speaking area, due to speakers' propensities to use the Low Saxon grammatical forms and their own self-identification of being "Achterhoekers".

### **3. Literature Review: Concepts in Dialectology and Language Change**

In this chapter, I will be considering first the theories of dialect change that underlie the theoretical perspective of this study. We may be seeing a case of dialect levelling or standardisation and dialect loss, so this section will consider the main differences between these processes of dialect change, and some important studies that have not already been discussed in Section 2. The main points and evidence presented by these studies will be considered throughout Sections 3.1, 3.2, and 3.3.

This will then be followed by an outline and discussion of previous sociolinguistic work that has taken place in the east of the Netherlands (Schaars, 1987, and Van Prooijje, 2011), or focused on the effect of the Standard language on Dutch dialects (Heeringa and Hinskens, 2015). Some of this has already been considered in the previous chapter; however; here these studies will be examined in more detail.

#### **3.1. Dialect Levelling**

Here I will provide a brief account of dialect levelling, one of the processes that may be occurring in the Achterhoek. This account considers some work on dialect levelling within the Netherlands, but also important studies that have been conducted in the United Kingdom, as this is also critical to the concept of dialect levelling in the Netherlands.

Dialects can undergo change in one of two directions, that of convergence to another variety, or divergence away from it (Hinskens, Auer & Kerswill, 2005; Kristiansen & Jørgensen, 2005). According to Auer (2017), within European dialects, convergence either towards the standard or towards other dialects has been the major development in sociolinguistic studies within the last century. Dialect levelling is a form of convergence which reduces the variation both within and between different dialects (Hinskens, Auer & Kerswill, 2005), as opposed to convergence which can be seen as one-sided accommodation to a particular variety (Hinskens, 1992). This is sometimes referred to as “advergence”. The process of dialect levelling involves the attrition of linguistic forms found within the mix of dialects (Kerswill & Trudgill, 2005) and the removal of marked attributes (Trudgill, 1986; Kerswill, 2002). For a levelled non-standard language variety (typically a regiolect) to develop, traditional dialects can adopt features of the standard (or less local) variety. These are most commonly lexical

and phonological features (Hinskens, Auer & Kerswill, 2005; Berruto, 2005; Britain, 2010). In fact, when considering the features present in a dialect continuum, it is items of these kinds that are most consistently measured. Over generations, the dialect speakers begin to incorporate these less local forms into their own speech, resulting in a levelled dialect. This may be seen in the Achterhoek if results show that speakers are beginning to replace traditional marked vowels (see Section 2), assuming these are representative of a wider trend within the region, with those of Standard Dutch.

An example of the levelling of vowels is seen in Watt's (2002) Tyneside study. He studied the realisation of the FACE and GOAT vowels (phonetically [ei] and [ou] in Standard British English), which present with a large amount of variation nationally. The results of his study showed that there was some levelling occurring in Tyneside as a result of dialect contact, from the local marked variants of [ɪə] and [ʊə] to [e:] and [o:], which could be described as "mainstream" or "generally northern" variants (Watt, 2002, p.47). In their study of Milton Keynes, Reading and Hull, Williams and Kerswill (1999) also found that the accents of all three towns were undergoing convergence due to contact (although not with each other), and that children's pronunciation features found in the New Town of Milton Keynes in particular were characteristic of what would be expected in London and south-eastern British speech<sup>25</sup>. Milton Keynes is an example of new-dialect formation, where features are mutually accommodated, resulting in a new dialect or koine (Williams & Kerswill, 1999; Kerswill, 2003).

Dialect levelling results from factors such as geographical mobility and social mobility (Williams & Kerswill, 1999; Kerswill & Williams, 2000). It is generally among the second generation of migrants that changes become evident, as children's speech begins to diverge from that of their parents (Williams & Kerswill, 1999). Additionally, the increased geographical mobility that we see in the modern age presents more opportunities for dialect contact and, in turn, the levelling which results from that contact; inner-city populations have declined, while smaller towns have seen an increase in population (Williams & Kerswill, 1999; Britain, 2010). Regarding levelling as a result of social mobility: we see this occurring perhaps more commonly through speakers' long-term accommodation as a result of their attempts (be they conscious or subconscious) to remove marked features from their speech (Trudgill, 1986). In the case of Milton Keynes, a new town development in the United

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<sup>25</sup> There were also innovations, and no wholesale adoption of London forms (but adoption of widespread forms).

Kingdom, a slightly different case was reported: adolescents began to diverge from their parents' speech perhaps as a result of peer group pressure to conform to youth social norms (Williams & Kerswill, 1999; Kerswill & Williams, 2000), resulting in a koineisation process.

Dialect levelling has also been studied in the Netherlands by Hinskens (1992), who considered the situation in Limburg, a Low Franconian dialect-speaking province in the south of the Netherlands, situated to the south of the Achterhoek and Liemers areas, and along the border with Germany to the east, and the province of Brabant to the west. Hinskens studied the dialect spoken in Rimburch, a town in the south-east of the province of Limburg. He found dialect levelling to be occurring, but noted that it does not necessarily lead to convergence to the standard language. In order to arrive at his conclusion, Hinskens first identified three hypotheses:

1. That dialect levelling affects variation across dialects, not just variation of a dialect – standard continuum.
2. That dialect levelling is a gradual process affected by extralinguistic factors as well as purely linguistic ones.
3. That accommodation in dialect use shows the presence of a levelling process.

Hinskens studied 21 Limburg dialect features, and found that eleven of these features were being levelled out. Of these eleven features, three (*r*-deletion, *n*-deletion, and *-də*, a derivational suffix in Limburgs) could be attributed to the effects of linguistic factors, and therefore exhibited loss only when these factors were present, and not in their use overall. Hinskens therefore concluded that dialect features show different degrees of effect, and that there is a “hierarchy of environments” (Hinskens, 1992, p.290; see also Trudgill, 1986, p.155) in which change or loss may occur. Within the community he studied, Hinskens noted that a dialect shift was also occurring separately. This involved the number of dialect speakers in the area gradually decreasing, with dialect use being confined to non-public domains. In public domains, residents of the region studied were increasingly using fewer dialectal forms in their speech.

There have also been studies of dialect levelling in the province of Brabant (such as those of Hagen, 1987; Swanenberg, 2009). Swanenberg and Van Hout (2013) also claim that, similar to the situation in Limburg, “the vertical process of levelling between dialects and the standard language is often strengthened by horizontal processes of levelling between



neighbouring dialects” (p.323), which leads to the final result of dialects losing some of their most salient features. Regarding phonology, Swanenberg and Van Hout (2013, p.325) note that some of the traditional dialect features<sup>26</sup> that are changing include:

- the loss of rising diphthongs, eg. *pjerd* > *perd* (horse)
- the loss of the sibilant *r*, eg. *rzug* > *rug* (back)
- the loss of h-dropping, eg. *uis* > *huis* (house)
- less usage of the glottal stop, eg. *lä?er* > *lækker* (tasty)
- less umlaut usage, eg. *löpt* > *loopt* (walks)
- no t-deletion in some monosyllabic words, eg. *nie* > *niet* (not)
- metathesis of the *sp* coda cluster, eg. *weps* > *wesp* (wasp)

Amongst these examples, we can see that although change has occurred, it is not necessarily always towards Standard Dutch<sup>27</sup>. This indicates that a horizontal levelling process is occurring, and that for convergence to occur, it does not necessarily always have to be vertical.

Why then might dialect levelling be a possible scenario for the Achterhoek? The increase in transport links to and from the area provides inhabitants with exposure to different dialect areas, and increasing urbanisation throughout the Netherlands provides opportunities for work and socialisation in other parts of the country. Additionally, Standard Dutch as the language of instruction within the education system is familiar to all residents, and the frequency of Achterhoeks as a spoken language appears to be in decline, resulting in dialect speakers receiving more exposure to Dutch forms. As observed by a participant (aged 50) in the main part of this study:

“as a child we learnt Dutch at school, but spoke Achterhoeks with our friends and our parents. Now I still speak Achterhoeks with my friends, but I speak Dutch to my kids.”

Yet it is not so simple to think of language change in this area as being a wholesale shift from Achterhoeks to Dutch (although it is evident that the two varieties are thought of as separate

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<sup>26</sup> Note that these dialect features are indicative of dialects in Brabant, and not in the Achterhoek.

<sup>27</sup> For example, the Standard Dutch forms would include *paard* instead of *perd*, or *lekker* instead of *lækker*.

entities). What is interesting is how Achterhoeks – not Dutch – differs today compared to when the speaker cited above was in school, and whether what he perceives as Achterhoeks contains any Dutch variants that were not observed previously.

Trudgill (1978) suggests it is factors related to language attitudes that begin shifts away from certain dialects; however, he stresses that these factors merely facilitate the change and are not instrumental in progressing it. Kristiansen and Jørgensen (2008), however, emphasise human agency when they claim that “social meaning-making and identity-construction are the driving forces underlying maintenance and change in language” (p.299). In the case of Achterhoeks, there appears to be a strong identity associated with being what they would themselves term “an Achterhoeker”; however, their own identity constructions would not be the only motivation for the maintenance (or the loss) of dialectal variants. The concept of identity varies between people, and may not be as strong as in previous generations.

Milroy and Milroy (1992) propose the idea that it is social networks that contribute to dialect convergence. Certainly in the case of Achterhoeks, the speakers tend to have a strong identity association with the region and traditional dialect, so would not be likely to attempt to dissociate from that. These social networks described by the Milroys include links to economic and industrial change. This means that the improved and more widespread transport networks which allow inhabitants of all areas to move freely around the country and expose them to new dialects are a major factor in the convergence of dialects. We can also extend this to the theory of national unification, as described by Hinskens, Auer and Kerswill (2008). The contact between the inhabitants of different regions becomes more frequent, as would occur with the improved transportation links. Consequently, the regions become both socially and culturally more similar, which can be evidenced through the examinations of infrastructure, economy, politics and the merging of cultures (Hinskens, Auer & Kerswill, 2008, p.33). The move from an agrarian to an industrial and post-industrial society would result in these certain cultural changes which in turn influenced dialects through the fact that there were more opportunities for dialect contact. We can see that following the declining percentages of those working in agricultural occupations, as was the case in the Netherlands mentioned above, more frequent contact between villages provides a hypothesised trigger for the beginning of dialect levelling across the Achterhoek region (Hinskens, Auer & Kerswill, 2008).

Milroy and Milroy (1992) also suggest that solidarity, which could be attributed to possible social identity constructions in the Achterhoek, and status, which we can relate to the relative prestige of Standard Dutch, are competing ideologies, which must be considered in discussions of language and dialect change (Kristiansen & Jørgensen, 2008). It is important to remember that the English translation for the original term for the standard variety of Dutch, ABN, is, roughly, “General Cultivated Dutch” (Donaldson, 1983; Smakman, 2006). This term, first introduced in the late 19<sup>th</sup> century, as discussed above (Willemyns, 2013), of course increases the prestige associated with the Standard, and almost denounces other varieties as being uncultivated. While this variety carries with it overt prestige, Achterhoeks can be associated with having some covert prestige due to the solidarity shown between speakers and their outward desire to maintain their *streektaal* (‘regional language’), which happens with some non-standard accents and dialects (Marlow & Giles, 2008).

But we can see through an example described by Kristiansen and Jørgensen (2008) that what once had been status-related differences in languages may now be related to other factors. Their study (1994, 1995) focused on the traditional dialects of Denmark and how linguistic features of those dialects came to be replaced by features of the standard variety, Copenhagen Danish. Kristiansen and Jørgensen found that that the new generations had adopted more features of the standard variety, whereas the older generations retained the old dialect. What were once status-related differences in speech had become age-related differences, as features of Low Copenhagen had spread into both High Copenhagen and then into other Danish varieties. Therefore, the High variety of the older generations became merely an old form of speech, but the Low variety of the older generations became the socially unmarked vernacular of the younger generations (Kristiansen & Jørgensen, 2008, p.293).

We can see that a similar situation may happen in Achterhoeks. Children are taught Standard Dutch in schools (Van der Harst, Van de Velde & Van Hout, 2014), and are not encouraged to read and write in Achterhoeks. Therefore, it is possible that the marked lexical and phonological features of Achterhoeks, as well as its unique orthography (which, in previous generations, would have been learnt through family correspondences, since it was not taught at school), will become restricted to the older generations, as more people are continuing through higher education, and so increasingly the new generations come to learn only Standard Dutch. It may be the case that they still speak with a regional accent, and Van der Harst, Van de Velde and Van Hout (2014) also point out that Standard Dutch as it is currently

used will have regional variations. But, as a consequence of continued and frequent exposure to the standard, and the Education department's subsequent insistence upon the usage of it, the traditional dialect will be in use less and less.

### 3.1.1. The Cone Model

Here, the cone model developed by Auer and Hinskens (1996) can be considered (See Figure 15 below). It represents a situation of diaglossia. The premise is that the base of the cone encompasses the variety of dialects of a given language. Hence, it is the largest part of the cone. The tip represents the standard language, and in between are regional variations, with regiolects close to the base and regional standards first below the tip. The model below, reproduced from Auer (2005b), represents the distinction and distance between the standard and dialects with reference to the "in-between" regiolects and regional standards. The base dialects and regional variations differ in that the base dialect would be considered to be the traditional, older dialect of a particular (mostly rural) area, whereas the regional variations are intermediate, often levelled, varieties coloured by either the standard or traditional variety. Differences between regiolects and regional standards are explained later in this section.

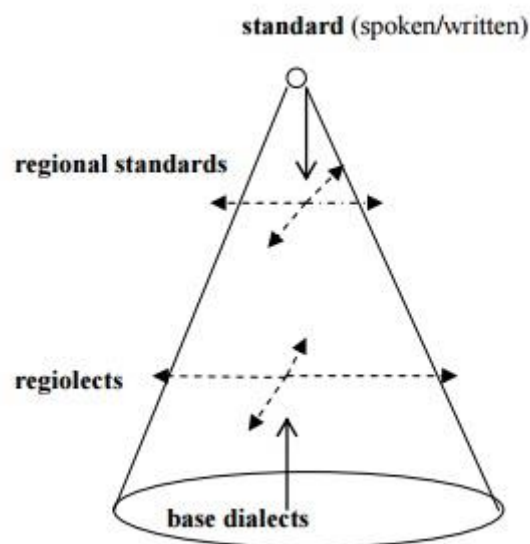


Figure 15: Auer's cone model (reproduced from Auer, 2005b)

It is important to note that although the figure shows a clear hierarchical, or vertical, structure extending from the base dialects at the bottom of the cone to the standard language at the top, it also shows the connections between horizontal relationships. The dotted areas show these

variations between relationships, with the diagonal arrows indicating that regiolects and regional standards can vary on both a horizontal and vertical level. That is, they may converge on, influence, and be influenced by, other speech varieties on their same “level”, as well as base dialectal and standard speech varieties.

The next question is: how do we then distinguish a regiolect and a regional standard (as they appear in the cone model) from a base dialect and a national, or official, standard? A regiolect is defined by Hoppenbrouwers (1983) as being one of several intermediate dialectal varieties that occupy the structural space between the standard variety and the base, or “traditional” dialect. These varieties are subtly different, and are sometimes considered to be the result of a dialect converging across other regional, perhaps neighbouring, varieties (Heeringa & Hinskens, 2015), rather than converging to the standard. Thus, it differs from the base dialect by virtue of its inclusion of other forms, but is recognised as a regional variety, and is not considered to be a standard variety. Nerbonne et al. (2013) describe the regiolects of the cone succinctly as “the convergence of varieties, the influence of the standard on regional speech” (p.208). By contrast, a regional standard may be understood to be closer to the national standard variety than a regiolect (with more of a regional influence on standard speech, rather than standard influence on regional speech). It is possibly the result of dialect speakers’ conscious attempts to acquire the standard variety, but falling somewhat short (Auer & Hinskens, 1996), such as the case of southeast Limburg’s *Hollendsj mit knoebele* (‘Dutch with bumps’) (Hinskens & Tældeman, 2013; Auer & Hinskens, 1996). A regional standard is somewhat of a mixture between local dialectal and standard varieties, and there may, in some cases, be a certain regional standard feature where there already exists a standard and dialectal variant (Sandøy, 2002). It is likely to differ phonetically from the national standard or traditional dialect (Sandøy, 2002), yet a speaker of such a variety could still be considered to be using standard, if perhaps “accented”, variants. This is caused, obviously, by the convergence of dialects towards the standard, or vice versa. Speakers of a regional standard variety may be able to be regionally placed by their speech, and while their speech falls short of the prestige variety, they are not traditional dialect speakers; they would be considered to speak the standard variety for their region.

In the case of Achterhoeks, this model raises the question of whether what is seen as the dialect variety today is actually higher in the cone, or if the base has actually risen from the original representation of the dialect. The consequence of the base rising is that speakers are

still using “vernacular”, but it has levelled. Therefore, what is regarded as the dialectal variety may differ as changes occur over a number of generations. Auer (2017) states that dialect speakers today are likely to admit that they do not speak the old traditional dialect anymore, but continue to use the term “dialect” to describe their speech, on the condition that it contains regional characteristics. The perception of what is considered dialect is an important aspect of this study, and this cone helps to address that aspect to some extent – it would be fair to expect the base of the cone to have risen since 1979 with the inclusion of more Standard Dutch phonological features in what participants consider “speaking Achterhoeks” to be. This is measured in this study through the participants completing sentence and picture tasks, being specifically instructed to do these in their (Achterhoeks) dialect. This is also how we can distinguish between what is considered dialect and what is considered to be regional standard – whether participants report themselves to be speakers of dialect or speakers of the standard variety.

### **3.2. Accommodation**

Accommodation theory, as proposed by Giles (1973), seeks to explain social motivations for style shifting. It suggests that speakers change their speech style based on their interactions with interlocutors. Changes can be conscious or subconscious, and occur as a result of the speaker’s desire to either conform to the speech of the interlocutor, or deviate away from it (Giles, 1973). The speaker may have positive opinions of who they are speaking to, and so may change their speech style in a show of solidarity or a desire to be liked and accepted by the interlocutor (Gallois & Callan, 1988); such changes may be seen in the phonology, lexis or syntactic structure of their speech. Conversely, the opposite may be true, and we therefore see speakers diverge away from the style of the interlocutor. We also see situations where speakers adopt new variants in preference to old ones due to their perception that the old features may be out of date, but the new features – or the people who use them – represent a kind of modernity (Williams & Kerswill, 1999, p.13; Kerswill, 2003, p.3). The outcome of this is of dialect forms being lost in favour of the features of the other (usually more widely used) target variety (Britain, 2010, p.7), resulting in dialect levelling. Short-term accommodation, be it conscious or subconscious, can result in long-term accommodation, which is “defined as semi-permanent changes in a person’s habitual speech after a period of contact with speakers using different varieties” (Kerswill, 2002a, p.680). This in turn has the

possibility of leading to a permanent change over a number of generations and a levelled dialect (Trudgill, 1986; Kerswill, 2002).

Milroy and Milroy (1992) explain how in some places such as Belfast or New York, young men are derided by others should they use middle-class rather than vernacular speech forms (p.4). This suggests that the adoption (or, indeed, suppression) of certain features of a dialect is the outcome of the speaker wanting to identify him/herself with a particular group, although the interlocutor may or may not belong to this group. This draws attention to the importance of covert prestige, as well as the overt prestige of standard dialects<sup>28</sup>; in Achterhoeks there is a level of covert prestige and solidarity attached to the use of dialect features in certain situations.

Further in relation to the case of Achterhoeks, we would need to consider the dialect alongside its current social status in order to judge the likelihood of long-term accommodation affecting it. As discussed earlier in this thesis, Achterhoeks is generally viewed as a regional dialect to which the prestige of Standard Dutch is not attached. While the dialect may carry a reasonable amount of covert prestige, the case may be that speakers will mostly be affected by geographical and social mobility factors as they feel the pressure to alter their speech in order to be more intelligible to speakers of Standard Dutch; certainly, they tend to use recognisable dialect forms in conversation only with other Achterhoeks speakers, according to the participants in this study. Bloemhoff's (2008b) study, as referred to in Section 2, has shown that the percentage of self-reported dialect speakers has declined, providing solid evidence for the hypothesis that long-term accommodation of phonetic features to those of Standard Dutch is a real possibility in the future of this dialect. I would suggest that the findings of this current research also echo the ideas described by Bloomfield (1933), and later Trudgill (1986) and Hinskens (1992), in that levelling occurs as a result of linguistic accommodation, either on a conscious or a subconscious level.

### **3.3. Standardisation**

James Milroy (2000, 2007) emphasises that in the process of standardisation, only one of a possible number of variants will be accepted by speakers as the standard, and others rejected;

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<sup>28</sup> The idea of prestige, in terms of how one wishes to be perceived socially, can play a role in accommodation, but accommodation also happens without it, as a kind of alignment between two people. In fact, Trudgill (2004) points out that recent developments within England have been *away* from the prestigious RP form.

the standard variety leaves no room for differences. The standard variety is the prestige variety, and carries with it the notion of correctness. As a standard language such as Dutch is officially codified throughout a long process (Milroy, 2000; Auer, 2005b), deviations from this codification are considered non-standard by speakers of that language. The orthography and pronunciation of *Achterhoeks*, both of which differ from Standard Dutch, embody an example of a non-standard variety, which lacks the prestige, authority and correctness (Milroy, 2007) of Standard Dutch. The existence of an orthography in *Achterhoeks* does suggest that there has been some variable level of standardisation within the dialect, but not to the extent that we see in Standard Dutch.

According to Auer (2005b), once a written standard is in place, it is the higher classes that begin using it in oral conversation first, whilst inhabitants of mainly rural areas continue to use the dialectal varieties. In the case of the standardisation of Dutch, the eastern rural varieties would be much more noticeable in speech due to their marked difference from the national standard variety. Dialect change in Dutch dialects is due mainly to convergence to Standard Dutch (Heeringa et al., 2000; Heeringa & Hinskens, 2015), and this process could thus be interpreted as the dialects slowly undergoing a standardisation process. However, the absence of a formal movement to standardise *Achterhoeks* would instead suggest that the standard variety is merely the target of subconscious convergence within the dialect, and this results in dialect levelling rather than standardisation. In other words, it could have been any variety to which *Achterhoeks* has exhibited some convergence, but due to the status and reach of Standard Dutch, it follows that that is the variety to which *Achterhoeks* would likely converge. However, as previously mentioned, the case in Limburg showed that changes in a dialect do not necessarily have to involve a convergence towards the standard language, and that horizontal levelling occurs as well; that is, dialects can converge on each other without becoming more standard (Hinskens, 1992). Standardisation processes therefore equate to vertical dialect levelling, and thus there are situations where it acts as one possible cause of the broad notion of dialect levelling. However, dialect levelling and standardisation should not be regarded as the same thing. Although dialect loss is often associated with convergence to the standard variety, Hinskens (1992) explains that “dialect levelling is not necessarily equivalent to convergence to the standard language” (p.461).

As an example from the Netherlands, Hagen (1987, cited in Swanenberg and Van Hout, 2013) concluded that the dialects in North Brabant have adapted to Standard Dutch, and



proposes four stages in a dialect-standard continuum, which could occur as a result of levelling or standardisation. Like Auer's Cone Model, these can be seen to be occurring both chronologically, and with different groups of speakers at the same time. Stage 1 is labelled "Dialect", which refers to the original dialect from the old generations. Given the current linguistic situation in the Netherlands, it is perhaps far more likely that what is viewed as dialect today fits more into the next stage, i.e, Stage 2, which is labelled "Intermediate varieties", considered to be younger dialect varieties. These have fewer primary features which may be thought of as being old-fashioned. However, marked secondary features are contained within these varieties. Stage 3 are "Accent varieties", which correspond to regional standards in Auer's Cone Model. These are varieties that are considered to be standard, yet the speaker will have a regional accent. Stage 4 is the "Standard", indicating use of the standard language with no regional features present.

I would argue that if the results are to show that there is some convergence towards the Standard variety, it would not be due to any attempts to standardise the dialect towards Standard Dutch, and would instead be the result of subconscious levelling or convergence. However, there may be some Standard influence. This is because there exists no movement within the Achterhoek area to formally standardise the dialect. Speakers tend to view Standard Dutch and Achterhoeks separately: participants in the study have reported conscious use of a standardised variety in certain situations, which they appear to view as a wholesale shift from their dialectal, vernacular speech. Most likely, we see a situation where both vertical and horizontal convergence occurs, as in Limburg and Brabant (see Section 3.1).

### **3.4. Other Previous Research**

#### **3.4.1. Schaars (1987) *Woordenboek* and Van Prooije (1984) *De Vakleu en et Vak***

Lex Schaars' work from the 1980s is arguably one of the most comprehensive analyses of the dialect of the Achterhoek. He interviewed residents of a number of different towns within the Achterhoek region, as well as those over the border with Germany, in order to produce a dictionary including some of the different lexical items and pronunciations being used within the region. These findings were compiled into five different themes depending on category, and written using Achterhoeks orthography:

1. De mens (People)

2. De mens en zien huus (People and their house)
3. De mens en zien wark (People and their work)
4. De mens en zien gezins en gemeenschapslaeven (People and their family and community life)
5. De mens en de weerd (People and the world)

Schaars' volumes are descriptive accounts in the form of a dictionary, and confirm the oft-cited opinion of everyday Achterhoekers, that there is a vast difference between neighbouring towns in respect of the words they use to describe everyday items and daily life. Similarly, Van Prooije's work also considered the different lexical items used within the Achterhoek region; his work focused on construction workers within the region, and his questions were related to the names that his participants had for different construction materials. Van Prooije's original sociolinguistic interview also included sentences which participants were asked to read in their dialect. Van Prooije hand-transcribed every sentence read by each participant after the recordings. However, the transcriptions were ultimately not used in his final publication (Van Prooije, personal communication, 2014). These sentences and recordings have instead formed the basis of my research, and are being used in the current study.

These works have codified and recorded in writing the speech of residents from the Achterhoek and Liemers regions. Through these, we therefore have a large sample of what the dialect varieties may have sounded like, and how they differed from one another, during the 1970s and 1980s. They provide a basis upon which to compare the speech of today, and how it has changed, in addition to the comparison between today's speakers with the actual recordings made by Van Prooije in 1979.

### **3.4.2. Heeringa and Hinskens (2015)**

The work of Heeringa and Hinskens (2015) is current and relevant to the present study of the dialects in the Achterhoek. They researched similarities and differences between older male dialect speakers in the Netherlands, and their younger female counterparts. Their research attempted to answer the question of how much change in regional dialects can be attributed to influence from the standard variety, and how much is a result of other sources.

The data used in their study came from a corpus of 86 recordings of local dialects that the researchers collected during the period of 2008-2011. The corpus was also comprised of three standard Dutch varieties, those being Standard Netherlandic Dutch (the standard variety that is also being considered in the current study), Standard Belgian Dutch, and Afrikaans. The map in Figure 16 is reproduced from Heeringa and Hinskens (2015, p.22), and shows the locations of the localities in which they recorded local dialects for their study.

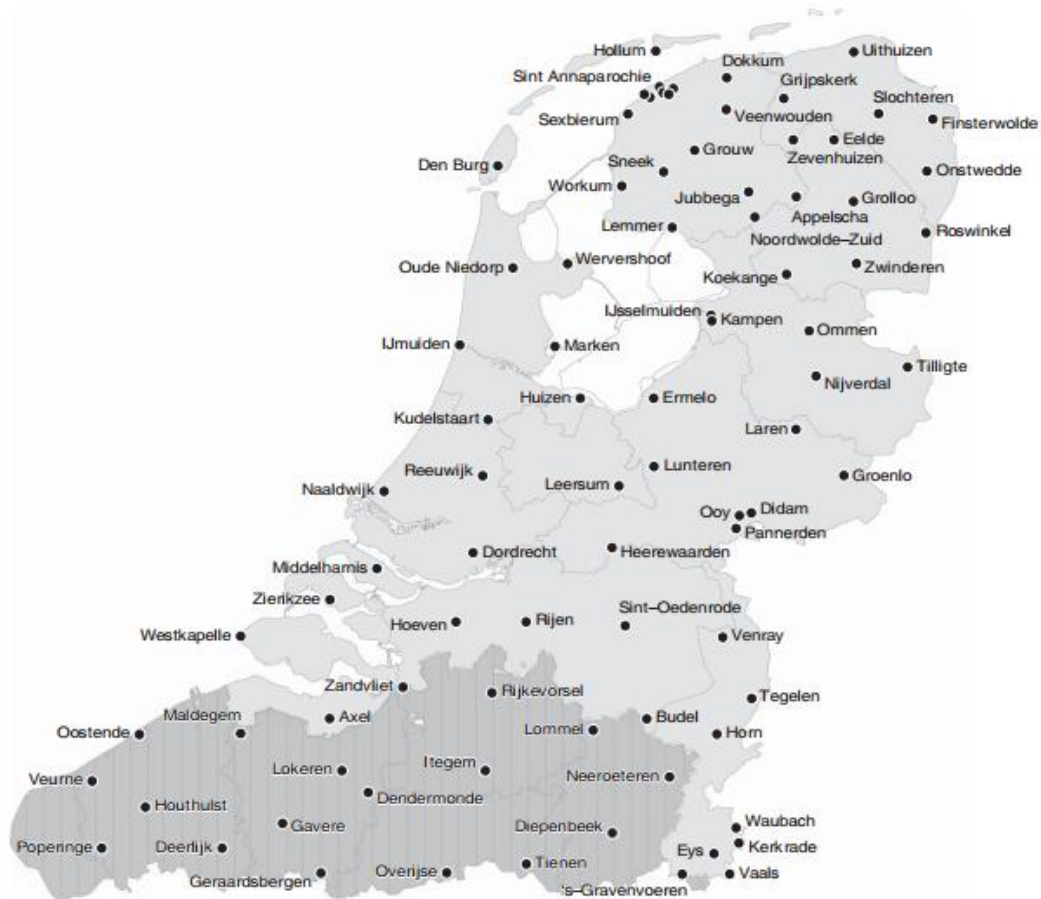


Figure 16: Map from Heeringa and Hinskens (2015, p.22) showing towns where local dialects were recorded for their study

The map is divided into Belgian and Dutch localities based on colour; Belgium is shown in a dark grey, and the Netherlands in a light grey. The towns that are of particular relevance to the current study are Didam<sup>29</sup>, Laren and Groenlo, which are situated within the Achterhoek region, as well as Ooy and Pannerdem, which border it.

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<sup>29</sup> The dialect of Didam could technically be considered to be that of Liemers, not Achterhoeks, although for the purposes of this research, they are not being treated differently (see Section 2.6 for a further explanation on this).

Heeringa and Hinskens hypothesised that change in regional dialects was due mainly to convergence on Standard Dutch, as was discussed in Section 3.4. Heeringa and Hinskens' study tested that hypothesis using sentences which participants were asked to translate into their own dialect. They were then asked to compare their translations with other speakers of the same dialect and gender/age group, and write a translation together, essentially coming to an agreement as to what most accurately represented their dialect. Each sentence thus had one older male consensus version, one younger female consensus version, and one Standard version provided. The sentences were also recorded, and IPA transcriptions provided for each speaker's pronunciations. The Levenshtein algorithm (Levenshtein, 1966, cited in Heeringa and Hinskens, 2015) was used in order to analyse and evaluate the results, and it was found that Heeringa and Hinskens' original hypothesis, that dialect change was mostly caused by convergence to the Standard, was proved correct.

However, that dialect change is due mostly to convergence on the standard was not the only proposal that the researchers were testing during this study. They also outlined two other hypotheses, both of which were also tested in the study and proven to be correct in their results:

“Sound changes in two dialects which make them converge to standard Dutch make them also closer to each other.

Sound changes in two dialects which make them diverge from standard Dutch make them also more distant from each other.”<sup>30</sup>

(Heeringa & Hinskens, 2015, p.21)

A significant finding to come out of this study was that the most usual outcome of change in regional dialects was confirmed to be convergence on the standard variety. However, this is not to say that horizontal levelling does not also occur, as discovered earlier by Hinskens (1992). Although the research undertaken as part of this thesis will continue to use the different method of formant analysis, Heeringa and Hinskens' research design represents another way of studying dialect convergence, and presents an alternative to using acoustic phonetic measurements.

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<sup>30</sup> Of course, this is not necessarily true, as the two dialects could converge on each other.

The researchers were essentially comparing completely different groups of speakers (males and females), so this could be viewed as a limitation of the study. However, they had their reasons for this choice: the males were representative of the older phase of the dialect, and the females were representative of the newer phase (Heeringa and Hinskens, 2015, p.22). While the motivation of the study was to measure change as the difference between these two groups – the comparison between speakers who are notoriously conservative in their ways of speaking, and less likely to adopt new variants, with a group of speakers who may be viewed as somewhat more innovative in their speech – the opposing effects of these groups of speakers still made for an interesting comparison. However, it is to be expected that these two groups of speakers would exhibit markedly different results. The practice of comparing two different groups of speakers is perhaps likely to produce a more limited picture than more similar groups would when investigating change, although this approach is interesting in itself as the differences between the groups can be observed and compared.

### **3.5. Overview**

After considering the theories and relevant studies that are related to the current research, it becomes evident that the present study is important in not just providing a comprehensive overview of the vowels of Achterhoeks, but also ascertaining if these vowels are undergoing a levelling or standardisation process. Previous research has focussed heavily on lexical differences between different areas of the Achterhoek, yet a gap needs to be filled in relation to phonetic variation. There are in existence many descriptive accounts of the dialect, but with the exception of dialectal equivalents of the Standard Dutch /œy/ (here referred to as the HUIS lexical set), fewer accounts of variation and change within the dialect, a gap which this research, to an extent, will fill.

The studies by Schaars and Van Prooije focused on documenting slight differences between the towns in the Achterhoeks-speaking areas, and each locality could be said to have its own variation of the broader dialect, such as Winterswijk for the Winterswijk area, or Aalten for Aalten. These even include some data from participants considered to speak the Liemers, rather than Achterhoeks, dialect. It should be noted here that my research approaches the situation a little differently. It is focused instead on providing a broad description of the area by considering the vowels which differ from the Standard variety, and the possibility of convergence on Standard Dutch, rather than replicating what has already been

comprehensively studied by Schaars and Van Prooijje. In contrast to these earlier studies, this research overall is not concerned with describing the differences between every locality, particularly because many of these differences are likely to be lexical.

This thesis considers changes in the vowels of the Achterhoeks dialect to be as a result of a levelling process. While the claim is that, in general, non-standard dialects are converging on the standard, Hinskens' (1992) work on the Limburg dialects showed a horizontal levelling situation, rather than just a straight convergence to the national standard. It is therefore a reasonable assumption, given what is happening elsewhere in the Netherlands, that this same process may be repeated in other areas, such as the Achterhoek.

## 4. Pilot Study: Initial Findings

Before the main stage of data collection, a pilot study was conducted in order to test the validity of the research design, as well as to formulate an initial idea of the changes in vowel pronunciation of Achterhoeks residents between 1979 and the present day. This study involved digitising and analysing the content of some original recordings made by Leendert van Prooije in 1979, and replicating the use of the original sentences (designed by Weijnen and van Prooije) from van Prooije's study to compare present-day speakers' pronunciations with those from almost 40 years ago. Vowels are referred to using the keywords developed in Section 2.3.2 in order to encompass the possibility of both Standard Dutch and Achterhoeks pronunciations from their respective phonological systems.

### 4.1. Methodology

The part of Van Prooije's 1979 corpus used for this study was comprised of older male construction workers from 28 different Achterhoek towns (see map below)<sup>31</sup>, which lie on or to the east of the River Oude IJssel (see Figure 115 on page 267 for a detailed visual of the location of the Oude IJssel). Van Prooije's corpus was obtained on cassette tapes from the Erfgoedcentrum van Achterhoeks en Liemers in Doetinchem, Netherlands. These tapes were then digitised using the Marantz PMD22 cassette player and the EZ Vinyl Tape Converter by Ion Audio.

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<sup>31</sup> Aalten, Almen, Barchem, Barlo, Beltrum, Borculo, Bredevoort, Breedenbroek, De Heurne, Dinxperlo, Doesburg, Doetinchem, Epse, Etten, Gaanderen, Gelselaar, Gendringen, Gorssel, Hengelo, Lochem, Ruurlo, Steenderen, Varsseveld, Veldhunten, Vorden, Vragender, Winterswijk and Zwolle.

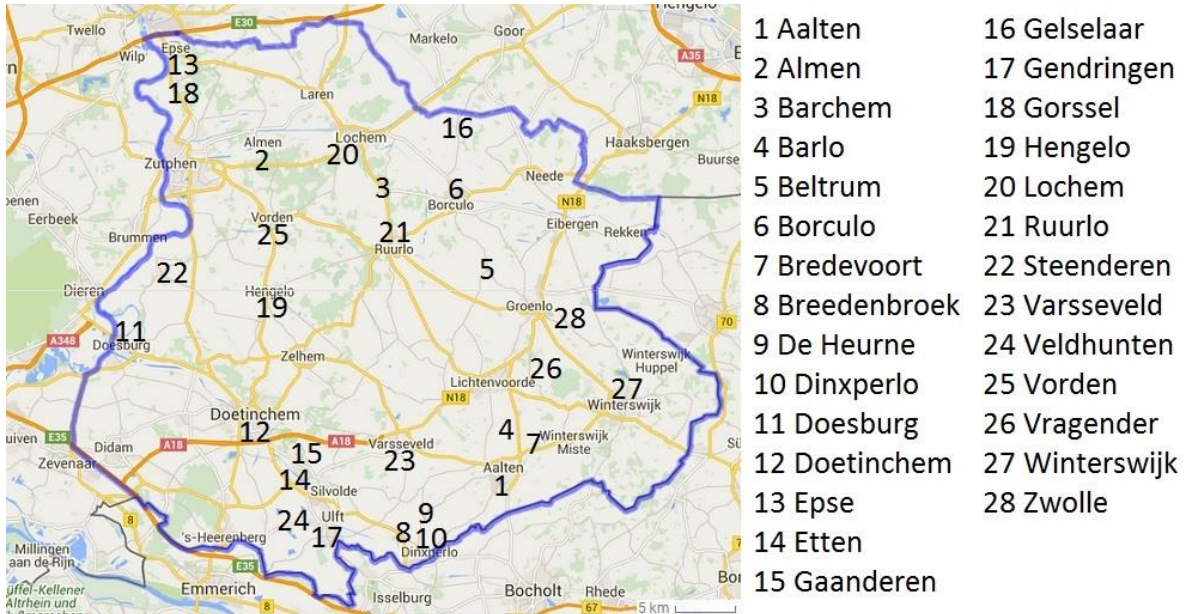


Figure 17: Map of the Achterhoek region. The locations of the speakers from the 1979 corpus have been marked (N=28).

The original interviews included a general questionnaire and sentences designed to elicit dialectal pronunciations. For the pilot study both the 1979 and modern-day speakers' PRAAT, KAART, KAAS, PAARD and KIJK vowels from selected sentences (included later in this chapter) were extracted using Audacity, and then analysed in Praat (Boersma & Weenink, 2014) and Formant Editor, a tool developed by Márton Sóskuthy. Regarding quality, recordings were converted to WAV files, in Stereo at 44100Hz. The lowest two formants were measured using Formant Editor at eleven time points and then averaged, with the exception of diphthongal vowels; these vowels also had the F1 and F2 measured at eleven points, but instead of averaging, points 2 and 8 were used to show direction of diphthongisation (see Figure 18). These results were compared to vowel productions by modern-day speakers of Achterhoeks using a newly-collected corpus to see if there was any change in the vowels over time.



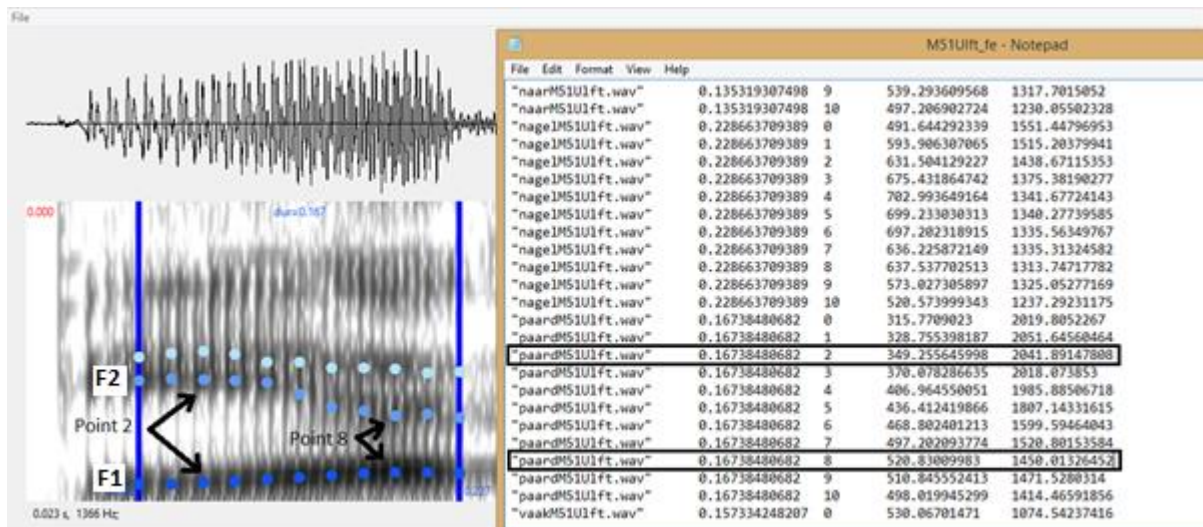


Figure 18: F1 and F2 formants measured at eleven points in Formant Editor. For diphthongs, such as the example shown here, the values at points 2 and 8 were used to show direction.

The pilot study involved five participants, all of whom were resident in the Achterhoek town of Ulft, which lies on the River Oude IJssel. They were recorded in 2014, and recruited through family contacts. Although they are from an area historically known for farming activities, these speakers all lived in a less rural setting in Ulft, a larger town. Male speakers were chosen in order to facilitate a more direct comparison with the 1979 speakers. The age spread, however, was from speakers in their 30s to speakers in their 60s, so as to allow for comparison between ages. The participants were asked to read from the same list of sentences that was used in 1979. The sentences were written in Standard Dutch, and the participants were asked to read them in their dialect, bearing in mind that traditional Achterhoeks differs in its orthography. This method was chosen in order to replicate parts of the original study, and to ensure that the speakers' vowels were recorded under similar conditions. Four speakers were interviewed twice at different times over the course of two months, as during the first reading they read the sentences in Dutch, despite three of these four speakers using Achterhoeks in their daily speech. It was determined that the fact that the sentences were written in Standard Dutch and not in Achterhoeks contributed to the participants' decision to read them aloud in Standard Dutch, and they were asked a month later to read the same sentences in their dialect, as well as at the initial recording session. At this point, three of these four speakers read in Achterhoeks, the fourth not doing so because his vernacular was Dutch and not Achterhoeks. The fifth speaker read in Achterhoeks the first time, and so was not asked to read the sentences a second time.

The sentences the participants were asked to read were a subset of the sentences from Van Prooije’s 1979 study. These same sentences were chosen in order to maintain consistency and so that the vowels to be analysed were in the same phonetic environments. The list below shows the sentences that participants were required to read; words in bold indicate that they contain the vowels to be analysed:

- *We gingen vannacht **allemaal** weg* (‘We all went away tonight’)
- *Ik **ga** een gat **graven*** (‘I’m going to dig a hole’)
- *De **kaart** is zwart* (‘The card is black’)
- ***Daar** loopt een oud lam* (‘There goes an old lamb’)
- *Het **gaat** een stuk beter met zijn **nagel*** (‘His nail is getting much better’)
- *Hij heeft al sinds 1940 een **paard*** (‘He has had a horse since 1940’)
- *Hij liep **naar** de toren* (‘He ran to the tower’)
- *De **prijzen** van huizen **gaan** omhoog* (‘The prices of houses are going up’)
- *Je moet niet zo **vaak** in de spiegel **kijken*** (‘You must not look in the mirror so often’)
- *Die **spijkers** zijn van **ijzer*** (‘Those nails are made of iron’)
- *Hij was **stijf** van de **pijn*** (‘He was stiff from the pain’)

Vowels from the bolded words fit into the lexical sets as follows:

PRAAT	KAART	KAAS	PAARD	KIJK
allemaal, daar, ga, gaan/gaat, naar	graven, kaart, vaak	gaat (3 <sup>rd</sup> pers. sing), nagel	paard	ijzer, kijken, pijn, prijzen, spijkers, stijf

Table 8: Words corresponding to the lexical sets (Pilot Study)

For the main study, the expectation was to analyse more vowels than what were covered in this pilot, from the same 1979 corpus, as well as recording at least 30 current Achterhoeks speakers, and compare their vowels to those of the 1979 speakers. During the pilot study, the vowels looked at were PRAAT, KAART, KAAS, PAARD and KIJK, but HUIS is also considered in the main study. Additionally, all non-spontaneous tokens of the aforementioned lexical sets from the 1979 corpus are included, in addition to the selected ones chosen for the purposes of the pilot study. Due to the written sentences being in Dutch, there is also the addition of a picture task that aims to elicit responses in Achterhoeks (and thus the Achterhoeks pronunciation of certain key words, such as *paard*, *spijkers* and *nagel*) in more spontaneous (although still consciously dialectal) speech. More information on the modifications of the pilot study is discussed further in Section 5.1.

Although it has been noted that the phonologies are separate, words containing the Standard Dutch vowel /a:/ and the spread of Achterhoeks possibilities have been analysed together. This is less complicated when comparing the Standard Dutch diphthong /ɛi/ with the Achterhoeks monophthong /i:/, as the distribution of these vowels within both phonologies has been shown to be parallel with each other.

## 4.2. Results and Discussion

### 4.2.1. 1979 – KAART, PRAAT, KAAS and PAARD

In compiling the results, most but not all tokens were analysed for each speaker. The analysis of the selected tokens was dependent on the intelligibility of the word in question, or because part of the recording containing the desired words had been cut off. Some speakers produced the same word a number of times and so may have more than one token of the same vowel included in their results.

The PRAAT pronunciations produced perhaps the most variable results. While there was little interspeaker variation, there was intraspeaker variation, yet this occurred on the same words every time, and there was variation between [a:] and [ɔ:] pronunciations. One of the most consistent results was the pronunciation of the PAARD vowel as [iə] by all 1979 speakers, with no convergence to Standard Dutch realisations. One speaker, from Beltrum, pronounced it first using the Standard Dutch lexical form represented by PAARD, but then acknowledged the Achterhoeks pronunciation, suggesting that at the time Achterhoeks speakers were very aware of the pronunciation of this particular word being quite different from that in Standard Dutch. Evident in the pronunciation of this word was the pre-/r/ breaking, where the close front vowel was diphthongised and ended in a schwa. The following charts show the diphthongisation in *paard*, first by all the individual 1979 speakers for whom it was recorded, and then averaged by speaker. The arrows represent the direction of the diphthongisation, with mean values indicating its beginning with [i] and, in most but not all cases, ending with [ə]. The average KIJK, KAART and PRAAT values are included for reference.

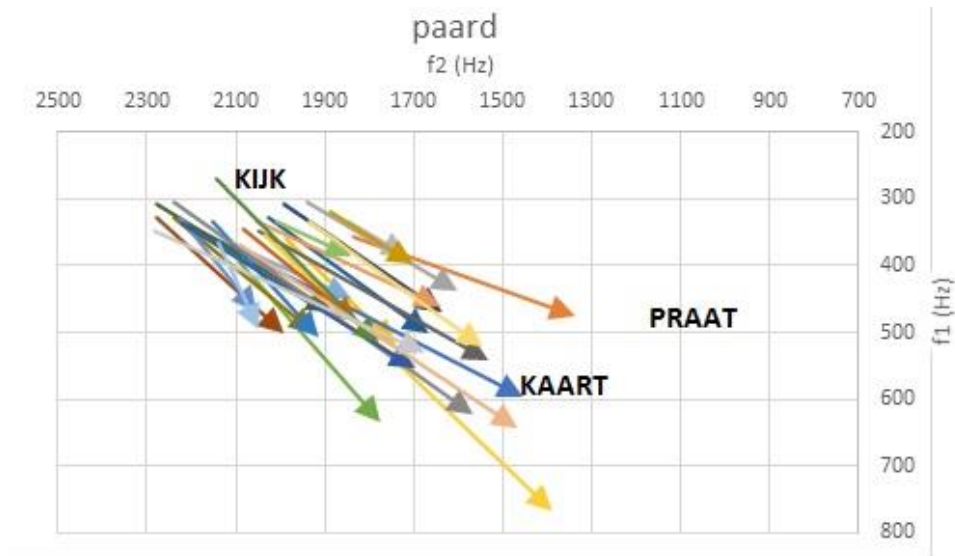


Figure 19: F1/F2 plot: *paard* (all 1979 speakers). Each arrow represents a single token for each speaker and shows the direction of the diphthong (N=27).

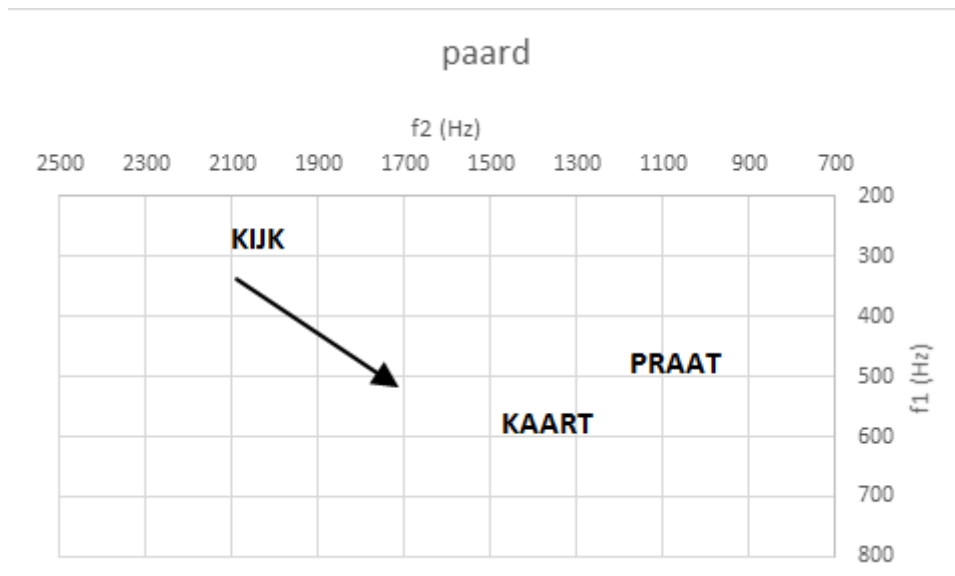


Figure 20: F1/F2 plot: *paard* (mean, 1979). The arrow shows the average direction of the diphthong (N=27).

We can see that for each speaker, the vowel tends to start off as a close front vowel at onset, but becomes more open and retracted. This is more evident for some speakers than others; for example, the speaker from Gelselaar (see Figure 21) showed the greatest extent of diphthongisation and lowered his vowel as far as [a:], while the majority diphthongised to a schwa in place of the rhotic consonant. The average of the results sees the vowel moving in this way, but there is also little movement in the pronunciations of the speakers from Gaanderen, Gorssel, Steenderen and Epse, as well as for the Gendringen and Vorden speakers, who lowered the height of the vowel, but did not show much retraction (from an F2

value of 2227 Hz to an F2 value of 2051 Hz for Gendringen, and 2138 Hz to 2049 Hz for Vorden).

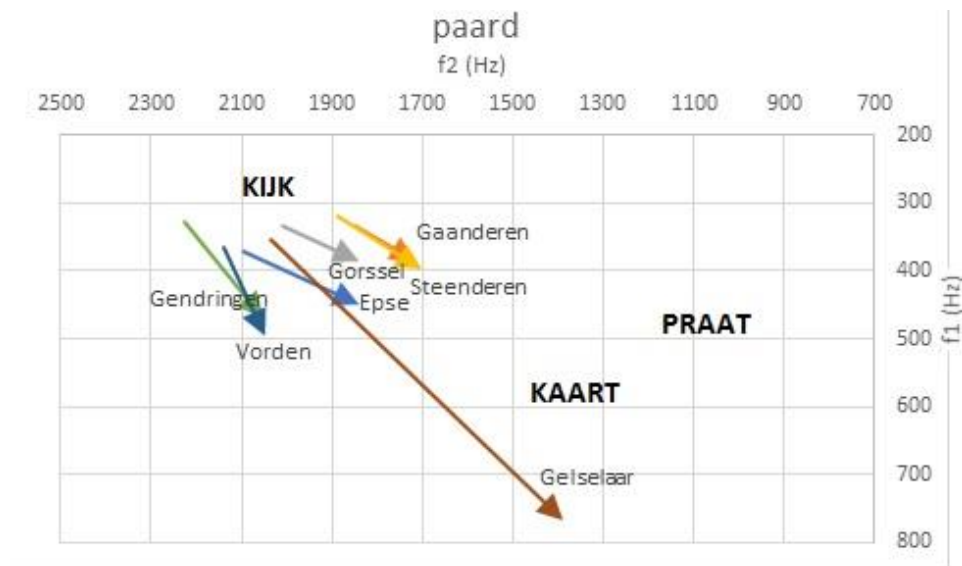


Figure 21: Speaker pronunciation of "paard" from various towns in 1979 (N=7).

We also see that *gaat* ('go') has varied pronunciations, being usually realised with either the PRAAT or KAAS vowels. This can be linked back to the idea first mentioned in Section 2.5 regarding verb conjugation in Low Saxon dialects, providing an explanation for why *gaat* has a different pronunciation based on how it is conjugated: third-person singular forms tend to elicit vowel alternation into a fronted vowel, which are entirely consistent in terms of the vowel used (Bloemhoff et al., 2013b). The formant chart below shows the realisation of *gaat* across the different 1979 speakers. *Gaat* can be clearly grouped into front realisations and back realisations, with two speakers showing more centralised vowels, as seen in Figures 22 and 23. The average KIJK, KAART and PRAAT values are again included for reference.

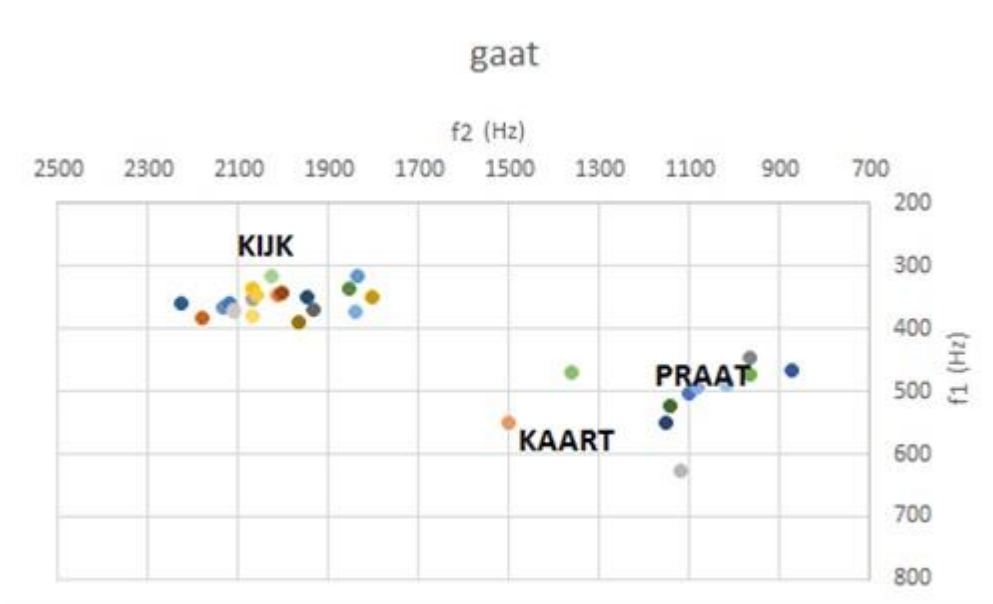


Figure 22: F1/F2 plot: gaat (all 1979 speakers). Each point on the plot represents a different speaker (N=31).

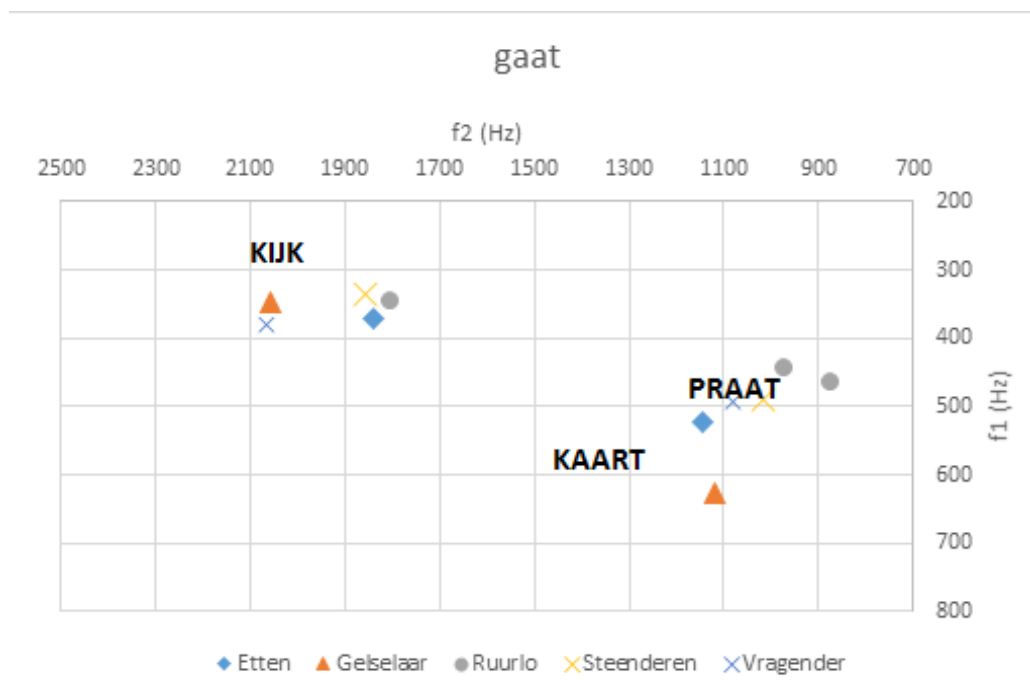


Figure 23: gaat. Data points are representative of the front and back pronunciations observed in the speech of five speakers (N=11).

Figure 23 shows the frequencies of F1 and F2 for the speakers who had both the back (PRAAT) and front (KAAS) variants analysed. The fronted variants tended to be produced during the sentence “*Het gaat een stuk beter met zijn nagel*”, whereas the back variants were produced when speakers replaced *gingen* in “*We gingen vannacht allemaal weg*” (“we all

went away tonight’)<sup>32</sup> and *gaan* in “*De prijzen van huizen gaan omhoog*” (‘the prices of the houses are going up’) with *gaat*. What we are seeing here is due to the grammatical feature observed in some of the more northern Low Saxon border dialects (see Chapter 2.5), including Achterhoeks, where the singular form of the verb is also used for plural forms (Heerink, 2014; Bloemhoff et al., 2013b), and, subsequently, where a strong verb is used there is a change in the vowel. Consider the following examples (from Groeneveld, Noe and Schaars, 2015), where more traditional Achterhoeks orthography (Groeneveld, Noe & Schaars, 2015; Van Prooijje, 2011) is used:

<i>Wij gaan naar Doetinchem (Dutch)</i>	<i>Die spijkers zijn van ijzer (Dutch)</i>
<i>Wi-j gaot naor Deutekem (Achterhoeks)</i>	<i>Die spiekers bunt van iezer (Achterhoeks)</i>
(‘We go / are going to Doetinchem’)	(‘Those nails are [made] from iron’)

Due to this correlation, these results seem to suggest that, in keeping with the traditional vowel alternation rules, speakers view *gaat* as having two distinct pronunciations depending on in which form it is being used: the fronted variant is used in the third person singular form (as in *Het gaat een stuk beter met zijn nagel* where *gaat* is realised as *geet*), and the back variant is used for other forms, including the plural (as in *De prijzen van de huizen gaan omhoog* where *gaat* is realised mostly as the singular form *gaot* [‘yɔ:t] but also occasionally as the plural form *gaon* [‘yɔ:n]). What should also be considered is that although both variants were recorded for only some speakers, closer analysis of the data in the later study revealed that both variants exist in the speech of more speakers than were measured for this part of the study. This occurred as some speech tokens were not measured due to the lower recording quality of these tokens.

As Figure 24 shows, *nagel* (from the KAAS lexical set) was overwhelmingly pronounced with a front mid vowel (with an F1 average of 458 Hz, and an F2 average of 1851 Hz), but there were two speakers, from Beltrum and Vorden, who used a variant closer to what we would expect from a speaker of Standard Dutch. These speakers, however, changed to the traditional Achterhoeks pronunciation, and so have a higher fronted variant included in their

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<sup>32</sup> Even though *gingen* is past tense, some speakers still replaced it with *gaat*.

results in addition to their more open realisations<sup>33</sup>. The vowel in *nagel* was not the only vowel that the speaker from Beltrum changed from a Dutch to an Achterhoeks pronunciation, with the vowel in *paard* initially resembling the Dutch one, suggesting that this speaker may have begun a process of accommodation to some Dutch pronunciations.

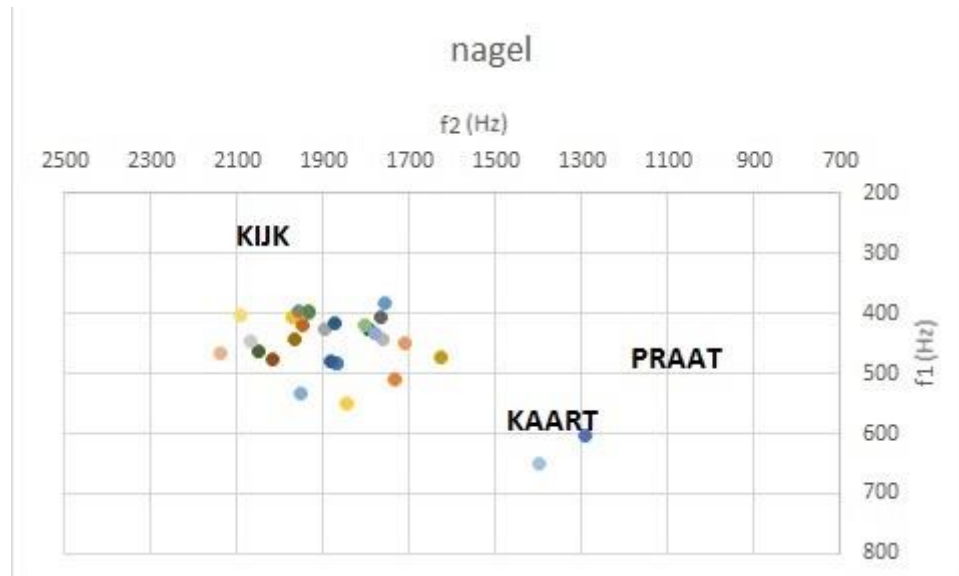


Figure 24: F1/F2 plot: *nagel* (1979). Each point on the plot represents a different speaker (N=29).

The vowels in *daar* and *naar* are seen in Figures 25 and 26<sup>34</sup> to be more centralised than the other vowels of the PRAAT lexical set, seemingly following the principle that /r/ has a tendency to centralise the preceding vowel (Booij, 1995; Collins & Mees, 2003). However, while these words most often have rhotic pronunciations in Standard Dutch, the Achterhoeks realisations tended to result in pronunciations of [na:], [nɔ:], [na:ə] and [nɔ:ə], where an off-glide was sometimes observed. Therefore, rather than a rhotic consonant, it is perhaps the off-glide here that is responsible for these individual words being more centralised than the other words containing the PRAAT vowel. This is because an off-glide can often cause its preceding vowel to become centralised and lengthened (Collins & Mees, 2003). This is

<sup>33</sup> This method was changed during the main part of the study to include only the pronunciations where participants self-corrected to the Achterhoeks variant. As conscious representation of dialect was recorded, it is assumed that participants who read sentences using Standard variants first, and then reread the sentence, did not consider their first utterance to be the dialectal variant. These utterances are, therefore, not useful when trying to determine the Achterhoeks variant, and came about as sentences were written in Standard Dutch orthography which caused some participants on occasion to read in Standard Dutch first before translating to their version of Achterhoeks.

<sup>34</sup> There are fewer speakers on the plot for *naar* (Figure 26) than for *daar* (Figure 25), as fewer tokens of the vowel in this word were examined due to low recording quality, or pronunciation as a schwa.



considered to be true of all vowels in Standard Dutch (Collins & Mees, 2003), and we see its most obvious evidence in the Achterhoeks pronunciation of *paard*, where the vowel combination acts as a short diphthong (see Section 2.3.2).

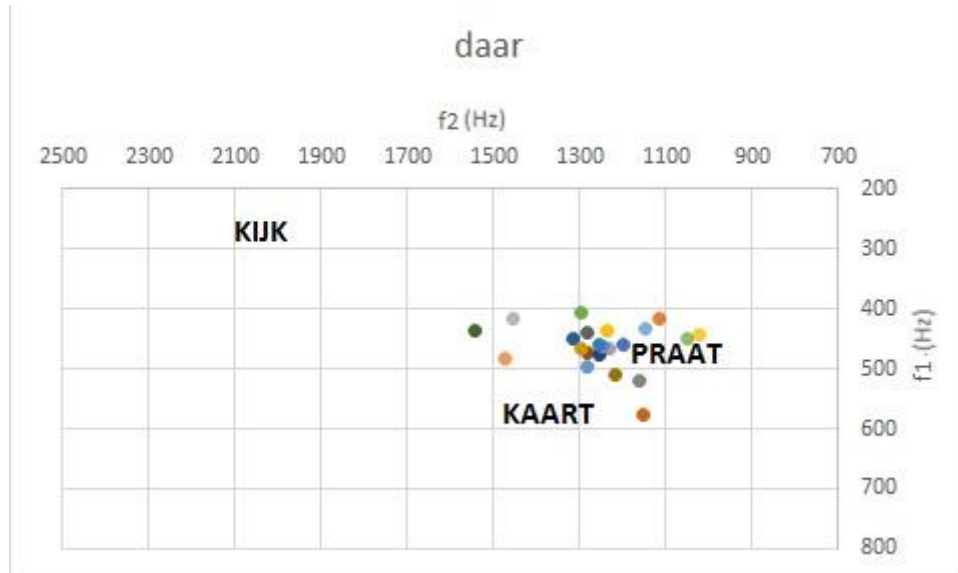


Figure 25: F1/F2 plot: *daar* (1979). Each data point represents a different speaker (N=22).

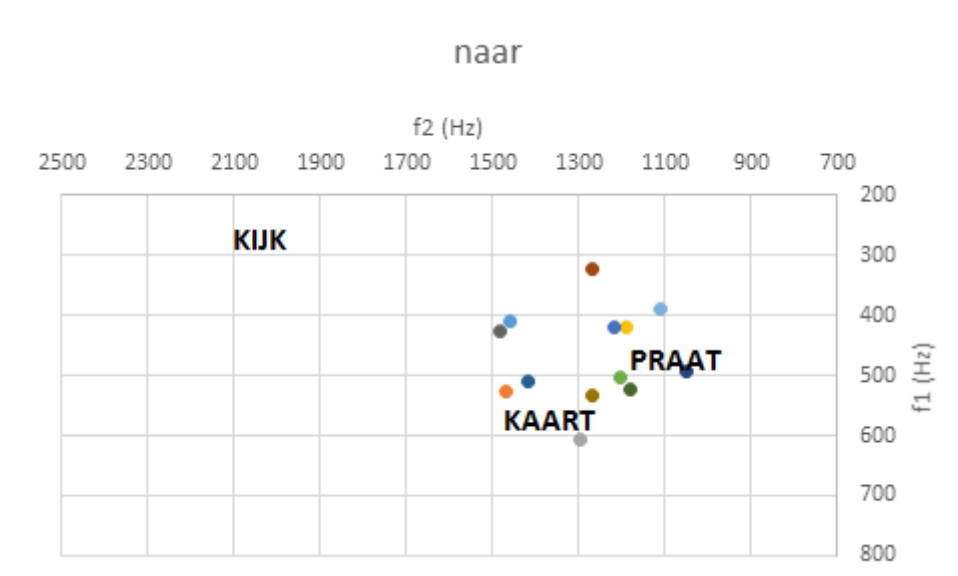


Figure 26: F1/F2 plot: *naar* (1979). Each data point represents a different speaker (N=13).

Figure 27 shows the overall average realisation of all of the PRAAT, KAART and KAAS vowels (which are grouped together as these lexical sets are all pronounced with [a:] in Standard Dutch), with *gaat* listed twice (the averages of the fronted and retracted variants are calculated separately), and with the outliers of unstressed vowels (particularly in *naar* and *daar*) removed. From this chart we can see that the difference between the KAAS and

PRAAT variants is clear, and *kaart*, *vaak* and *graven*, pronounced with the more open and Standard vowel, are lower than the variants that use traditional Achterhoeks pronunciations (those within the KAAS and PRAAT lexical sets). We see that *vaak* and *graven* seem to be backer than *kaart* itself; it is possible that this is perhaps a kind of interdialect form. The words *gaat* (in the plural function), *gaan*, *ga* and the final vowel in *allemaal* show the most retraction; this could be attributed to the phonetic environment where the preceding velar consonant (in *gaat*, *gaan* and *ga*) results in the vowel becoming more retracted. In the case of *allemaal*, the following lateral consonant has perhaps affected the vowel; particularly before the velarised or “dark” [ɫ], the vowel can be in a lowered and retracted position.

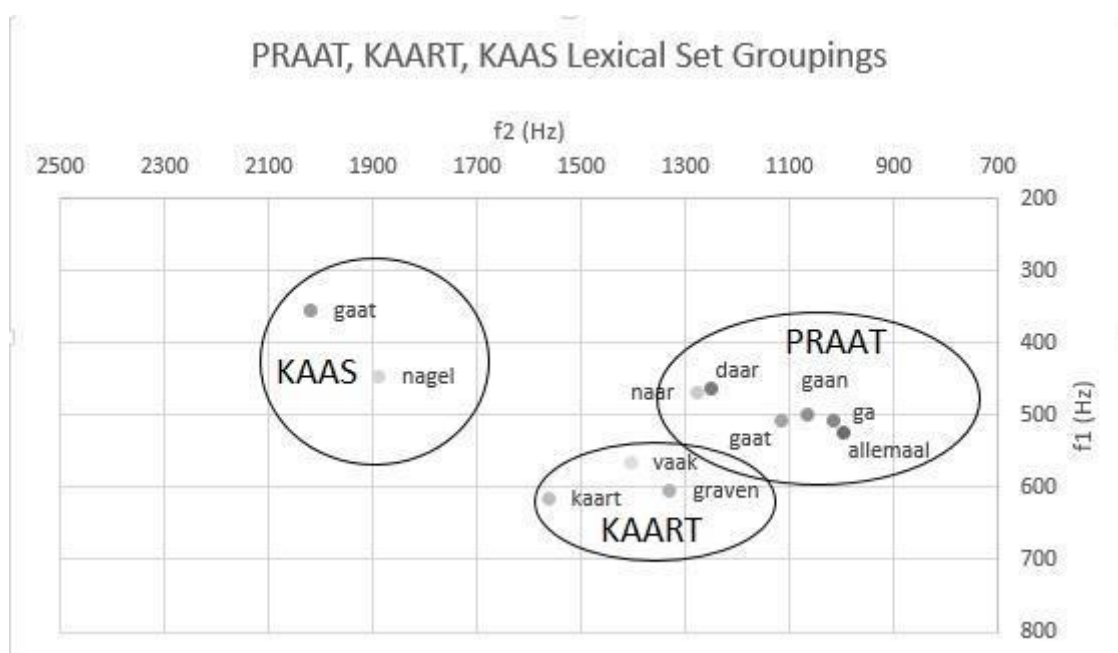


Figure 27: Mean realisations of the lexical set groupings of PRAAT, KAART and KAAS in the 1979 speakers (N=264). The mean F1/F2 values of words are shown within their lexical set groups. “Gaat” appears twice, as it is pronounced differently depending on how it is used in the sentence.

#### 4.2.2. 1979 - KIJK

Regarding the Achterhoeks speakers’ pronunciation of the KIJK vowel, there was not as much variation amongst speakers as there was with the variants that corresponded to the other lexical sets. We can see from the formant plot in Figure 28 that all speakers realised KIJK as a closed front monophthong. This can clearly be interpreted as Achterhoeks /i/, and not Standard Dutch /ei/.

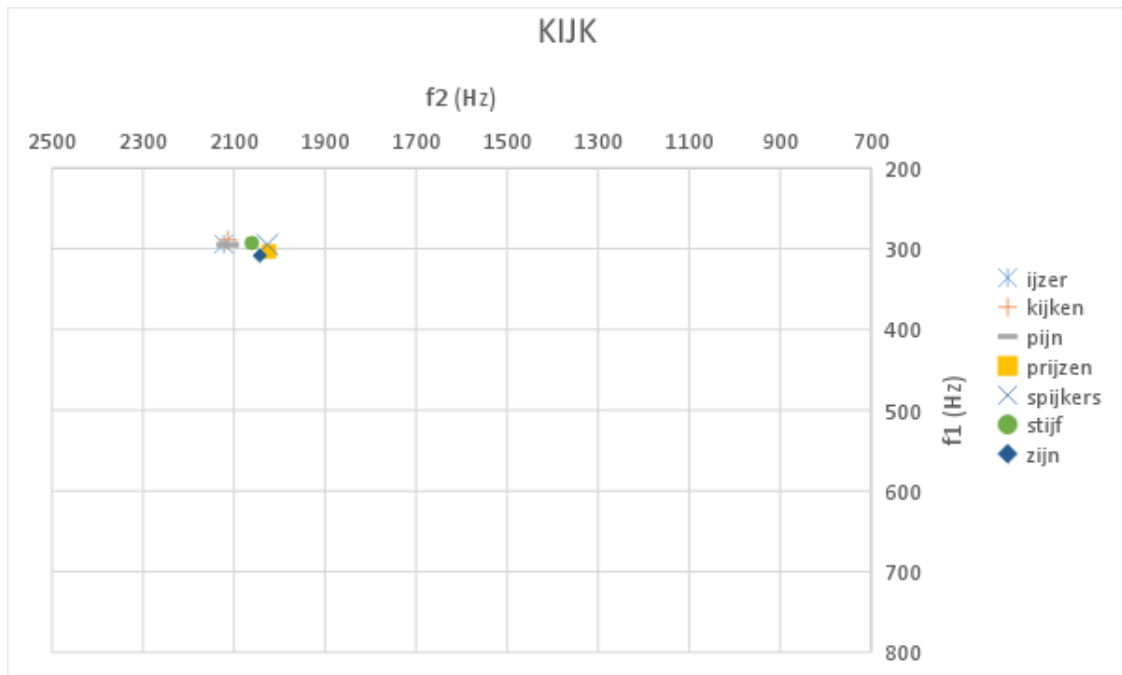


Figure 28: Mean of /i/ in 1979. Each data point represents the mean formant frequencies of all tokens of the corresponding word (N=167).

To look at one of these words in more detail, Figure 28 shows that *ijzer* was usually pronounced with a close-front vowel [i], with F1 frequencies ranging from 221Hz to 366Hz, and F2 frequencies ranging from 1818Hz to 2323Hz. It was always realised as a monophthong. Its most fronted position was recorded in the speech of the Epse speaker, with its most retracted position recorded in the speaker from Gaanderen. Due to the distance between Epse and Gaanderen, it may appear that there is a difference due to geography (refer back to Figure 17 on page 96), but other particularly fronted vowels were observed in *ijzer* in the speakers from Vragender and Varsseveld, which lie fairly close to Gaanderen. Therefore, any differences between the vowel's position in this word are less likely to be because of geographical reasons, due to the relatively close distance between Varsseveld, Vragender and Gaanderen. But, of course, this cannot be ruled out. It is, however, interesting to consider the fact that the speaker from Gaanderen did tend to have the most retracted, or close to the most retracted, vowel for all KIJK tokens analysed for him, whereas the vowels of the speakers from Vragender and Varsseveld often occupied the more fronted positions. This can be seen by comparing their positions in Figure 29 with their positions in Figures 30 and 31. There are, however, two considerations here. The first is that these pronunciations are perhaps idiosyncratic rather than a question of the speaker's dialect. The second is that the pronunciations could also be a result of the fact that the formant values were not normalised, and therefore the more retracted vowel observed in the Gaanderen speaker may be due to

differences in this speaker's vocal tract (especially as this was a uniform finding across the words containing this vowel). In the main study (see from Section 5), formant values were normalised in order to account for this possibility.

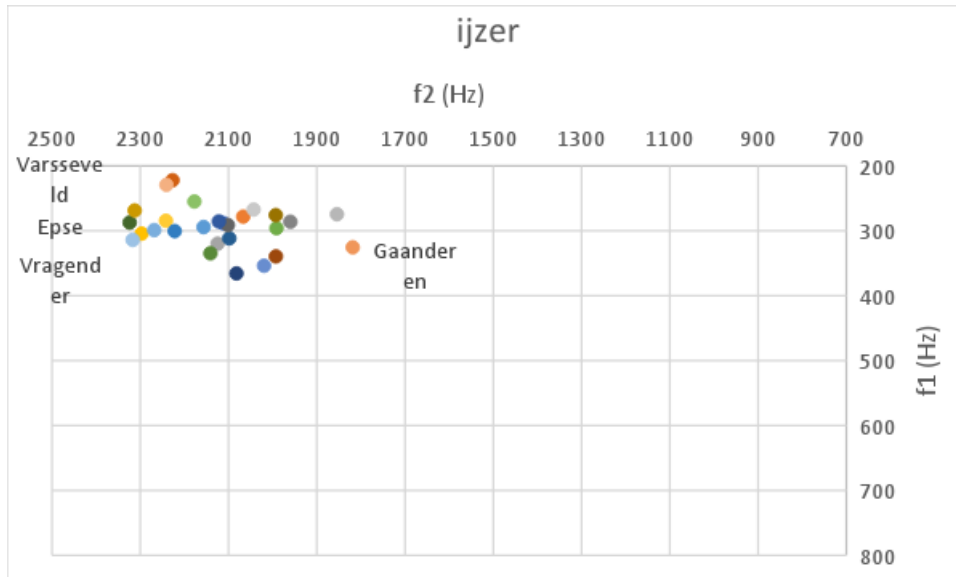


Figure 29: F1/F2 plot: *ijzer* (1979). Each data point represents a different speaker (N=27).

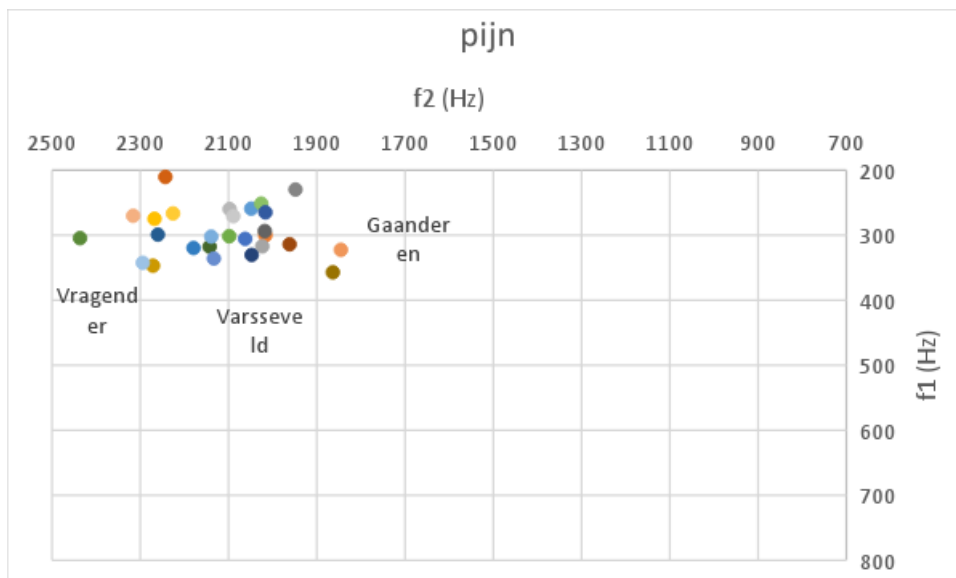


Figure 30: F1/F2 plot: *pijn* (1979). Each data point represents a different speaker (N=27).

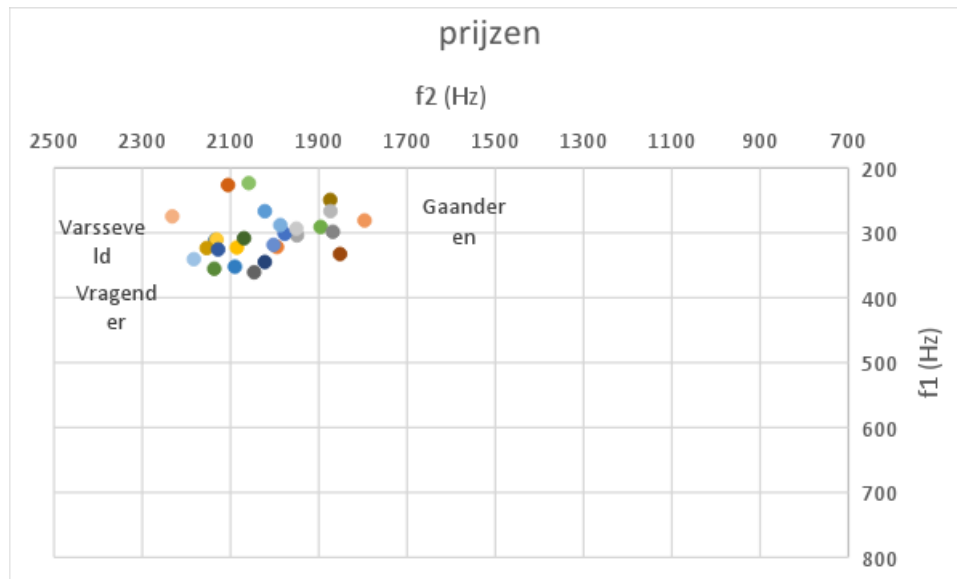


Figure 31: F1/F2 plot: *prijzen* (1979). Each data point represents a different speaker (N=27).

Taking into account the other data points, we can see that this vowel occupies the close front area of the vowel space. Glides are not shown in the charts above. However, none of these vowels was diphthongised, and the speakers retained the old Low Saxon monophthong.

### 4.3. 1979 - Overview

The 1979 recordings showed considerable consistency in terms of pronunciations, although we could observe some instances of the Standard Dutch vowels being used in place of Achterhoeks: both [a:] and [ɔ:] were heard for *ga*, and *naar* and *daar* (also of the PRAAT lexical set) both often appeared to be more centralised. There was also some shift in *nagel* from [e:] to [a:] observed. All KIIK words were pronounced with the expected Achterhoeks [i] vowel. This suggests that participants may be more aware of this feature as being more typical of the Achterhoeks dialect than is the distinction between the [a:] of Dutch and the [ɔ:] of Achterhoeks (illustrated using the PRAAT lexical set). On the other hand, their consistency could indicate that they are actually less aware of the distinction. This, however, is probably not the case here, as the speakers were given the instruction to specifically read the sentences (written in Standard Dutch) in their dialect. This instruction indicates that they were aware of the features being used as typical of their version of dialect.

#### **4.4. Modern Achterhoeks (Pilot Study)**

The pilot study involved five male Achterhoek residents aged 32, 35, 51, 58 and 61 (hereafter referred to as M32, M35, M51, M58, and M61) reading the same selected sentences as those used in the 1979 study. The participants selected for this stage of the study differed in a number of ways to the speakers from the original corpus, so it is important to consider the fact that these differences exist. Firstly, the speakers from Van Prooijje's 1979 study were all older speakers, with an average age of around 70 years old (Van Prooijje, 2011). The speakers included in the pilot study were from a much younger age group, with the oldest being 61 years old. Therefore, we could consider the fact that there is a larger generational difference than simply the 35 years between recordings. Additionally, many of Van Prooijje's participants were from rural areas, and they were also construction workers; the speakers in this pilot study all lived in the non-rural town of Ulft, and had differing occupations.

As we shall see shortly, the results showed that there was more variation between standard and non-standard variants amongst these speakers than the 1979 speakers, suggesting that there has been some shift since 1979 in the use of Achterhoeks vowels. The first observation is that there is what appears to be slightly less awareness shown by the modern-day speakers. This is seen by comparing where Standard Dutch vowels were used in place of Achterhoeks vowels. That is, the modern-day speakers used more Standard Dutch vowels in words in which the 1979 speakers had previously used Achterhoeks vowels. However, these distributional patterns may not necessarily relate to awareness, because the modern-day speakers were not as explicitly told to read in their dialect as the 1979 speakers, and instead were asked to read as they would normally say the sentences in their everyday speech. This, of course, meant that speakers who did not consider themselves to be speakers of dialect might be included. This was an issue that was rectified in the main part of the study in order to ensure consistency, where ultimately only self-identified dialect speakers were asked to read the sentences as they thought they would be pronounced using the dialect. In this stage of the study, M35 showed the most convergence on Standard Dutch, using the Standard Dutch pronunciation for each recorded word, even where the other speakers retained the Achterhoeks variant. This was the speaker who either did not know, or did not choose to use dialectal variants, and he would be considered the only regional standard speaker interviewed.

The first noticeable difference is that the use of the traditional Achterhoeks vowel in *prijzen* appears to be declining, with three of the five speakers using the diphthongal Standard Dutch variant (see Figure 32). One of the diphthongs was identified in M35, who did not use any traditional variants, but it is more noteworthy that two of the dialect speakers also diphthongised their vowel. The decision about which vowels were diphthongised and which were not was based on whether their F1/F2 formant measurements indicated obvious diphthongisation. As noted earlier, however, this method was modified for the main study, and F1/F2 time points 2 and 8 were recorded in order to show diphthongal vowel trajectories, or the lack thereof, for all tokens. Whether or not a vowel was diphthongal was determined by a combination of auditory judgement, whether there was sufficient movement visible on the spectrogram, and whether point 8 of the vowel encroached upon the vowel space of another vowel, which usually involved a difference of at least 200Hz at either F1 or F2. If the difference between points 2 and 8 was too small, the measurement of the vowel was taken at point 2, the onset position.



Figure 32: F1/F2 plot: *prijzen* (2014). The arrows represent the diphthongal pronunciations, while the single data points represent the monophthongal pronunciations (N=5).

*Nagel* also showed variation between the Achterhoeks pronunciation and the Standard Dutch pronunciation, suggesting another slight shift towards Standard Dutch. The more fronted variants were seen in the speech of speakers M32 and M61. However, based on F2 values, these pronunciations were not as fronted as those present in the 1979 data. This is suggestive of the vowel in this word beginning to converge on the Standard Dutch variant. It is a gradual change, not a discrete substitution as might be the case for *geet/gaat* or *peerd/paard*.

Figure 33 shows the vowels in *nagel* for all 2014 speakers plotted against the average KAAS and KAART realisations of the 1979 speakers. We can see that two speakers from 2014 (represented on the chart by the points in blue) are using a fronter vowel than the other speakers, and this appears to be closer to the phonetic values for KAAS than for KAART. This could be representative of a change in progress, where the vowel is beginning to shift, but as there is limited data at this stage of the study, it is only an indication and needs to be considered alongside further data.

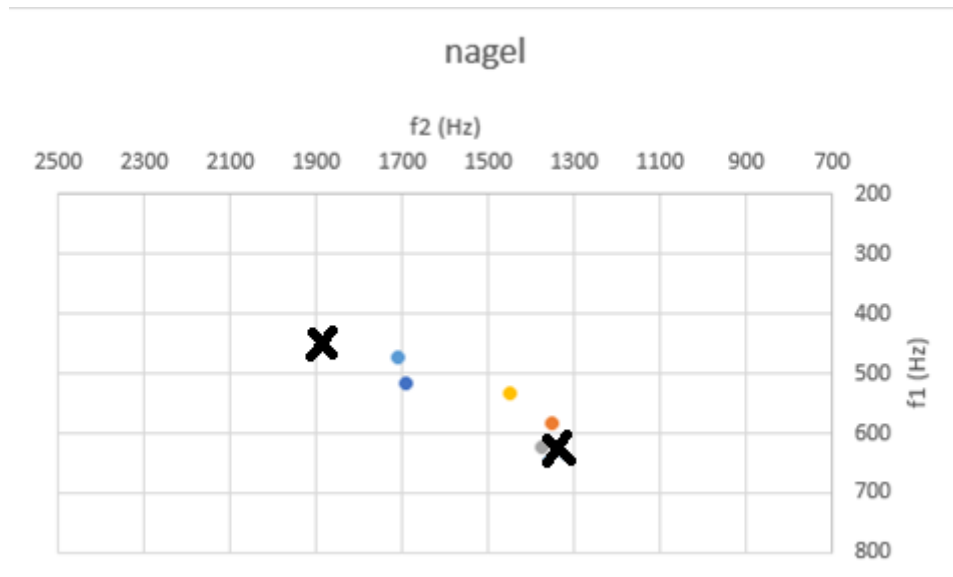


Figure 33: F1/F2 plot: *nagel* (2014). Vowels for each 2014 speaker are shown as circles, while KAAS and KAART averages for the 1979 speakers are shown as crosses ( $N=5$ ).

The results for *gaat* are also interesting. There was no realisation of the vowel as a back vowel (see Figure 36); however, neither was there any *gaan-gaat* verb substitution, as was occasionally seen among the 1979 speakers (although the sample size is too small to claim that this grammatical feature has definitely been lost). Where this word appeared in the third person position (therefore corresponding to the KAAS lexical set), two speakers used the Standard Dutch pronunciation (M35 and M58) of [a:], while the other speakers used the Achterhoeks [e:] variant. Yet, unlike as in *nagel*, the fronted realisation of *gaat* has not shown retraction since 1979, suggesting that this fronted (third person singular) *gaat* pronunciation has more likelihood of being retained in Achterhoeks. We can compare the fronted variants of 1979 and 2014 in Figures 34 and 35, where the positions of the (fronted) 1979 vowels are shown in grey, and the 2014 vowels are shown in black and labelled. Figure 34 shows the position of the vowel for each speaker recorded in 2014, where both dialectal (fronted) and standard (non-fronted) variants are seen. One of these non-fronted variants was of course



recorded by the non-dialectal speaker, yet there is some significance in the fact that a dialectal speaker also produced a similar vowel. In Figure 35, however, we see the distribution of the F1/F2 frequencies recorded by the 1979 speakers in the sentence *het gaat een stuk beter met zijn nagel*, with the 2014 speakers' F1/F2 frequencies superimposed onto the chart as well, showing them to be well within the same range as the equivalent vowels for the 1979 speakers (which suggests retention).

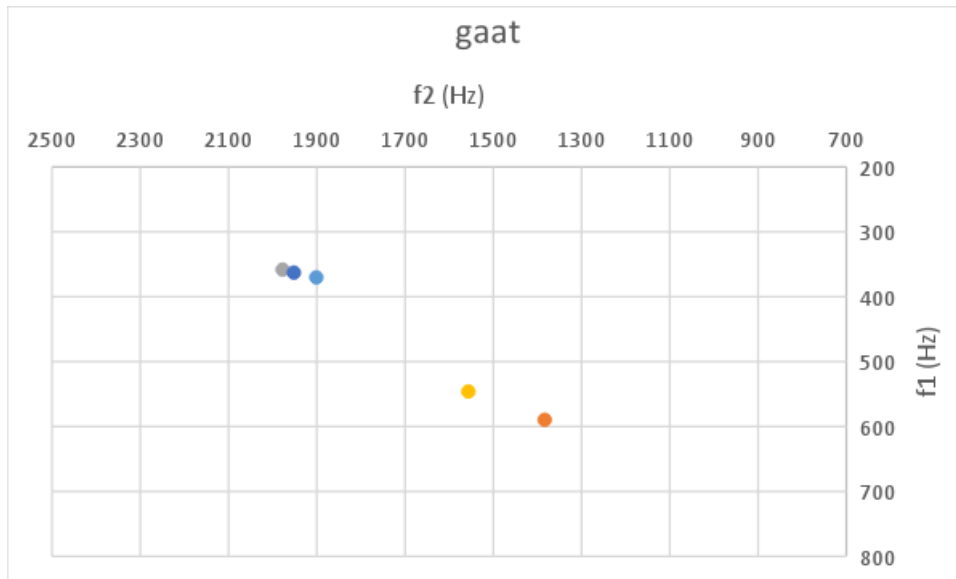


Figure 34: F1/F2 plot: *gaat* (2014). Each data point represents a different speaker. The front vowels are the pronunciation of the third person singular form, and the back pronunciations are non-third person singular (N=5).

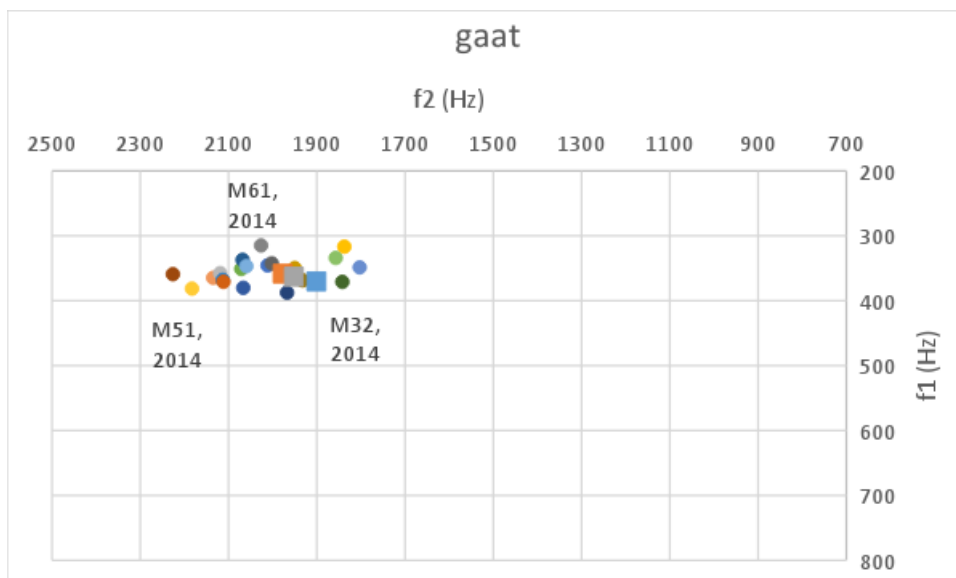


Figure 35: F1/F2 plot: *gaat* – Position of all 1979 and selected 2014 speakers (1979 speakers represented by circles, 2014 selected speakers represented by squares) (N=34).

## 4.5. Discussion

The most compelling findings revolved around the PRAAT and KAAS vowels and how the 2014 speakers compared to the 1979 speakers. Consider Figure 36, which shows a comparison; we can see that there appears to be a shift towards a more central vowel. In particular, *nagel* has retracted, and *gaan*, *ga* and the backed pronunciation of *gaat* appear to have all fronted considerably. There may be an internal effect present, particularly in the production of the third vowel in *allemaal*. Previous research (eg. Cox & Palethorpe, 2004; Collins & Mees, 2003) have focused on the influences of prelateral vowels. The following /l/ have most likely contributed to the continuing realisation of the vowel in *allemaal* as a back vowel; coupled with the preceding /m/, vowels in these positions can present as more lowered and retracted than usual (Collins & Mees, 2003). This is particularly prevalent when /l/ is realised as a velarised dark [ɫ], and a study by Botma, Sebregts and Smakman (2012) found that the retracting effect of /l/ is evident in both short and long vowels equally. Therefore, we can assume that there is an internal effect involved at keeping the vowel in this back position.

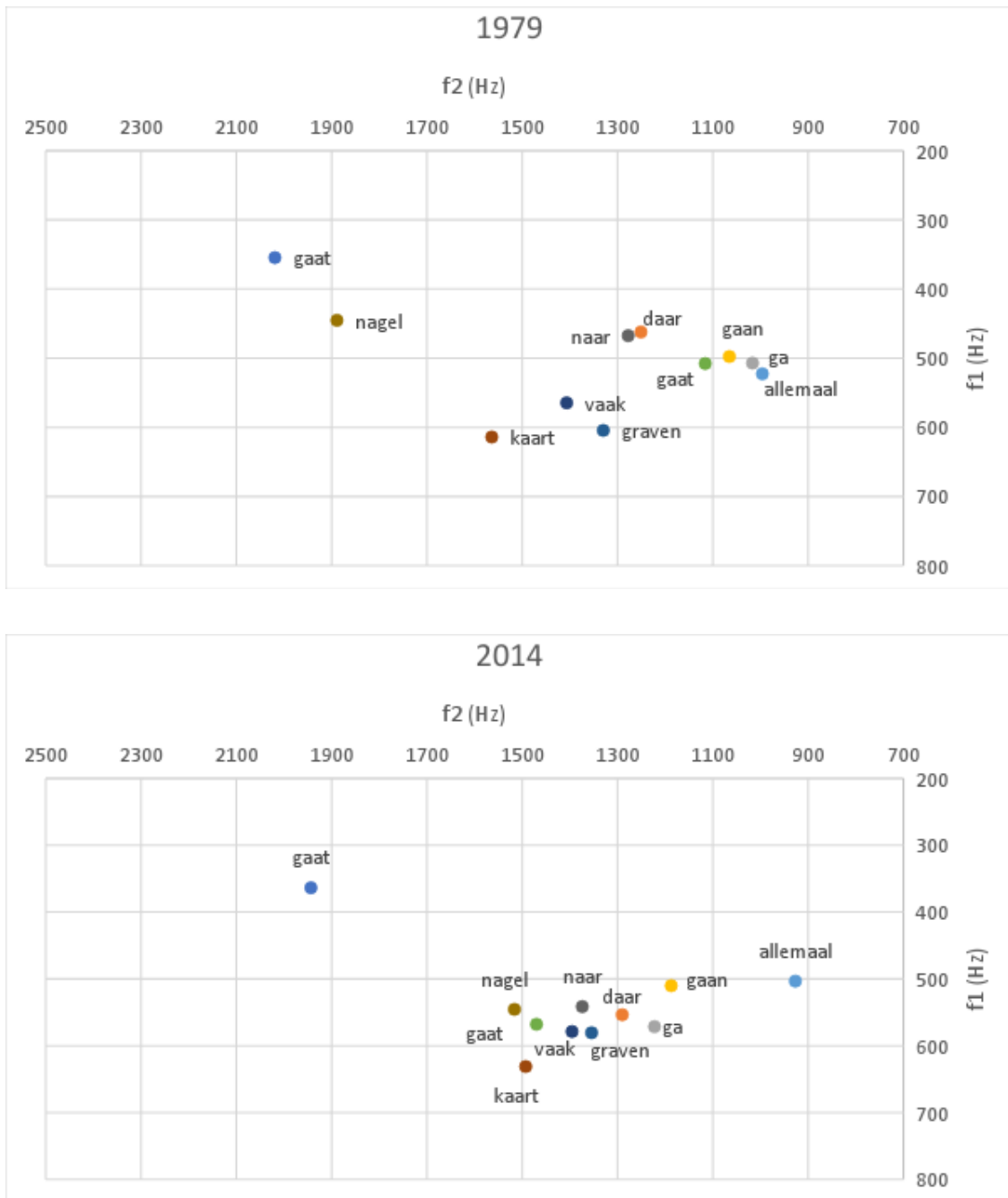


Figure 36: 1979 (N=264) / 2014 (N=55) Comparison of PRAAT, KAART and KAAS. Each data point represents the mean formant values for the specified word. “Gaat” is listed twice, once to correspond with the KAAS vowel, and once with the PRAAT vowel.

What we also need to consider is whether pronunciation differences in Achterhoeks are instead due to speakers’ ideas that these are not just different pronunciations, but different words. If we look more carefully at *paard*, which was almost always realised with a (diphthongising, in that it had a brief schwa off-glide) long close front vowel in the recordings, we can see that its pronunciation is a rather salient feature of Achterhoeks that would not be found in Standard Dutch. However, some western dialects do not use the

standard term *paard*, but instead *hors* (Peter Reynders, personal communication, 2015), which is clearly a lexical rather than phonological difference. The speaker from Beltrum who changed his pronunciation from [pa:t] to [piət] in order to produce the Achterhoeks pronunciation commented that “*peerd [paard] is een mooi woord*”, or a good “word”, suggesting lexical difference. Therefore, *peerd* may be seen as an entirely different word; almost certainly it is retained from the old dialect, as suggested by the data from Bloemhoff et al. (2013a), referred to in Section 2.3.2.

#### 4.6. Conclusion

The results of this study showed that the Achterhoeks pronunciations of the KIJK vowel is more evident in the speech of modern speakers than KAAS (which showed shift to [a:]) and PRAAT (which appeared to be fronting in some words). There was in general less variation observed with KIJK, and with some exceptions such as in *prijzen*, the dialect speakers tended to retain the traditional vowel. However, there was one exception - three out of the five modern speakers used the diphthong [ei] in *prijzen*, something that was not evident in the 1979 speakers' recordings<sup>35</sup>.

PRAAT appears to be becoming more fronted, although when preceding dark [ɪ] or a nasal consonant it is still noticeably more retracted than in other positions. We see then that its formant values appear to have shifted slightly towards those of Standard Dutch. We can conclude from this that, although speakers are using the same vowel on a phonemic level, the phonetic values have changed, and we could be seeing these vowels in the very early stages of shifting and levelling, possibly towards the /a:/, which is present in Achterhoeks in words like *kaart*. The conclusion was that the KIJK vowel should be examined more closely in the next stage of the study with regard to possible diphthongisation, as potentially it may level to a diphthong, but have different phonetic values from those of the Standard Dutch variant. In other words, speakers have retained use of the Achterhoeks variant, but early levelling may be occurring on a subconscious level, as it is subphonemic (whereas a straight phoneme substitution might be more conscious). We can also refer back to Figure 32 here, which suggests a big jump between the diphthong and the monophthong. Some evidence relevant to answering the research questions has been shown in this pilot study, but with such a small

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<sup>35</sup> This is taking into account that one of the 2014 speakers was consistently speaking in a regional standard, rather than traditional dialect.

sample size, there is obviously more research that needs to be conducted in order to definitively answer the question.

One modern speaker (M35), as mentioned earlier, used standard pronunciations for all vowels – this could potentially suggest that Standard Dutch influence has grown since the original study was undertaken in 1979, due to the absence of any obvious dialectal features in his speech. However, he was not specifically asked to speak Achterhoeks, but rather to read the sentences as he would normally speak. In order to gain an adequate picture of the salience of Achterhoeks features, a larger sample size is required. Participants should identify as being able to speak the dialect, and to be speaking dialect throughout the duration of the interviews, in order to gain an accurate picture of what the traditional dialect is to these speakers. As the definition of what it means to “speak Achterhoeks” will differ from person to person, each participant’s “version” of the dialect is the most important object of investigation of the main part of the study. This approach provides information about the consciousness of a dialect (in this case, Achterhoeks), and speakers’ productive competence in the dialect.

We can also consider the effect of performance speech, as the speakers were not recorded in casual conversation; rather, they engaged in what was effectively a translation task where it was expected that they would recite the written sentences in their dialect. Performance speech is defined by Schilling-Estes (1998) as a “register associated with speakers’ attempting to display for others a certain language or language variety” (p.53); in her study on Ocracoke speech, Schilling-Estes (1998) found that speakers would be likely to highlight the dialect features which they were most aware of, and so dialect features showed regular patterning across elicited performance speech. Therefore, what was expected from the results of this study was that there may be shifts in and out of dialect speech, but that there would likely be a consistency as to when this occurred. Participants were recorded with the aim to examine their knowledge of dialect features, and thus what they find to be the features of the dialect they themselves speak. As the results showed, there seemed to be a shift towards the Standard Dutch diphthong in the KIJK vowel in three out of the five modern speakers. However, the effects of whether or not there was a performance element to the speakers’ realisations could not be determined, as they were not directly asked to speak in dialect (this was an aspect of the study which was changed for the main data collection period).

The next step in this study was to record more sentences than the examples used in the pilot study, and to also include the HUIS vowel in the analysis due to the monophthongal pronunciations of /y/ and /u/ in Achterhoeks, which differ from the Standard Dutch /œy/ for this keyword. Words recorded in this study as having consistent standard pronunciations from 1979 (those from the KAART lexical set, such as *vaak* and *kaart*) were predicted to be unlikely to have seen a divergent change, but they would also be considered for the purpose of consistency. In addition to the reading of sentences, a picture study was also conducted, in order to see which variant speakers use and how it is pronounced in a different condition from read sentences. Onset and coda formant frequencies were measured for all vowels, and a normalisation procedure applied.

## 5. Methodology

### 5.1. Modifications of Pilot Study

The next stage of this study was modified from the pilot study, particularly in respect of the measurement and presentation of data. Although it is discussed in more detail in the relevant sections below, it is helpful to summarise these changes concisely here:

1. Regarding the study design, female participants, as well as male ones, were involved, and a picture task was added as well as the inclusion of more sentences to be translated into dialect, with the addition of sentences testing participants' pronunciation of the HUIS vowel (see below). Results were included only from participants who stated that they spoke Achterhoeks, therefore data such as that of M35 from the pilot study were not included in the final results. This speaker was, however, interviewed again, and his speech was used as a comparison to dialect in the later perception study conducted in 2016.
2. While the F1/F2 formants of monophthongs were only measured at the temporal mid-point throughout the pilot study (see Section 4.1), during the main stage they were measured at both points 2 and 8 to account for any slight diphthongisation that the vowel might be undergoing, or to confirm the monophthongal attributes of the vowel. This ensures greater accuracy of measurements compared to selecting just the midpoint of the vowel or averaging the measurements. Point 2 of the measurements was then used in analysis of monophthongal vowels.
3. Additionally, the formant data were normalised. This was to account for the fact that the new 2015 data included a broader age range, as well as both male and female speakers. Without normalisation, these speakers could not be directly compared to each other and the earlier recordings (which were comprised solely of participants who would be considered to be NORMs<sup>36</sup> (Chambers and Trudgill, 1980) under a UK classification system of speakers). A brief description of how the normalisation procedure ("Lobanov") was selected is included in Section 5.3.1.
4. The other major modification made was in the presentation of the data. Normalised formant charts were created using NORM (Thomas and Kendall, 2007) in order to display the

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<sup>36</sup>Non-mobile, Older, Rural, Male.

results, as they are more visually useful and consistent when analysing data. Additionally, scatter plots were created in the programme R, and box plots in SPSS, both of which were helpful in establishing and visualising trends and stability across the data.

The sentences were written in Standard Dutch, and participants were required to translate them into their dialect; they were not presented with sentences written in the orthography of the Achterhoek. The sentences presented to participants to read in their dialect included the original sentences also used in the pilot study, along with the following additions (all designed and used originally by Weijnen and Van Prooije in 1979):

- *Met veel geweld kwam hij **aanrijden*** ('With great force he came riding')
- *De jongens waren tegen de populierenstam aan het **slaan*** ('The boys were beating against the poplar tree')
- *Ik zal deze bezem meenemen **gaarne*** ('I will gladly take this broom')
- *De koe had **grote** horens* ('The cow had big horns')
- *De buren zetten bij de **trouwerij** een boog om de deur* ('The neighbours put a bow on the door at the wedding')
- *In de keuken **staat** een oventje* ('In the kitchen is an oven')
- *De kogel **raakte** de kraai die op **draad** zat* ('The bullet hit the crow that sat on the wire')
- *Ik heb dat ding **daar** nodig* ('I need that thing there')
- *We eten **kaas*** ('We are eating cheese')
- *Hij had een **blaar** aan zijn voet* ('He had a blister on his foot')
- *Hij liep tegen **paaltje** aan* ('He ran into the pole')
- *Moeder deed de **gordijnen** dicht* ('Mother closed the curtains')
- *'s morgens vroeg **opstaan** kost moeite* ('It takes effort getting up early in the mornings')
- *Hij is een **huis** aan het zoeken* ('He is searching for a house')
- *De dominee loerde naar **buiten*** ('The vicar peered outside')
- *Het jongetje wilde onder de auto **kruipen*** ('The little boy wanted to crawl under the car')
- *Kun je rauw vlees **ruiken**?* ('Can you smell raw meat?')
- *We **gaan** het **huis** in de breedte bouwen* ('We are going to build the house in width rather than length')
- *De vrouw **maakte** de koe los* ('The woman untied the cow')
- *Ik moet **spijkers** hebben van die grootte* ('I must have nails of that size')
- *Het was al licht toen het vuur **uitging*** ('It was already light when the fire went out')
- *De **kuikens** zijn in de schuur* ('The chickens are in the barn')

The picture task was comprised of images which were also designed to elicit dialectal pronunciations. The names of items or entities seen within the images, or likely descriptions of actions, contained the vowels which are the objects of this study. Thus it was assumed that participants would use these words, and their pronunciations could then be studied, and



compared against the results of the less spontaneous task of reading sentences in their dialect. Participants were encouraged to speak in dialect during both tasks, but it was reasoned that they might be less aware of dialectal pronunciations while undertaking a more spontaneous task. Example pictures shown to participants are included in Figure 37.

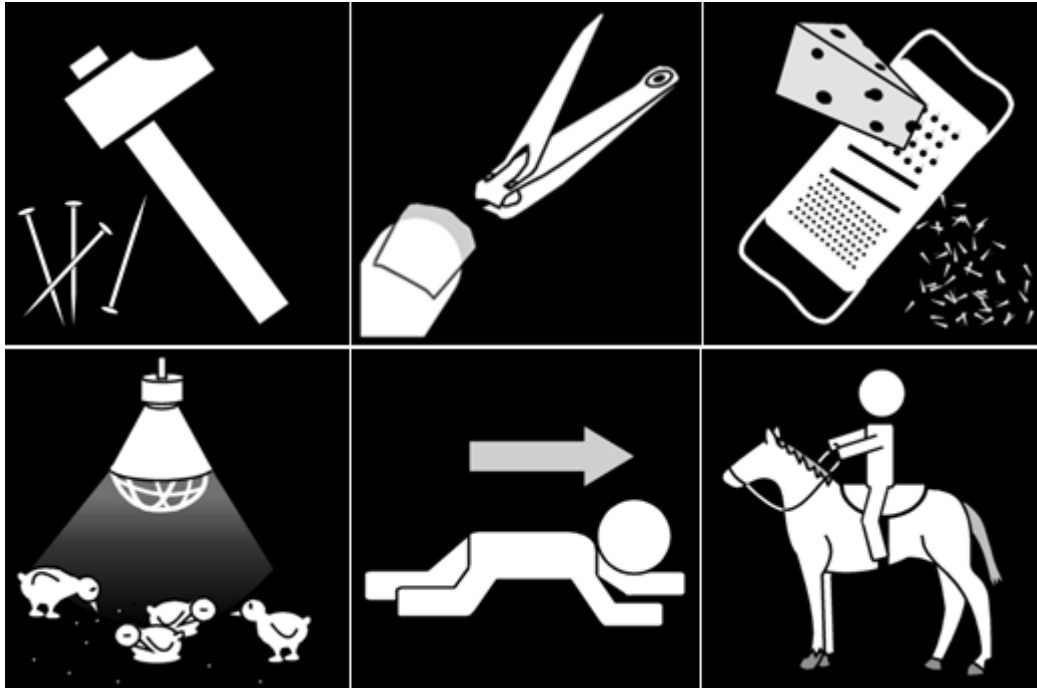


Figure 37: Sample pictures used for Picture Task, designed to elicit dialectal pronunciations. Clockwise from top left, the target words are “spijkers”, “nagel”, “kaas”, “paard”, “kruipen”, and “kuikens”.

These pictures, obtained from the online resource Sclera Picto’s, are a sample of what were shown to participants. In the first picture, the target word is *spijkers*, the Dutch translation for ‘nails’, which belongs to the KIJK lexical set. What was of interest was whether participants pronounced the vowel using the monophthong [i] or the Standard Dutch [ɛi]. In the second picture, the target word is *nagel*, the Dutch word for (specifically) a fingernail; in the third picture it is *kaas* (‘cheese’), both of which belong to the KAAS set; here we are testing whether speakers are using the Standard Dutch vowel, or the fronted Achterhoeks equivalent. The fourth and fifth pictures, *kuikens* (‘chickens’) and *kruipen* (the action of ‘crawling’) are the target words, testing whether participants pronounce the vowel using the Standard Dutch diphthong [œy] or one of the Achterhoeks monophthongs, either [y] or [u]. These belong to the lexical set HUIS. The final picture depicts *paard* (‘horse’); here we are looking at whether the speakers are using a fronted centring diphthong [iə] or the Standard Dutch [a:].

The elicited words from both the sentence and picture tasks correspond to the lexical set keywords as follows:

<b>PRAAT</b>	<b>KAART</b>	<b>KAAS</b>	<b>PAARD</b>	<b>KIJK</b>	<b>HUIS</b>
allemaal, blaar, daar, draad, ga, gaan/gaat, jaar, naar, opstaan, paaltje, praten, schaap, slaan	graven, kaart, vaak	gaat (3 <sup>rd</sup> . pers. sing), kaas, maakte, nagel, raakte, staat (3 <sup>rd</sup> . pers. sing)	gaarne, paard	gordijnen, ijs, ijzer, kijken, pijn, prijzen, rijden, spijkers, stijf, tijd, trouwerij	bruiloft, buiten, huis, huizen, kruipen, kuikens, luister, ruiken, uit, uitging

Table 9: Words corresponding to the lexical sets

## 5.2. Participant Recruitment and Interviews

34 Achterhoeks speakers from 11 different towns (see Figure 38) were recruited through personal contacts and a specially set-up Facebook page shared with other organisations based in the region. Participants were recorded completing a picture task and reading sentences from a list (see Appendices 1 and 2). The recordings were made with a Zoom H4n recorder, and participants were asked to speak in dialect. That way, their knowledge of their own dialect could be judged and compared to other speakers who were also asked to speak in their version of the dialect. However, the picture task would be expected to elicit a slightly more casual speech style than the sentence reading task. These recordings were carried out during the summer of 2015, and speakers were categorised by age, sex, and whether they were from a rural or non-rural area. All speakers reported that they spoke Achterhoeks at least sometimes, whether their everyday speech was representative of what they believed to be traditional dialect, or whether they sometimes switched between Achterhoeks and a more standard version of Dutch. For some, Achterhoeks formed only a part of their overall repertoire, but what was of interest here was how participants spoke in their own version of the dialect.



Figure 38: The Achterhoek region (Map data: Google, n.d.). The locations of the speakers from the 2015 corpus have been marked (N=34).

Four out of the five speakers from the pilot study were re-interviewed during this stage, including the speaker who did not use Achterhoeks variants, in order to ascertain if he would use dialect speech when instructed to do so, or if his earlier recordings indeed reflected his usual speech style and not just an awareness of Standard Dutch vowels. This speaker did not change his speech style from the pilot study, and so his results were disregarded during the vowel analysis stage, as by this stage of the study, the interest was only in those who were speaking what they believed to be the Achterhoeks dialect. His recordings did, however, provide the voice of the regional standard speaker in the later perception study. The full list of participants included in the study is shown in Table 10, organised from youngest to oldest speaker:

<b>Age</b>	<b>Sex</b>	<b>Town</b>	<b>Area</b>	<b>Reference</b>
26	Male	Ulft	Non-Rural	M26Ulft
31	Female	Zelhem	Rural	F31Zelhem
32	Female	Halle	Rural	F32Halle
33	Female	Hummelo	Rural	F33Hummelo
33	Male	Bredevoort	Rural	M33Bredevoort
34	Female	Ulft	Non-Rural	F34Ulft
35	Male	Hummelo	Rural	M35Hummelo
35	Male	Ruurlo	Rural	M35Ruurlo
37	Male	Ruurlo	Rural	M37Ruurlo
38	Male	Ruurlo	Rural	M38Ruurlo
39	Female	Terborg	Non-Rural	F39Terborg
42	Male	Zelhem	Rural	M42Zelhem
43	Male	Silvolde	Non-Rural	M43Silvolde
44	Female	Zelhem	Rural	F44Zelhem
48	Female	Zelhem	Rural	F48Zelhem
48	Male	Ruurlo	Rural	M48Ruurlo
49	Male	Ruurlo	Rural	M49Ruurlo
50	Female	Zelhem	Rural	F50Zelhem
50	Male	Ulft	Non-Rural	M50Ulft
52	Male	Ulft	Non-Rural	M52Ulft

53	Female	Zelhem	Rural	F53Zelhem
53	Male	Silvolde	Non-Rural	M53Silvolde
55	Male	Zelhem	Rural	M55Zelhem
56	Female	Silvolde	Non-Rural	F56Silvolde
58	Male	Varsseveld	Rural	M58Varsseveld
59	Male	Ulft	Non-Rural	M59Ulft
62	Male	Ulft	Non-Rural	M62Ulft
63	Male	Westendorp	Rural	M63Westendorp
67	Female	Zelhem	Rural	F67Zelhem
70	Female	Ruurlo	Rural	F70Ruurlo
71	Female	Ruurlo	Rural	F71Ruurlo
72	Female	Zelhem	Rural	F72Zelhem
72	Male	Gaanderen	Rural	M72Gaanderen
73	Male	Ruurlo	Rural	M73Ruurlo

*Table 10: List of participants recorded reading sentences and completing a picture task in the Achterhoeks dialect*

For the major part of the study, more sentences were analysed from the 28 original speakers from 1979, and the vowel pronunciations compared to those of the modern Achterhoeks speakers. The 1979 speakers were all classified as dialect speakers, but most of them most likely knew how to speak a more standard version of Dutch in different circumstances (Van Prooije, personal communication, 2015). The original research took the form of sociolinguistic interviews, with periods of sentence reading interspersed between the other questions. Van Prooije designed the original sentences to elicit dialectal pronunciations as well as variation in the lexicon (other questions in his study, not replicated here, focussed on lexical differences). A selection of Van Prooije's sentences were replicated for this study, those being the sentences that would result in the pronunciations of the vowels important to

this study. The same sentences were used in order to replicate the linguistic conditions as accurately as possible. However, what needs to be taken into account is that there are a number of differences between the modern-day corpus and that of the earlier corpus. The age range of the modern-day participants was 26-73, with both male and female participants included. Van Prooije's corpus was comprised of male speakers only, and of an older age – the youngest speaker was aged 56, the oldest was aged 92, and the average age was about 70 (Van Prooije, 2011). Additionally, Van Prooije's corpus included more towns in the area, whereas the current research is focussed within a smaller area, along and north of the River Oude IJssel, and then extending into the centre of the Achterhoek.

Although in the pilot study initial pronunciations of sentence words in Dutch were included in the final result, this aspect was changed for the main part of the study. The reason for this was that the sentences were written in Standard Dutch, and with Achterhoeks having its own orthography, participants were required to have to translate the sentences into their dialect. Therefore, only the pronunciations that speakers determined to be the Achterhoeks pronunciations are relevant for the study, and not the pronunciations that they themselves then corrected to the dialectal variant. It is important to consider this, as some participants reported that although they could speak Achterhoeks (some more regularly than others), there was the added step of translating sentences written in Dutch, and sometimes they would say the Dutch word because it was what they were reading, not because it was what they thought was the Achterhoeks variant. The picture study was added in order to try to balance this out. Additionally, on a related note, in Van Prooije's recordings the vernacular spoken by each participant, as well as the interviewer, was a dialect (throughout the modern day study, the variety spoken by the interviewer was the standard, rather than dialect). Standard Dutch was used occasionally when participants were reading questions themselves (which were written in Standard Dutch), or on the occasion that the interviewer read out the sentences for the participant to translate into dialect. Most participants read the questions and sentences aloud themselves, but there was the odd occasion where the interviewer did so instead.

### **5.3. Data Analysis**

#### **5.3.1. Normalisation Procedure**

As with the pilot study, the vowels were extracted and analysed using Audacity, Praat, and Márton Sóskuthy's Formant Editor (2014). Vowel quality was judged through a combination

of auditory and spectrogram analysis. However, for this stage of the study, results were also normalised using the normalisation programme NORM (Thomas & Kendall, 2007). This was done because of the inclusion of female speakers at this stage of the study, and a larger sample size that included both younger and older speakers than that analysed during the pilot study. There are physiological and anatomical differences between speakers' vocal tracts, which a normalisation procedure can assist to compensate for to a considerable extent. In the case of this research, female speakers were added as a modification from the pilot study. Usually, female speakers will exhibit higher formant frequencies; this is because they have a shorter vocal tract than male speakers, resulting in higher resonant frequencies (Flynn, 2011).

The normalisation chosen was the Lobanov method, due to the sample size and the research conducted by Adank et al. (2004) which found that, when tested with Dutch vowels, the Lobanov method performed well, alongside Nearey 1. Some studies (Fabricius et al, 2009; Flynn, 2011), rank Nearey methods quite poorly, and Lobanov has been shown to outperform Nearey (Flynn, 2011). A disadvantage of Lobanov is that it works best when the entire vowel system is included (Thomas & Kendall, 2007), and not all vowels were measured as part of this study. However, this disadvantage is the case with the majority of vowel normalisation methods offered through NORM, and the other advantages of Lobanov, as found by Adank (2003) and Adank et al. (2004), and its ranking by Flynn (2011), were judged to outweigh this point (though they did not test all of the procedures offered through NORM).

### **5.3.2. Praat and Audacity Procedures**

Using Audacity, the target words from the sentences and picture task were isolated, and subsequently opened in Praat (Boersma & Weenink, 2014), in which the vowels were manually extracted one by one. There were eleven F1 and F2 measurements each of which were checked using the formant editor, and adjusted where needed. Formants were measured again at points 2 and 8, as in the pilot study, in order to show direction of diphthongisation, or lack of diphthongisation. The vowels were divided into groups to be analysed separately; these were based on the lexical set keywords (PRAAT, KAART, KAAS, PAARD, KIJK and HUIS) developed for this study. After the formants had been measured, all data were uploaded to NORM (Thomas & Kendall, 2007) and normalised using the Lobanov method. Formant plots were created, using NORM, for group means, speaker means, and individual vowel measurements.

## 5.4. Perception Study

### 5.4.1. Rationale and Survey Design

Following the initial study of speakers' representations of dialect, a second stage was initiated, which aimed to build a more comprehensive profile of the typical Achterhoeks speaker according to residents in the Netherlands. A perception study was conducted in order to gather together a social picture of how other Dutch speakers viewed the Achterhoeks dialect, and what characteristics they ascribed to Achterhoeks speakers. This study was conducted through an online survey, created with and hosted by Qualtrics, in which respondents were asked to listen to a sentence being read in either Achterhoeks or a regional standard variety, and then to rate the speaker on a number of dimensions. Some of these characteristics were based on the idea of cultural capital (cf. Bourdieu, 1984; Prieur & Savage, 2011; Savage et al., 2013), while other questions followed a perceptual dialectological approach attributed primarily to Preston (1989, 1999), whereby respondents were required to rate the language on features such as its "pleasantness" or "correctness".

It is not enough simply to acknowledge and describe geographical differences; we "must explain them" as well (Trudgill, 1974, p.216). The inclusion of a language attitude evaluation in discussions of language variation can add such an explanation. This is because the identification of variables by themselves is mostly descriptive in nature, but the social meanings behind a conscious or subconscious style choice can only be determined through a test of language attitudes (Grondelaers, 2013). Without this component, the explanatory capacity of studies of variation and change is reduced. We can determine possible reasons for style shifts and linguistic patterns through the use of such a test. Social information is embedded in one's linguistic choices, and this information needs to be considered in order to add another level of depth to the analysis, and to examine possible reasoning for attitudes which appear connected to the use of certain linguistic variants. The reason for inclusion of this perception study as a partner study to the main research goes back to the notion of being able to explain as well as describe variation. According to Knops and Van Hout (1988) (from an idea originally proposed by Smith, Giles and Hewstone, 1980), "variables have to be traced back to a complex set of criteria" (p.2) in order to be explanatory, and these criteria include perceptual data (Grondelaers, 2013; Knops and Van Hout, 1988). In order for the description of results to be meaningful, the social information embedded in the linguistic data



needs to be explained through a perception task: what attitudes are associated with a certain (conscious or subconscious) style choice? What do the style choices convey about the speaker? The notions of prestige and correctness are generally attached to the standard language (Milroy, 2007), but the stereotype of Achterhoeks speakers as “farmers” has persisted, as mentioned earlier in this study. Grondelaers (2013) states that it is important to distinguish between attitudes and stereotypes: attitudes “are richer in conceptual content than stereotypes, because they [attitudes] involve associations of beliefs and evaluations” (p.587), in contrast to stereotypes, which tend to be generalised and the product of folk-linguistic ideas.

Language attitudes are comprised of cognitive, evaluative and behavioural components in contrast to ideas surrounding stereotypes. Attitudes are processed through more conscious thoughts than stereotypes (Grondelaers, 2013). Thus, with the inclusion of a perception study of Dutch speakers’ attitudes towards those speaking a particular dialect (in this case, Achterhoeks), the reliance on stereotypes is more likely to be removed, and conscious or subconscious perceptions take their place instead.

In the same vein as Savage et al. (2013), we can relate language attitudes to the idea of one’s cultural interests (what promotes one’s social mobility), which requires respondents to possess ingrained ideas of certain cultural interests being associated with higher or lower social classes. For a respondent to make assumptions about a speaker’s interests from a small speech sample implies that the respondent is also judging him/her as belonging to a particular social group, which may be based on national identity, age groupings, religion, or social class, among others. Social class in the Netherlands is not necessarily evaluated in the same way as it is in Britain, yet certain occupations or interest in particular cultural activities may be regarded as more prestigious than others (Savage et al., 2013; Ganzeboom et al., 1992). Therefore, evaluating a language variety in this way can still lead to an overall picture of what the “typical” Achterhoeks speaker embodies, which may or may not, of course, be actually true of that speaker. For example, Bourdieu (1984) considers some activities, typically associated with the arts, as belonging to a “high” culture – connected to “the icy solemnity of the great museums, the grandiose luxury of the opera-houses and major theatres, the décor and decorum of concert-halls” (p.34) – as opposed to those of “popular” culture. However, this is disputed in more recent studies such as Prieur and Savage (2011), who state that Bourdieu’s idea of cultural capital comes from an observation of and immersion in 1960s

France, and the awareness of cultural capital in today's society (in France and elsewhere) is different. Additionally, it needs to be considered that in today's society, there is a mix of traditional "high" and "popular" interests being shared by a wide variety of people.

Part of Savage et al.'s (2013) study attempted to analyse patterns of cultural interests without the initial assumptions that certain activities were "more highbrow than others" (p.8). The graph in Figure 39 shows the results of their study, obtained through a multiple correspondence analysis of a nationally representative British survey (obtained by the BBC through the survey firm GfK). The musical and leisure variables that are accompanied by a + sign indicate a liking for that particular variable, whereas where they are accompanied by a – sign, it indicates a disliking or disengagement. Similarly, for the food variable, L indicates liking that particular food, and D indicates disliking. They identified that a "culturally disengaged" (p.226) group exists, seen on the right hand side of the graph in Figure 39, which overwhelmingly shows variables accompanied by a – sign, whereas the variables on the left show more + signs, signifying higher cultural engagement. Variables which appear close to each other tend to be more often chosen together.

What is perhaps most interesting is that the left hand side of the graph seems to be split in two, the top quadrant displaying interest in more traditionally highbrow activities, and the bottom engaged with those that are more popular. The researchers classed the top group as the "highbrow" group, with interests in classical music, and activities such as visiting the theatre or stately homes. The bottom group was considered to be attracted to more of an "emerging" cultural capital, such as visiting the gym or engaging in sport. A further analysis of age and occupation categorised the "highbrow cultural" group as older people in managerial and professional positions, and the "emerging cultural" group as the younger middle classes, while the "disengaged" tended to be those in routine work or those who did not work. Savage et al. (2013) explain that this means there are two types of cultural capital, accompanied by a "disengaged" group:

"The first axis is clearly aligned with social class, with the routine classes located on the disengaged right hand side of the y axis, whilst age distinguishes the middle-aged and elderly 'highbrows' from the more youthful middle classes attracted to 'emerging' cultural capital" (p.226).

We can see in the top and bottom right quadrants of Figure 39, the “disengaged” group. Many of the variables which occur in this part of the graph are accompanied by a – sign or a D (for “dislike”). Some of the activities listed not being of interest to this group are visiting stately homes (represented in the figure by “stathom-”) or the theatre (“theatre-”), while they also do not enjoy classical (“M.classic-”) or jazz (“M.jazz-”) music. However, these are interests which we can see are enjoyed by the “highbrow” grouping (“stathom+”, “theatre+”, “M.classic+” and “M.jazz+”). The “disengaged” group are then so named due to their lack of interests which are found in the other corners of the figure. However, they demonstrate a liking for fast food (“L-FastFood”); conversely, the “highbrow” group indicates a dislike for it (“D-FastFood”).

To return to the “emerging” group, in the bottom left quadrant of Figure 39, we can see that they have a lot of interests, and are therefore “culturally engaged”. However, these interests were deemed to be not as “highbrow” as those of the (mostly) older generation in the top quadrant. Some of their interests include going to the gym (“gym+”) or the pub (“pub+), and listening to pop music (“M.pop+”).

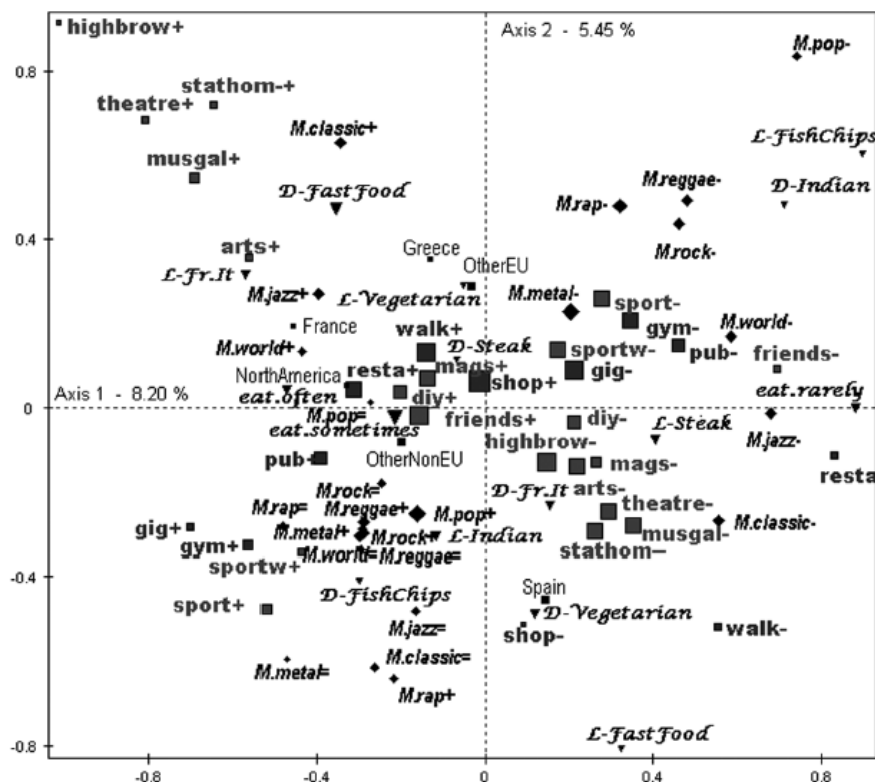


Figure 39: Cultural capital graph reproduced from Savage et al. (2013, p.227)

The rationale behind this part of the current study is based on the results of the cultural capital analysis as undertaken by Savage et al. (2013), with the expectation that the perception of the dialect could be linked with cultural interests, and associated with, as described by Savage et al. (2013), “highbrow cultural capital”, “emerging cultural capital”, or “cultural disengagement”. As social class is conceptualised differently in the Netherlands, we can see if there is indeed a link between the perceived interests of residents, and how the results would fit in with the British idea of class. After listening to speech samples, survey respondents were asked questions relating to what they thought the interests of each speaker would be, including those related to eating habits, holiday destinations, musical taste, or leisure activities undertaken in one’s spare time (Savage et al., 2013). Based on the ideas of Bourdieu (1984) and the results obtained by Savage et al. (2013), it was assumed that an interest in, for example, classical music, would be associated with higher prestige (or, “highbrow cultural capital”). Therefore, if a respondent was to answer, based only on a single sentence they heard from the speaker, that the speaker was interested in classical music, it would imply a level of prestige for the dialect. Yet answering that the speaker listened to a specific local band would indicate not only perhaps less prestige associated with the dialect, but also that the survey respondents had more geographical knowledge of the location of the dialect speaker. Their responses may denote a conscious or subconscious view of the typical interests of someone who exhibits certain speech characteristics, forming a perceived description of the speaker based on more than age, gender, and general location. It has previously been found by Giles et al. (1992) that older non-standard speakers tended to attract less prestige, and the intent of this exercise within the current research is to ascertain if this is the case in Achterhoeks, and whether there is a correlation with supposed interests. Here, we are not asking for the participants’ actual interests, but what others perceive them to like instead, and whether the results correlate with the findings of the aforementioned study.

Other questions in the survey were related more to one of Preston’s (1989, 1999) perceptual dialectological approaches focusing on language attitudes. One of the first perceptual dialectology studies was actually focused on the Dutch language, and was conducted by Weijnen (1946), and described in Gooskens et al (2013) and Preston (1989). Weijnen’s work is perhaps (one of) the earliest and most famous examples of Dutch perceptual dialectology research (although Gooskens et al., 2013, also cite research conducted by Willems in 1886). Weijnen’s method was commonly known as the “Little Arrow” method. As part of this technique, Weijnen had Dutch respondents originally from the province of North Brabant

draw arrows on a map from their own town to other towns and cities neighbouring their own, in order to indicate whether they believed the dialect of that town or city to be similar to their own. This was followed by a study by Rensink (1999), who, in 1955, completed a map of the entirety of the Netherlands using the same method. The map can be seen in Section 2.6.

Modifications and new approaches to perceptual dialectology continued to follow from Rensink's study, but the present study is not an attempt to replicate Weijnen's Little Arrow method, whereby the question "*in which place(s) in your area does one speak the same or about the same dialect as you?*"<sup>37</sup> was posed to potential respondents. This is because the current research is not concerned so much with dialect distance, or dialect similarities, as it is with dialect characteristics. Instead, I am interested in the attribution of personal traits of Achterhoeks speakers and the Achterhoeks dialect, in order to build a profile of the (stereo)typical Achterhoeks speaker. The relation to other dialects is not as relevant at this stage, except as a means to compare regional standards to national standards.

The technique adopted for these types of questions is based on the idea of a language being rated on certain attributes. The study tests respondents' opinions of the "correctness" and "pleasantness" of the language, as pioneered by Preston (1989), but traits used in Matched Guise studies (a technique developed by Lambert et al., 1960), such as "intelligent", "educated" and "trustworthy", are also included. This is to ensure compatibility with a wide range of studies that have employed ratings such as these (cf. Garrett, 2010; Demirci & Kleiner, 1999; Preston, 1999). Here, we are using the Verbal Guise technique: the voices which the respondents hear are different speakers, not the same speaker as would be the case in a Matched Guise study.

Gooskens et al. (2013) describe perception of dialect variation specifically within the Netherlands and Belgium, including the aspects of dialect distance, dialect identification and dialect intelligibility. According to their definitions, dialect distance is the descriptive aspect which forms the basis for the other two aspects, dialect identification and dialect intelligibility. This includes the ideas that non-linguists hold regarding the similarity between different language varieties. These ideas may be either accurate or inaccurate, but they form the basis of one's ideas and intuitions regarding a dialect's typical characteristics and features. Dialect identification is concerned with the extent to which non-linguists identify

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<sup>37</sup> This question was originally included in an older questionnaire by Willems in the 19<sup>th</sup> century (Gooskens et al., 2013).

where dialects are spoken, in the context of a specific place or a general region, and what features these identifications are based on. Dialect intelligibility explores the extent to which semantic meaning is derived from different dialects by non-linguists. The current perception study deals with parts of the first two aspects: dialect distance and dialect identification. It asks participants for their views of the typical dialect and regional standard characteristics, and to identify the location of each speaker. This is not so specific as to require the pinpointing of an exact location, but rather to identify the speaker as coming from a rural or non-rural area. In other words, the listeners are rating the degree of rurality based on a speech sample.

Preston (1999) is critical of the fact that many language attitude studies do not include a component that requires the respondent to state where they think the speaker originates from. This fact was addressed to an extent in this study. As all the voices that the respondents hear are those of speakers from the Achterhoek region, it was not considered necessary for a map task to be included. However, respondents were asked to state whether they thought the speaker they were hearing came from a rural area, a small village, or a city. These choices were then to be compiled alongside the language attitudes, and the listener's ratings on cultural capital.

Only male voices were used in the survey for purposes of consistency; the choice to use only male voices was also the result of having a larger database of male voices than female voices. However, survey respondents were required to estimate the age of the speaker, in order to ascertain whether dialect speakers are mostly viewed as being of a certain age. Respondents were also asked to indicate what sort of job they believed the speaker possessed; this, of course, would relate to a rating of prestige – although maybe not directly, as the respondents may differ in how they view the prestige of different jobs.

It was also important to consider which aspects of the sentence the survey respondents were reacting to. In other words, it is necessary to identify the linguistic cues on which the participants based their responses. Gooskens et al. (2013) explain that studies, such as Hagen, (1980) and Knops (1984), have shown that participants rated pronunciation as constituting the largest difference between dialects. Although these studies considered Standard rather than dialectal varieties of Dutch, and so to this extent differ from this research, it is reasonable to suggest that participants in the current study will also react to pronunciation differences the most. For this reason, participants' reactions to the sentences are expected to

be based on their phonetic awareness. In order to judge this most accurately, sentences that contained words with fewer dialectal vowels or words (as determined by the first part of the study) were included in the survey. This was to ensure that the results could be accurately interpreted as the survey respondents reacting to the dialectal vowels, and not some other part of the sentence, such as a Standard Dutch lexical item being replaced with a dialectal one. Sentences read in Standard Dutch by a regional speaker were also included in the survey questions; these were to be used to compare characteristics rated by the respondents. Each sentence was presented at least twice to the respondents, in varying orders, to compare self-described dialect speakers from rural and non-rural locations with a (regional) standard speaker<sup>38</sup>. One sentence (*Kun je rauw vlees ruiken?*) compared rural and non-rural dialect speakers, instead of a dialect speaker and a standard speaker, due to differences found between the pronunciations of the HUIS vowel during the first study. All sentences were taken from the 2015 database of speakers, recorded in the Netherlands during the summer of 2015. Respondents were asked to complete the same set of questions for each speaker they heard (See Appendix 3 for an example). The following five sentences were chosen as they covered the vowel groupings being considered in this study:

- Hij heeft al sinds 1940 een **paard** (M42Zelhem and M35Uift)
- Kun je rauw vlees **ruiken**? (M48Zelhem and M26Uift)
- In de keuken **staat** een oventje (M35Uift and M43Silvolde)
- Hij was **stijf** van de **pijn** (M35Uift, M55Zelhem and M59Uift)
- We **gaan** het **huis** in de breedte bouwen (M63Westendorp, M53Silvolde and M35Uift)

The sentences above could potentially include a number of different variables, however the speakers which the respondents listened to differed only in their pronunciation of the vowels in each target word. This means that it is more likely for there to be an accurate picture of which vowel was influencing the respondents' perceptual choices, and that their judgements were triggered just by the vowel in the target words. These sentences covered a range of vowels being examined in this research, and the aim is to see if the survey respondents associated different characteristics with each vowel, ie. are vowels belonging to one lexical set associated with a more rural perception than other sets? We do need to consider the fact

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<sup>38</sup> All sentences in Standard Dutch were read by a 35 year old male speaker from the town of Uift.

that there might be mismatch between the variants of other variables contained in the sentence and the target variable, but it was not expected that this would influence the results too much due to the fact that the variants chosen were some of the more noticeable markers of the Achterhoeks dialect.

The vowels considered belonged to the PRAAT, KAAS, PAARD, KIJK and HUIS lexical sets. KAART was not considered, as vowels in this set are pronounced using the same vowel in both Standard Dutch and Achterhoeks. Sentences where more than one target word was present were chosen deliberately in order to differentiate between perceptions where the sentence contained two different dialectal vowels (*gaan* and *huis*) as opposed to the same vowel (*stijf* and *pijn* in sentence 4). It is then possible to see if there is evidence of ratings being affected by the presence of two vowels rather than one. This may be because two dialectal variants could elicit stronger reactions from the survey participants; alternatively, we can consider if there is more social meaning attached to one vowel than the other – for example, Levon and Fox (2014) mention that the variable of TH-fronting in England elicits stronger responses than that of the non-standard alveolar pronunciation of [ɲ]. These vowels are, of course, repeated in other sentences (to group in the Standard Dutch pronunciations: *gaan* and *staat*, and *huis* and *ruiken*), thereby testing what is eliciting the respondent’s reactions (if the vowels were not repeated elsewhere, it would not be obvious in the sentences containing more than one vowel which one the respondent is basing their judgments on).

Sentences were presented to the respondents in the following order:

Order	Speaker	Age	Classification	Sentence	Gloss	Vowel
1	M42Zelhem	42	Rural	Hij heeft al sinds 1940 een <b>paard</b>	He has had a horse since 1940	[iə] (PAARD)
2	M35Uft	35	Standard	In de keuken <b>staat</b> een oventje	In the kitchen is an oven	[a:] (KAAS)
3	M26Uft	26	Non-rural	Kun je rauw vlees <b>ruiken</b> ?	Can you smell raw meat?	[y] (HUIS)



4	M55Zelhem	55	Rural	Hij was <b>stijf</b> van de <b>pijn</b>	He was stiff from the pain	[i]; [i] (KIJK)
5	M63Westendorp	63	Rural	We <b>gaan</b> het <b>huis</b> in de breedte bouwen	We are going to build the house in width	[ɔ]; [y] (PRAAT, HUIS)
6	M35Ulft	35	Standard	Hij heeft al sinds 1940 een <b>paard</b>	He has had a horse since 1940	[a:] (PAARD)
7	M59Ulft	59	Non-rural	Hij was <b>stijf</b> van de <b>pijn</b>	He was stiff from the pain	[ɛi]; [i] (KIJK)
8	M48Zelhem	48	Rural	Kun je rauw vlees <b>ruiken</b> ?	Can you smell raw meat?	[u] (HUIS)
9	M53Silvolde	53	Non-rural	Wij <b>gaan</b> het <b>huis</b> in de breedte bouwen	We are going to build the house in width	[a:]; [y] (PRAAT, HUIS)
10	M35Ulft	35	Standard	Hij was <b>stijf</b> van de <b>pijn</b>	He was stiff from the pain	[ɛi]; [ɛi] (KIJK)
11	M43Silvolde	43	Non-rural	In de keuken <b>staat</b> een oventje	In the kitchen is an oven	[e:] (KAAS)
12	M35Ulft	35	Standard	Wij <b>gaan</b> het <b>huis</b> in de breedte bouwen	We are going to build the house in width	[a:]; [œy] (PRAAT, HUIS)

Table 11: List of recordings presented to survey respondents in the online perception task.

The expectation was that the respondents would be able to differentiate between the standard and dialectal pronunciations, and that these would elicit different responses. Some sentences also compared non-rural and rural dialect speakers. Here it is assumed that the rural dialect speaker is the one speaking a more traditional version of the dialect. In the sentence *Kun je rauw vlees ruiken*, the rural speaker is using the older traditional variant [u], whereas the non-

rural speaker is using the newer, but more common, dialectal form [y]. In the sentence *Hij was stijf van de pijn*, the non-rural speaker pronounced one of the target words with the standard diphthong, and in the sentence *Wij gaan het huis in de breedte bouwen*, the non-rural speaker pronounced *gaan* as it would be in Standard Dutch, whereas the rural speaker used the variant *gaat*, pronounced with a back vowel [ɔ:]. Therefore, each of these sentences provided a difference for the listeners to react to, in order for them to differentiate between the traditional and regional standard varieties. The traditional varieties refer to the speech of the participants who had translated the written sentences into their dialect. The regional standard varieties refer to the speech of M35Uft, the speaker who provided the voice for all of these sentences. Those who had translated the written sentences into their dialectal variety used fewer standardised forms than did the regional standard speaker.

Participants were first asked to fill in demographic information on the online survey form: their age, sex, current location, place of birth, and whether they considered themselves to speak a dialect (and if so, which dialect). After this initial information, participants listened to the first recording, and were asked how old they thought the speaker was, and whether they thought the speaker was from a rural location, a small village, or a city. This was done through the use of pictures; participants were presented with a picture of a rural area, a small town and a larger city (refer to questionnaire in Appendix 3). Pictures were used so that participants did not rely on their preconceived ideas of what may constitute a rural area, small village or city, and could instead use visuals to place the speaker into what they believed was the most likely setting. They were then required to rate how sure they were of their choices, in order to discourage respondents from picking their answers indifferently. They were also asked what sort of work they believed the speaker to undertake.

The survey then moved on to asking the respondents to rate the speakers' attributes, including the friendliness, intellect, education and trustworthiness of the speaker, and the pleasantness and correctness of the language he used. In previous studies, non-standard dialects are often rated highly for characteristics such as "trustworthiness" and "friendliness", whereas standard varieties tend to rate lower on these characteristics, but are rated higher for attributes associated with prestige, such as "correctness" and "pleasantness" (Ladegaard, 1998; Coupland, Williams & Garrett, 1994). Of course, including these traits in this question set was done in order to see if the same is true for the Achterhoeks dialect. The final questions then focused on the imagined cultural capital of the speaker, as described above. Participants

were asked the same set of questions for each of the twelve sentences they heard being read. (See Appendix 3 for complete list of questions asked for each speaker).

Hoe beoordeelt u de **spreker**:

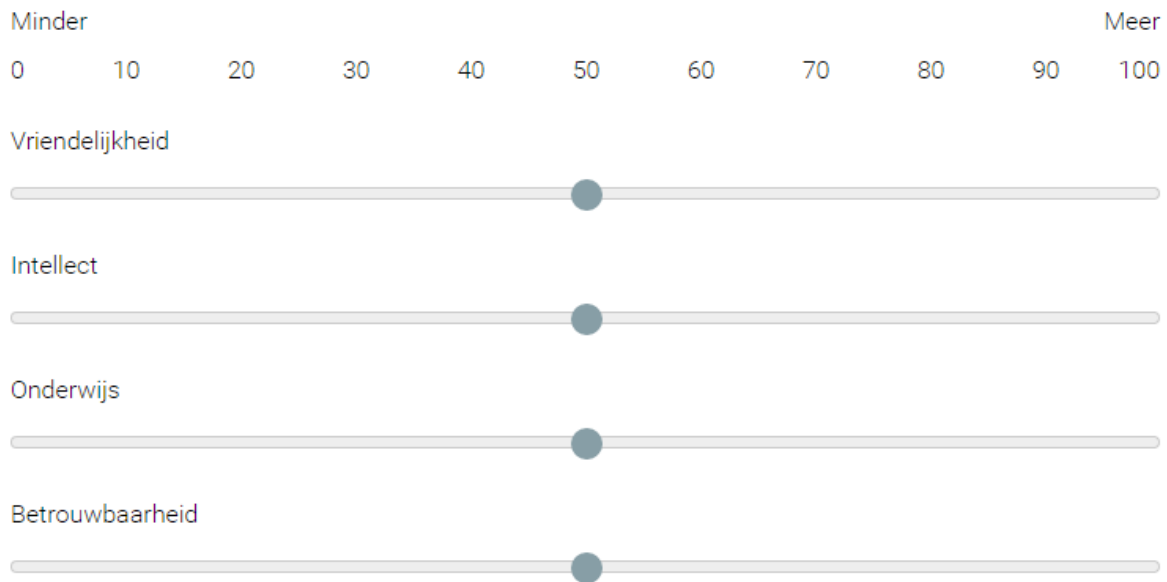


Figure 40: Example question on online survey. Participants were required to move the slider to indicate their choice. This question is asking them to rate the speaker on the attributes of Friendliness (Vriendelijkheid), Intellect, Education (Onderwijs) and Trustworthiness (Betrouwbaarheid). Participants must use the slider for ratings to be logged.

### 5.4.2. Recruitment

Participants were recruited through online social media platforms such as Facebook and word of mouth. The survey was also advertised through the Erfgoedcentrum Achterhoeks en Liemers (ECAL), situated in Doetinchem, as well as the regional radio programme Omroep Gelderland. The survey was also advertised to current undergraduate students at the University of Leiden, as well as Dutch visiting students at the University of York. To participate in the survey, all respondents were required to be aged 18 or over, and to be born in and live in the Netherlands. It was not necessary for them to be speakers of the Achterhoeks dialect, as the interest in this study lies in how respondents from all of the Netherlands perceive dialect speakers. It is possible that speakers of the Achterhoeks variety, or of another eastern dialect, may provide other responses from those given by speakers of western dialects, so the intent here is to compare perceptions of speakers from different parts of the Netherlands. However, the overwhelming majority of participants were from the Achterhoek region, due to the process of advertising the survey.

40 participants from across the Netherlands were ultimately surveyed. A breakdown of the respondents separated by age, gender and reported dialect is as follows:

Age group	Number	Percentage
18-39	18	45.00%
40-59	13	32.50%
60+	9	22.50%

Dialect	Number	Percentage
Low Saxon	22	55.00%
Low Franconian	8	20.00%
No dialect	10	25.00%

Gender	Number	Percentage
Male	14	35.00%
Female	26	65.00%

Table 12: Overall breakdown of survey participants by age, gender and dialect (%) (N=40).

The dialect speakers were grouped as follows: Low Saxon, Low Franconian and No Dialect. The Low Saxon group included those who said they spoke any Low Saxon dialect including Achterhoeks, as well as some reported “sub-dialects” of Achterhoeks, where participants have nominated the dialect of a particular town<sup>39</sup>. This group also included those who listed “Nedersaksisch” (Low Saxon) or “plat” in general as their spoken dialect. Most Low Saxon speakers reported they spoke a dialect of the Achterhoek. However, non-Achterhoeks Low Saxon dialects spoken included Gronings (found in the province of Groningen), Twents (found in the province of Overijssel), and a variety of Eastern Veluws (found in the province of Gelderland). These other Low Saxon dialects were not grouped separately for two reasons. Firstly, the features which the listeners would identify as dialect features (ie. the marked vowels) are fairly consistent across the Low Saxon-speaking area. These marked vowels tend to be widespread across this area, whereas the Low Franconian dialects are more likely to be closer to the Standard variety (see Section 2 for an explanation). Secondly, there were considerably more Achterhoeks speakers than speakers of the other dialects mentioned above, and there were some participants who did not specify which Low Saxon dialect they spoke.

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<sup>39</sup> These include Winterswijk, Laren and Aalten.

Therefore, it was most useful to group them together. The Low Franconian dialects, however, showed a more varied spread. These participants reported that they were speakers of the dialects of Liemers (Gelderland), Amsterdams (Noord Holland), Betuws (Gelderland), Brabants (Noord-Brabant), Heerjansdams (a western variety found in Zuid-Holland), and Zeeuws (Zeeland).

We can also view the survey participants' dialect use by age and gender; as Tables 12 and 13 show, younger participants are less likely to be dialect speakers than the middle and older age groups. This is a fact to be explored when analysing the data: if younger participants are less likely to speak a dialect than older participants, then it follows that dialect use will be perceived to be more common in older speakers, and corresponding social values ascribed to older speakers would then, by association, also be perceived to be more common among dialect speakers. See also Hay et al. (2006) for further discussion on linguistic differences being affected by perceived age, rather than the linguistic differences themselves. The participants have again been grouped into whether their reported dialect belonged to the Low Saxon or the Low Franconian groups of dialects, or whether they did not consider themselves to be speakers of a dialect at all.

	Dialect			
Age group	Low Saxon	Low Franconian	No dialect	Total %
18-39	22.22% (4)	27.78% (5)	50% (9)	100.00 (18)
40-59	69.23% (9)	23.08% (3)	7.69% (1)	100.00 (13)
60+	100.00% (9)	0.00% (0)	0.00% (0)	100.00 (9)

Table 13: Participants' reported dialect use by age (%), Actual figures included in brackets (N=40).

	Dialect			
Gender	Low Saxon	Low Franconian	No dialect	Total %
Male	70.00%	15.00%	15.00%	100.00 (14)
Female	48.00%	22.00%	30.00%	100.00 (26)

Table 14: Participants' reported dialect use by gender (%) (N=40).

As Table 13 shows, 50% of survey respondents between the ages of 18 and 39 and 7.69% of those aged between 40 and 59 considered themselves to speak no dialect at all. However, Achterhoeks (or another Low Saxon dialect) speakers were most represented amongst the participants, and most of them fell into the middle or older age groups, with only 22% of all 18-39 year olds considering themselves to be speakers of a Low Saxon dialect. Slightly more reported that they spoke a Low Franconian dialect. However, it should be noted here that many of the younger speakers were students in Leiden, and therefore more likely to come from a Low Franconian speaking area. Amongst the 40-59 and 60+ age groups, Low Saxon dialect speakers were dominant. Again, we can relate this to the fact that the majority of the older participants originated from the eastern Netherlands. However, only 7% of those aged between 40 and 59 and 0% of those aged 60+ considered themselves not to be speakers of any dialect. Whether or not participants were Low Franconian or Low Saxon speakers, the trend is clearly, and perhaps expectedly, showing that there are fewer younger dialect speakers than older ones. Table 14 shows the spread of dialect speakers across the two genders. There were, overall, more female participants than male participants in the study (63% to 37%; see Table 14 above). We can see that Achterhoeks speakers are evenly split among males and females, with the two other dialect speakers being female, and a smaller proportion of non-dialect speakers.

Overall, this spread of results shows that we will mainly be considering Achterhoeks speakers' perceptions of others who speak their own dialect. This of course could impact on their judgements of the regional standard speaker as well, in terms of whether or not they recognise him as being from the same region as those who reported themselves to be speakers of Achterhoeks. However, the perceptions of the 26% of participants who do not speak Achterhoeks provide an interesting contrast with the views of the Achterhoeks speakers, including how, if at all, their judgements on the attributes scale differ from those of the Achterhoeks speakers, and how their ratings of the regional standard speaker compare.

## 6. Results

The results consisted of the recordings of the six aforementioned lexical sets of 28 speakers from 1979, and 34 speakers from 2015. For the 1979 speakers, there were 352 tokens included of the PRAAT lexical set, 76 of KAART, 155 of KAAS, 41 of PAARD, 243 of KIJK, and 192 of HUIS. For the 2015 participants, there were 395 tokens of PRAAT, 81 of KAART, 243 of KAAS, 110 of PAARD, 477 of KIJK, and 352 of HUIS. Refer back to Table 9 (see page 122) for a list of words included in each lexical set.

Firstly, the normalised plots show the average of the vowels set in an F1/F2 plane, first in 1979 and then in 2015, of each of the lexical sets. The following sections consider each of these lexical sets in greater detail, and consider changes which have occurred between 1979 and 2015.

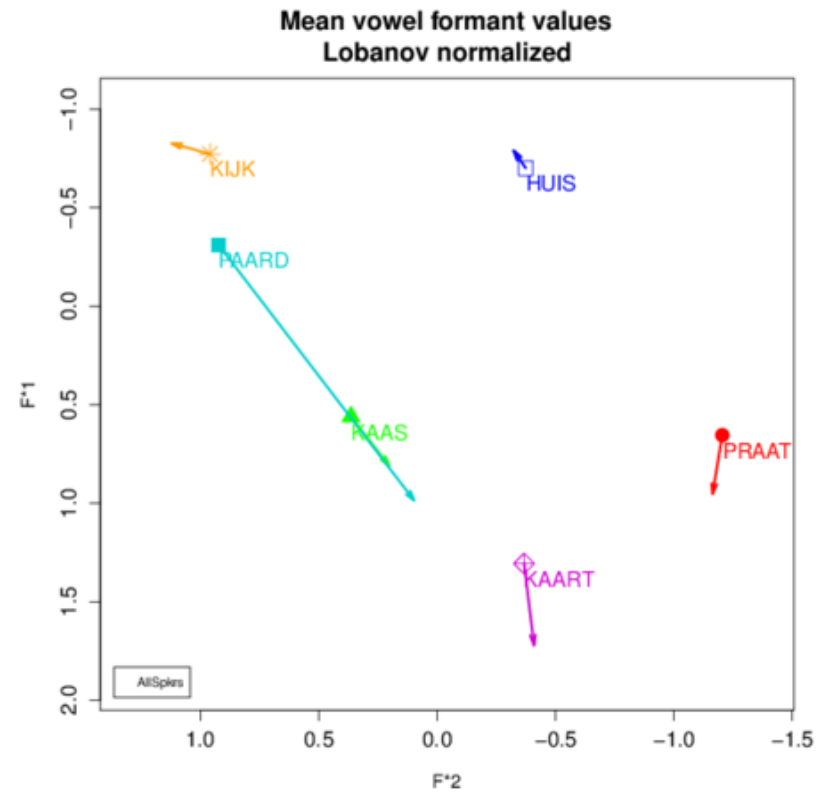
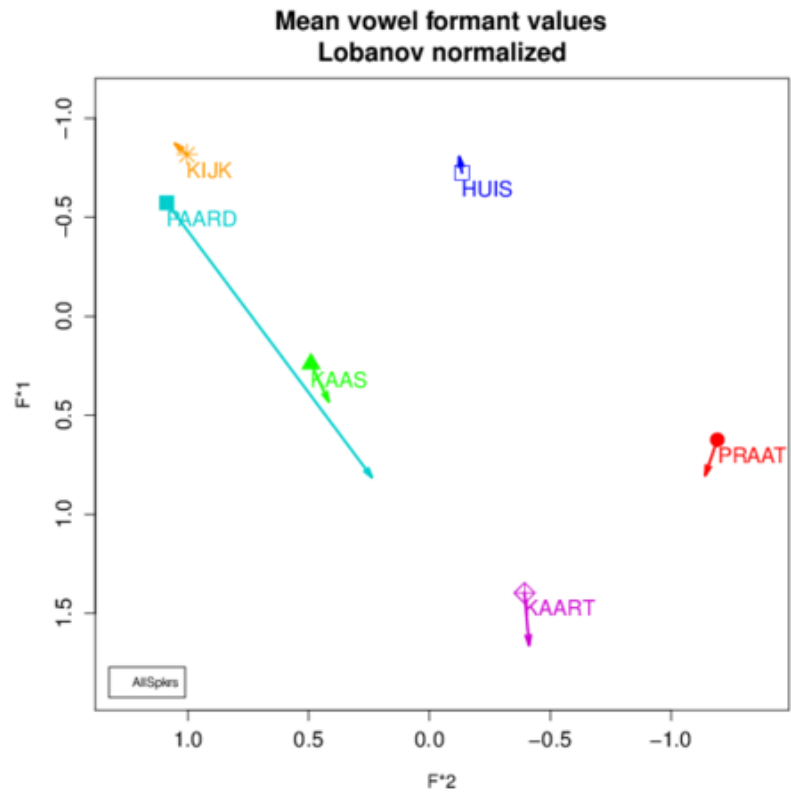


Figure 41: Average normalised F1/F2 vowel measurements for 1979 speakers (N=957). Figure 42: Average normalised F1/F2 vowel measurements for 2015 speakers (N=1658).



The plots in Figures 41 and 42 show the average F1/F2 values for each of the lexical sets. Overall, we see little movement in the KIJK, PRAAT and KAART vowels, but KAAS appears to have lowered, as has PAARD to a lesser extent, despite it clearly retaining its diphthongal vowel in at least some contexts. Independent samples t-tests (discussed further in the following sections) determined significant change between 1979 and 2015 in the KAAS, PAARD and HUIS vowels. Not particularly evident from Figures 41 and 42, it is the HUIS vowel which presents perhaps the most interesting results, and we will consider the situation with this vowel in both 2015 and 1979 first of all.

### **6.1. Rural and Non-Rural Variation in the HUIS Vowel in 2015**

The most noteworthy finding is that concerning the behaviour of the HUIS vowel after rhotic consonants among the modern speakers. Whilst the vowel was realised as a more front [y] (rather than [u]) the majority of times in all other positions in all speakers, there was a noticeable difference between speakers when it occurred after rhotics, with some speakers using the front variant, represented phonetically as [y], and others using a more retracted pronunciation, represented phonetically as [u]. The criterion for separating the classification of front and back variants of vowels after /r/ was based on the F2 measurement; values over 1500Hz would be regarded as front, and those under 1500Hz regarded as back. To address the gender effect, this value was chosen as acceptable for both males and females, based on the results of Adank et al. (2004b), who found average F2 formant values for /u/ for Northern Standard Dutch speakers to be 938Hz (females) and 805Hz (males) (p.1732). For the vowel /y/, they found the averages to be 1918Hz (females) and 1734Hz (males). It is accepted that there may be some limitation to choosing this method, so auditory analysis was also conducted which confirmed the results.

Whether the difference is present relates to whether speakers resided in a rural or non-rural area. The towns of Terborg, Ulft and Silvolde (alongside Etten and Gendringen) are the urban population areas of the Oude-IJsselstreek council (with Terborg having city rights, and Ulft the largest population) (Oude-IJsselstreek, 2016); (this is perhaps because they are located along the River Oude-IJssel) and so speakers from these towns were classified as residing in non-rural areas, whereas the other localities represented were classed as rural<sup>40</sup>. Speakers

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<sup>40</sup> These localities were situated across the municipalities of Oude-IJsselstreek, Doetinchem, Aalten, Berkelland and Bronckhorst, and comprised small villages of mostly farmland as well as some higher-density population

from rural areas were found to often use the retracted pronunciation after /r/, while speakers from non-rural areas used the fronted pronunciation in most instances. The following two formant plots in Figures 43 and 44 (generated in NORM, using the Lobanov method – see Section 5.3.1) show individual vowel pronunciations for two speakers of similar ages: a 32-year-old female from the rural town of Halle (F32Halle), and a 34-year-old speaker from the non-rural town of Ulft (F34Ulft). These plots show a comprehensive picture of their normalised frequencies, but we should specifically note the measurements for the HUIS vowel – the non-rural speaker did not show any use of the back variant, whereas the rural speaker’s back vowel was found only after rhotics, in the words *kruipen* and *ruiken*, both used in the picture task and sentence reading task. What is occurring here is that the rural speakers appear to be making a distinction that the non-rural speakers are not, be it consciously or subconsciously. To sum up: following /r/ the HUIS vowel is pronounced as [u], whereas it is [y] in any other condition, at least amongst those conditions included as part of this research.

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areas, with most having an “urban” centre. Some have town privileges. It was more difficult to classify some speakers who lived in a semi-rural location, such as a higher-density population area within a rural location (eg. speakers from Gaanderen and Varsseveld); these speakers have also been classed as “rural” as the urban belt areas are more of an exception to the rule regarding overall rurality.

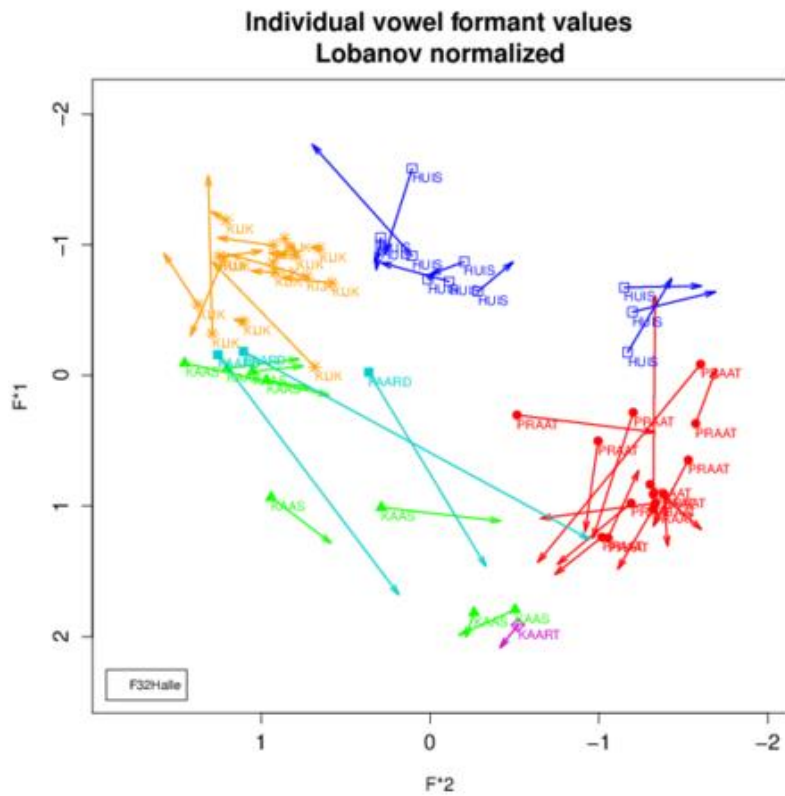


Figure 43: Female, 32, Halle (Normalised values). The HUIS vowel is represented in dark blue (N=52).

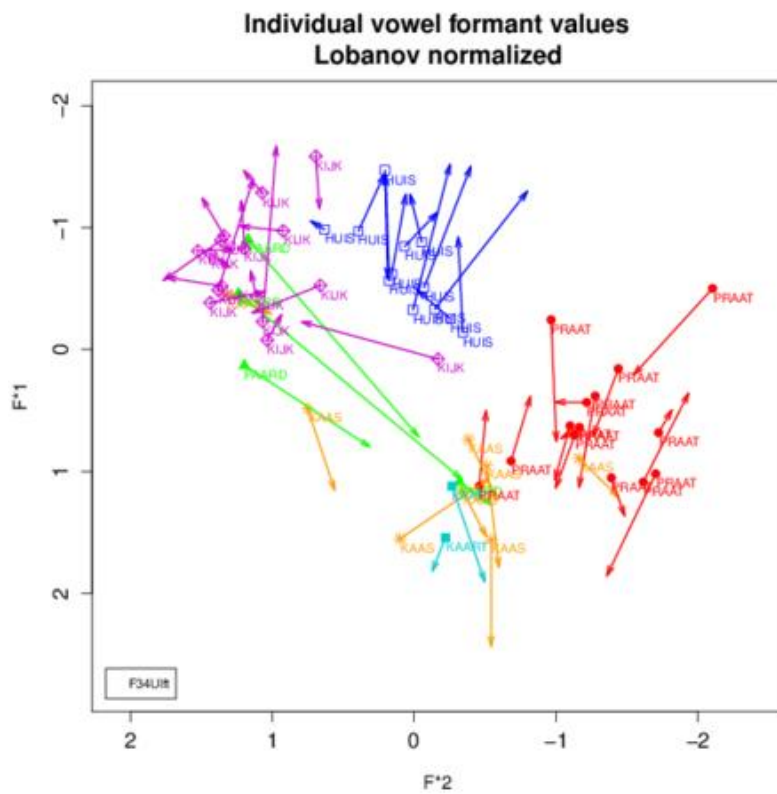


Figure 44: Female, 34, Uft (Normalised values). The HUIS vowel is represented in dark blue (N=56).

Similar results are also shown in Figures 45 and 46 for two male speakers of similar ages: a 38-year-old from a rural town (M38Ruurlo) compared to a 43-year-old from a non-rural area (M43Silvolde). Again, we see no back vowel usage from the non-rural speaker, yet frequent realisation of the back vowel from the rural speaker, which always occurred after /r/ in the words *kruipen* and *ruiken* in both the sentence reading and picture tasks. The values for the front vowel for each speaker were, however, similar, as shown in the figures. The HUIS vowel is represented in these figures in dark blue.

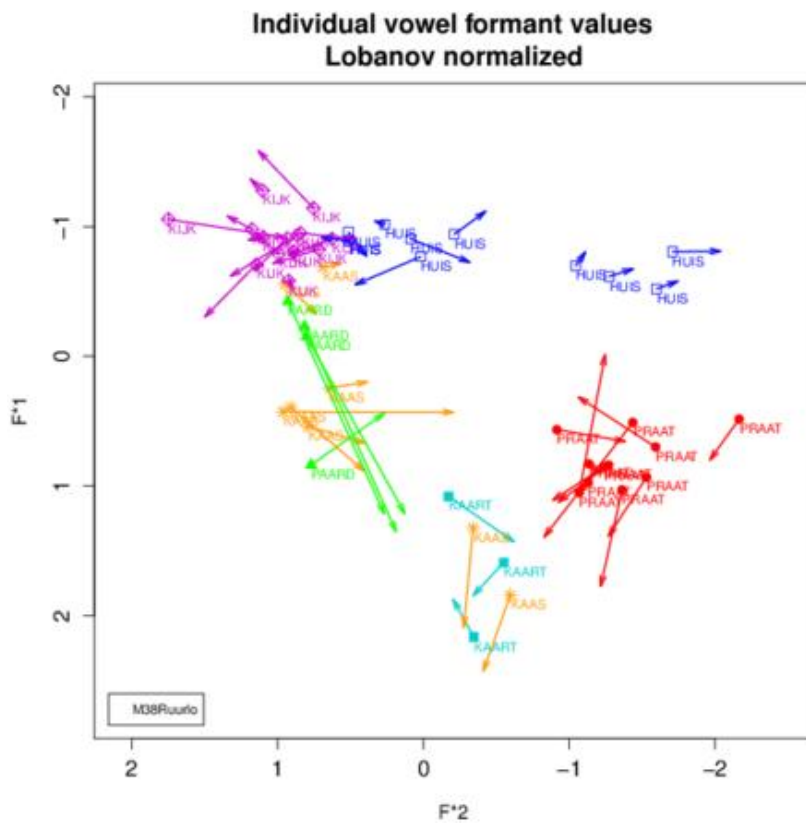


Figure 45: Male, 38, Ruurlo (Normalised values) (N=51).

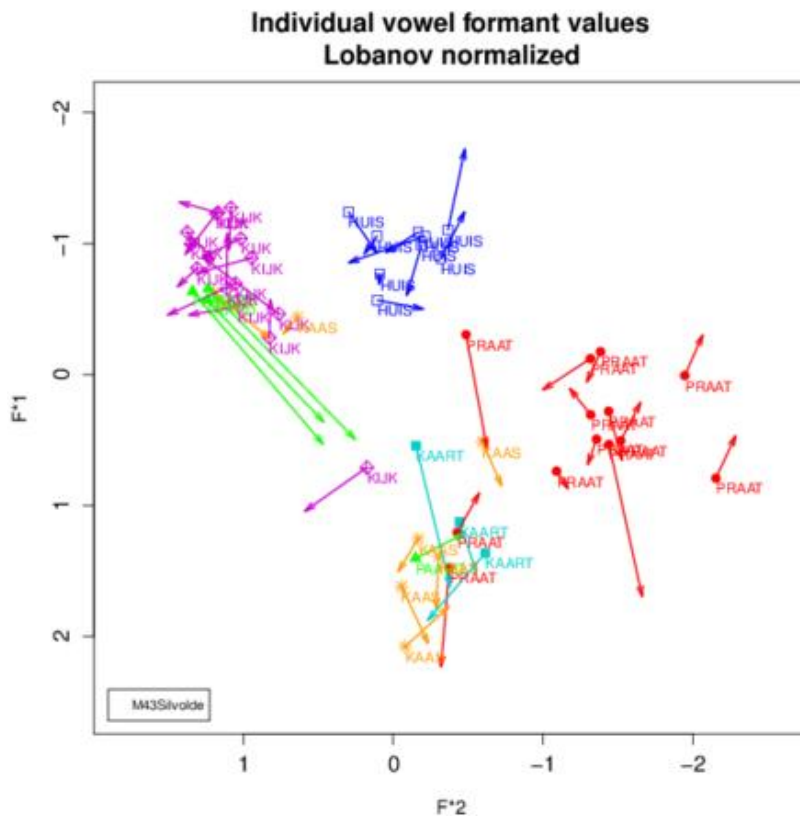


Figure 46: Male, 43, Silvolde (Normalised values) (N=50).

The spectrograms for each of these speakers' realisations of the word *kruipen* are shown in Figures 47 and 48. The first spectrogram (Figure 47) is that of M38Ruurllo; the second formant is low and can be observed close to the first formant, indicating the use of a high back vowel. However, for the second speaker, M43Silvolde, the second formant can be observed to be much higher up in the spectrogram, away from the low first formant (Figure 48). This indicates a more fronted pronunciation from this speaker than that produced by the first speaker. Both vowels, however, show monophthongal qualities. These results tended to be consistent across most other rural and non-rural speakers; the rural speakers' spectrograms mirrored those of M38Ruurllo here, whereas those from non-rural areas appeared more similar to those of M43Silvolde.

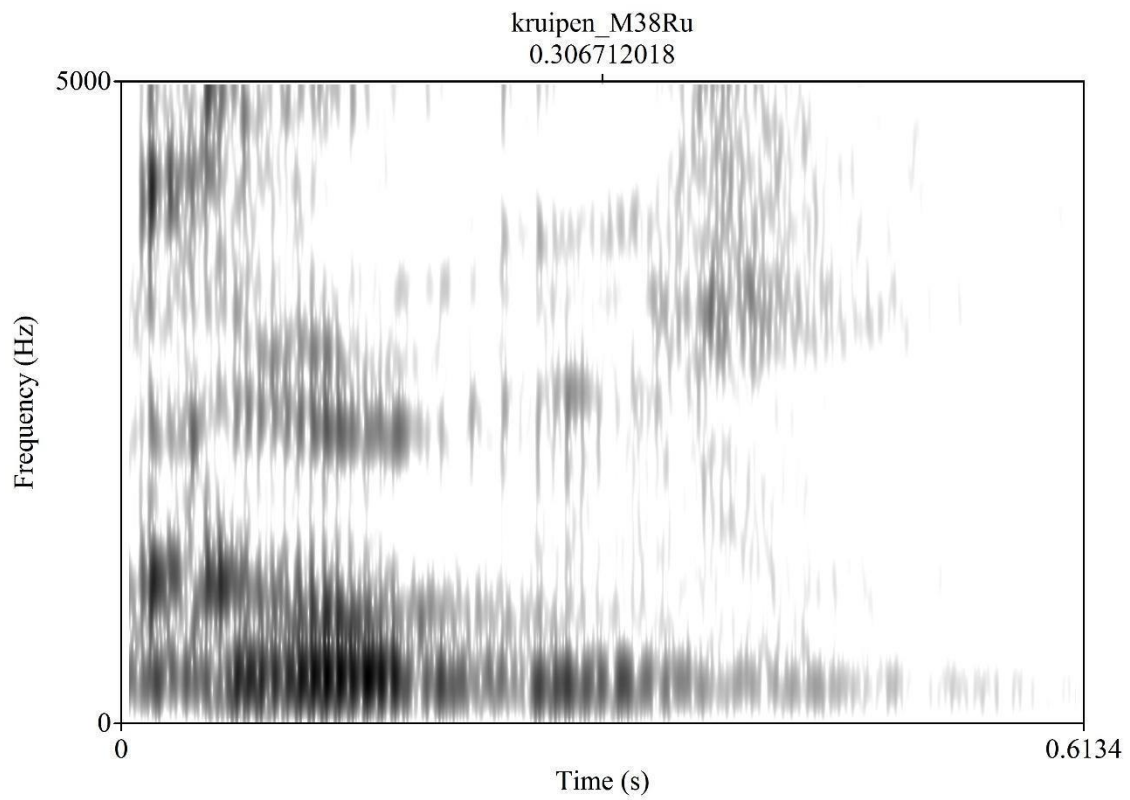


Figure 47: Spectrogram: M38Ruurlo, "kruipen".

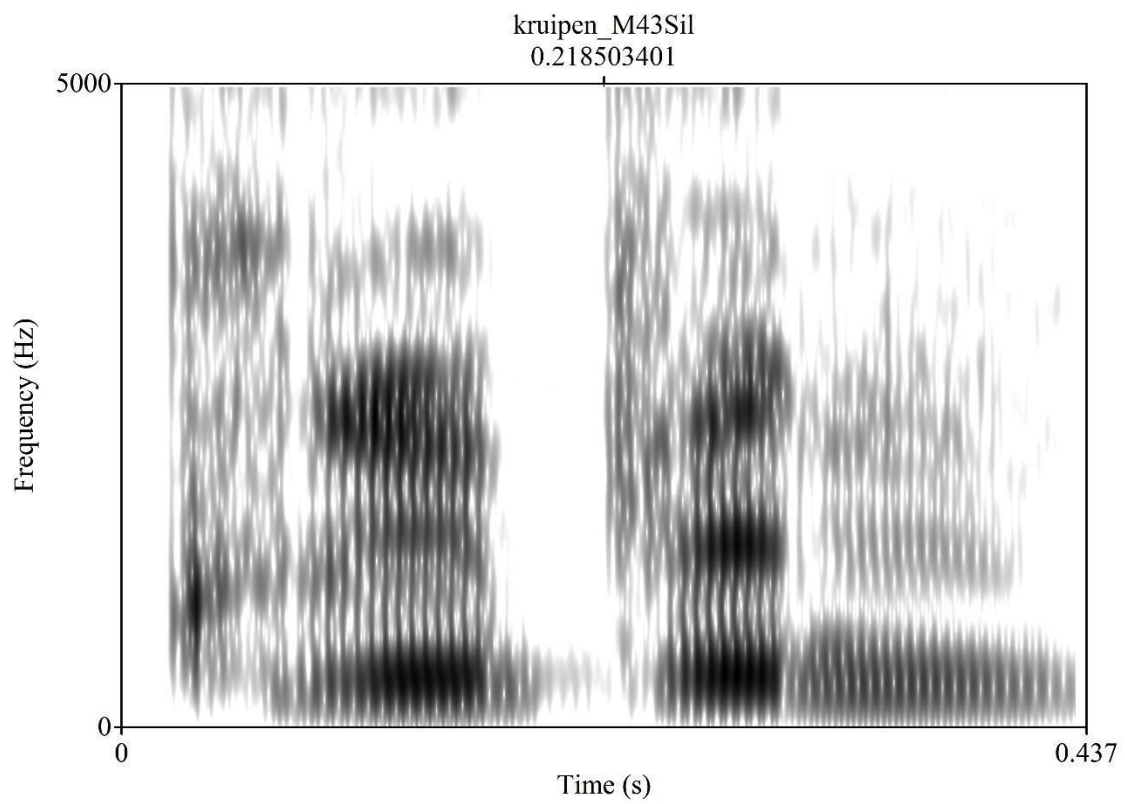


Figure 48: Spectrogram: M43Silvolde, "kruipen".

We can also look more closely at the individual words in scatter plots, which measure the onset F1 and F2 positions of the vowel in each of the most used words. All vowels have been realised as monophthongs (unless otherwise specified and addressed within the accompanying descriptions) which has the vowel onset position (or point 2, as shown in Figure 18 in Section 4.1 on page 97) as an appropriate place of measurement to display most common trends. Scatter plots were chosen to represent the information as they allow us to visualise where the most common F1/F2 values tend to be clustered. The average values of the KIJK, KAART and PRAAT vowels are also included in the plots as reference points.

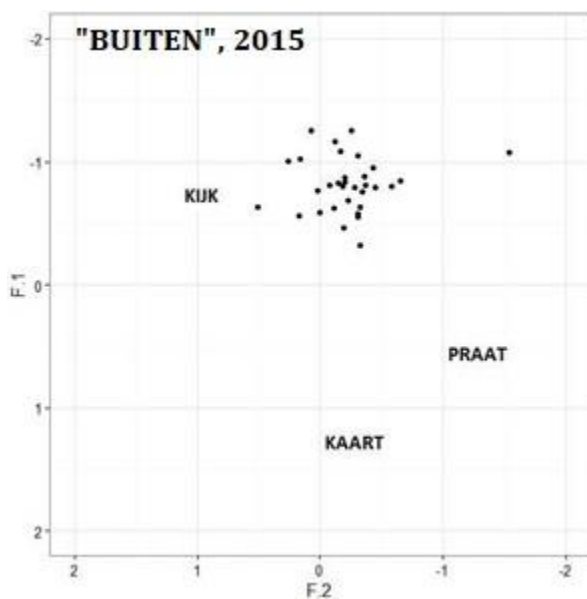


Figure 49: F1/F2: *buiten*, 2015 (scatter plot) (N=33).

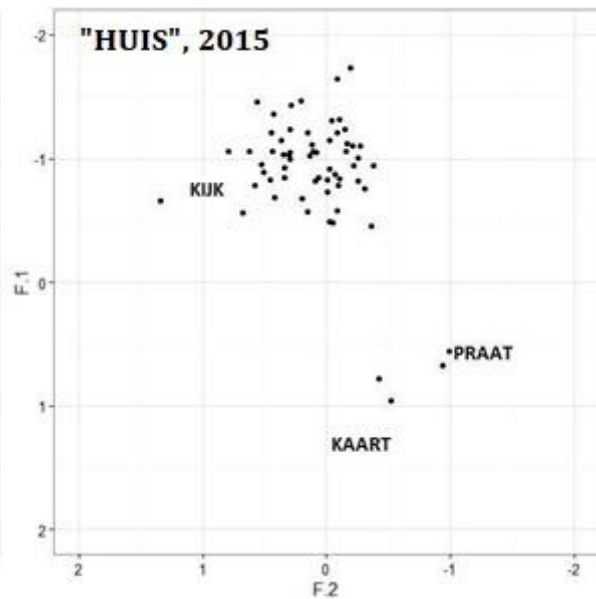


Figure 50: F1/F2: *huis*, 2015 (scatter plot) (N=62).

The figures present the normalised F1/F2 results for the words “*buiten*” and “*huis*” in 2015. The average values of the KIJK, KAART and PRAAT vowels are included as reference points.

Firstly, the vowel in *buiten* (see Figure 49) occupies a fairly small space and it is the front, rather than back, vowel which is realised by speakers in 2015, with only one instance of a more retracted vowel. The high concentration of tokens within this space signifies that the front vowel is stable in this word in 2015. A different picture is shown, however, in 1979, which is addressed in Section 6.2. The vowel in *huis* (‘house’), shown in Figure 50, displays more variation than in *buiten*. The greatest concentration is around the phonetic values for [y], yet this is spread over a larger space, indicating slightly more variation. Additionally, the points concentrated around the average values for KAART and PRAAT, and separate from the main cluster, indicate the onset position of the diphthong, a vowel quality which is realised by a minority of speakers, including those from the non-rural towns of Terborg

(female speaker, aged 39) and Ulft (male speaker, aged 59), and the rural village of Bredevoort (male speaker, aged 33, but who grew up in the non-rural town of Ulft).

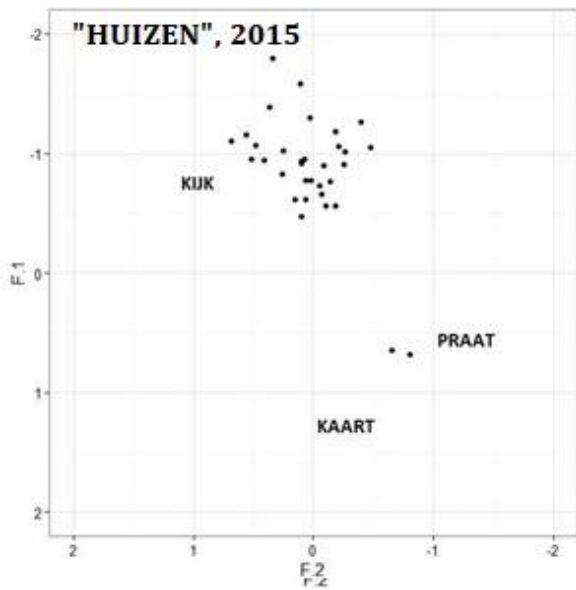


Figure 51: F1/F2: huizen, 2015 (scatter plot) (N=33)

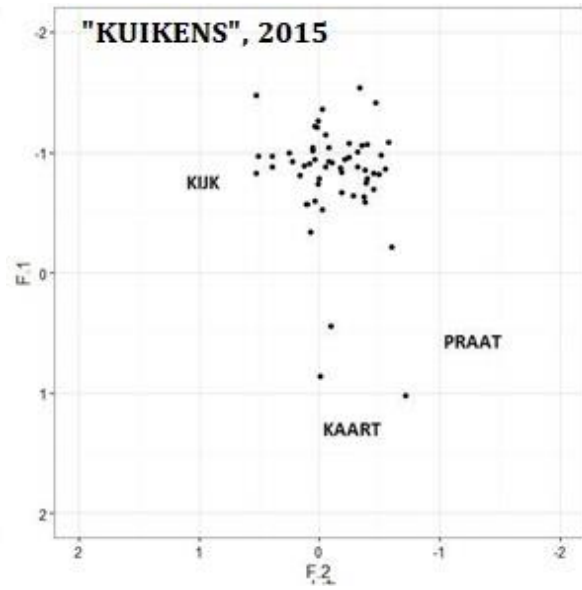


Figure 52: F1/F2: kuikens, 2015 (scatter plot) (N=59)

The vowel in *huizen* ('houses') (see Figure 51) was analysed separately from that in *huis*, in order to determine whether the following voiced consonant had a different effect. This did not appear to be the case, with *huizen* yielding similar results to *huis*. Again, the largest concentration was around the front variant, with no use of the back variant, and the onset of the diphthong also shown as separate points closer to the average values of PRAAT and KAART, having been recorded in the speech of a small number of speakers. This is represented by the occurrences noted in the bottom corner of the plot. For *kuikens* ('chickens') (Figure 52), a similar central area to *buiten* and *huizen* is covered, where the formant values occupy a front-central area.



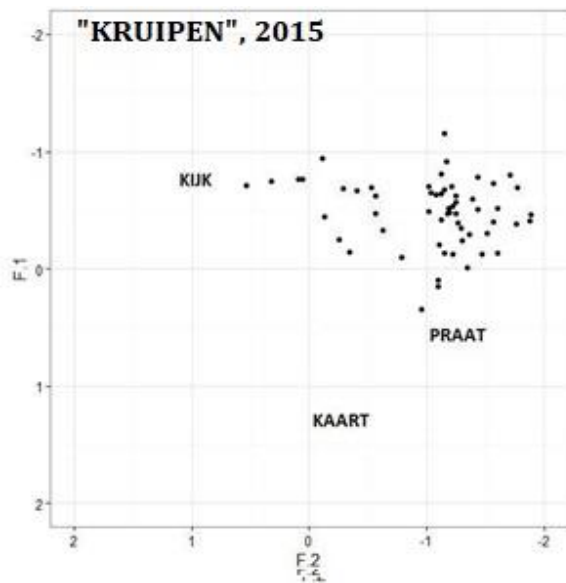


Figure 53: F1/F2: *kruipen*, 2015 (scatter plot) (N=61)

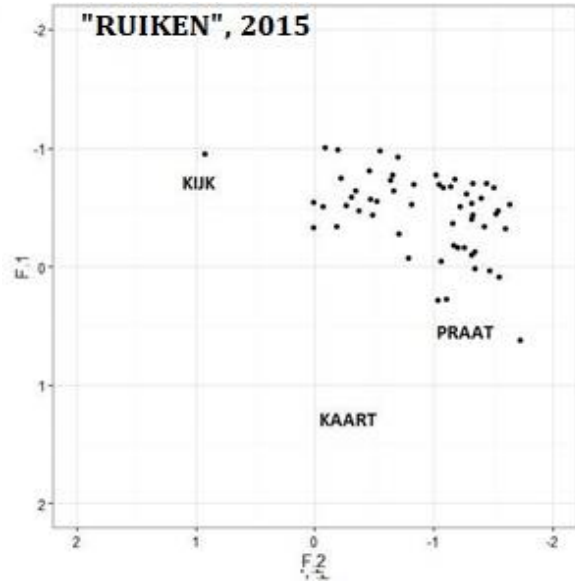


Figure 54: F1/F2: *ruikken*, 2015 (scatter plot) (N=58)

We now consider the vowels that appear following rhotics, where there appears to be a bimodal distribution. With *kruipen*, we see the first indication of a split between front and back vowels, not simply a distinction between a dialectal monophthongal realisation and the Standard Dutch diphthong, as seen in *huis* and *huizen*, for example. The split, however, does not necessarily appear to be discrete, in that the whole vowel space is being used, and there were some occurrences of intraspeaker variation. The most common realisation appears to be further back than the qualities that have been observed in the words examined previously, although more front, central realisations also occur. This is where we can see the difference between the rural and non-rural speakers, as explained earlier: it is the majority of rural speakers who are using the back pronunciation here, whereas the non-rural speakers are keeping with a more front vowel as observed before. Figure 55 shows the difference between the rural and non-rural speakers' vowels. Here, we can see that the rural speakers show more usage of the back vowel, and more instances of the front vowel are observed in the non-rural speakers.

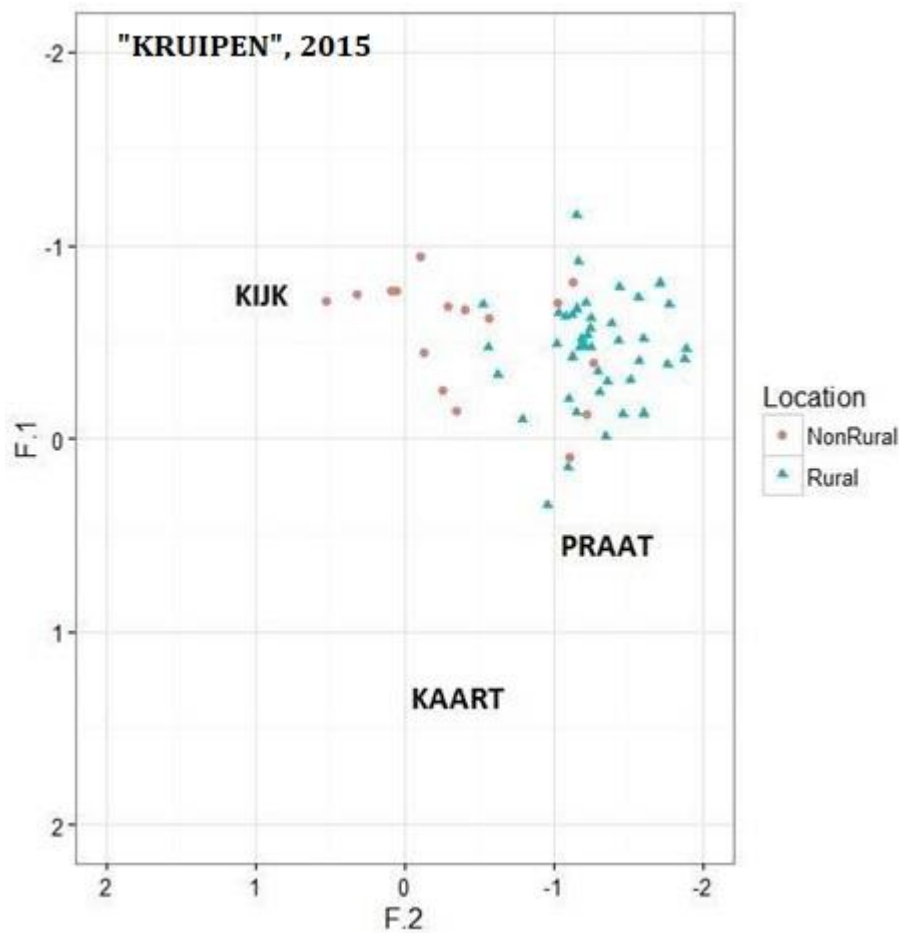


Figure 55: F1/F2 *kruipen* – rural speakers vs non-rural speakers, 2015 (scatter plot) (N=61)

We see the same pattern with *ruiken* as we did with *kruipen*; again, there is a split between the realisations of the vowel in the word as either front or back, and it is the rural speakers who favour the latter vowel. There are a few instances of the diphthong [œy] occurring, with onsets centered closer to the phonetic values of [ɔ]. As with *kruipen*, the front pronunciations are observed more often in the non-rural speakers, as evidenced in Figure 56.

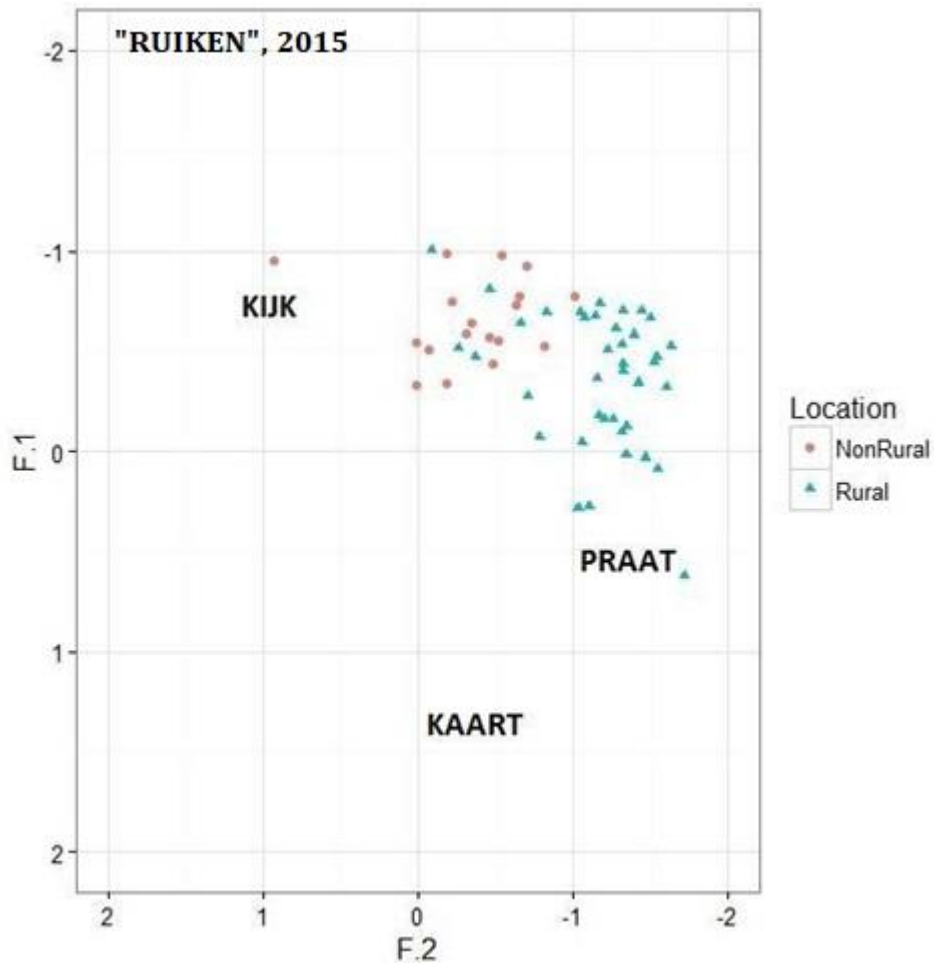


Figure 56: F1/F2 ruiken – rural speakers vs non-rural speakers, 2015 (scatter plot) (N=58)

To look in more detail at *kruipen* and *ruiken*, where the vowel followed a rhotic, normalised F2 measurements (correlating with the retractedness of the vowel) are considered in Figures 57 and 58. Here, we can see a definitive split in the boxplots between rural and non-rural speakers, again indicating an observable vowel difference.

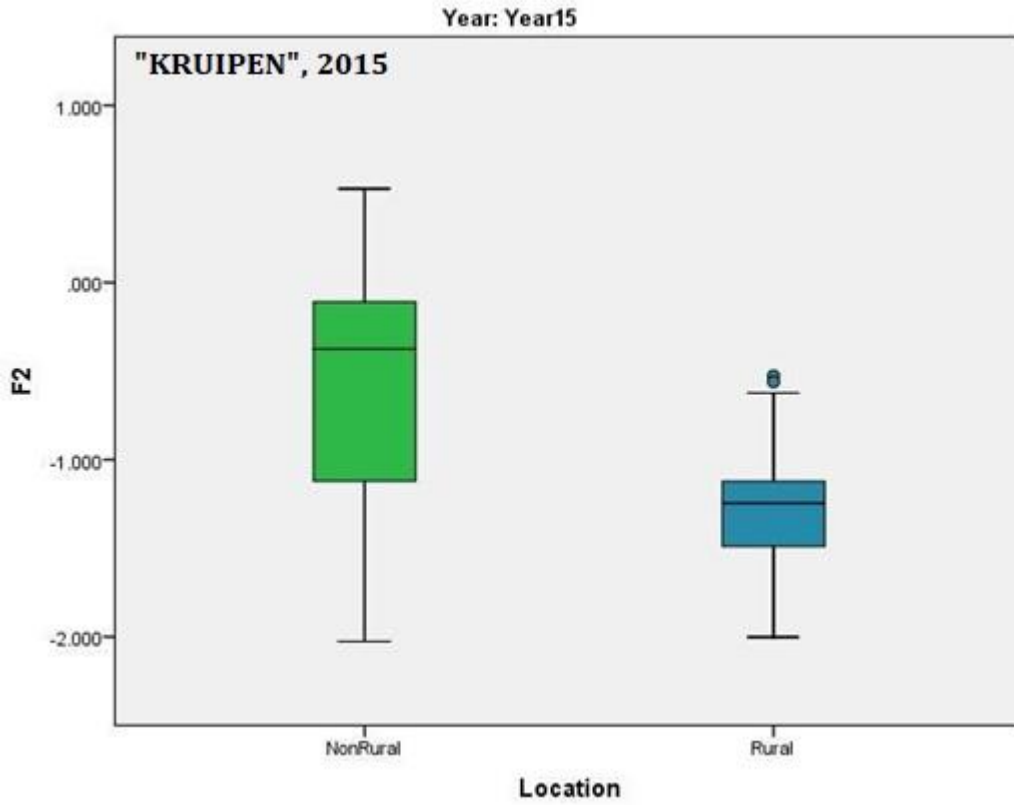


Figure 57: Boxplot showing F2 values for "kruipen" in rural and non-rural speakers, 2015 (N=61)

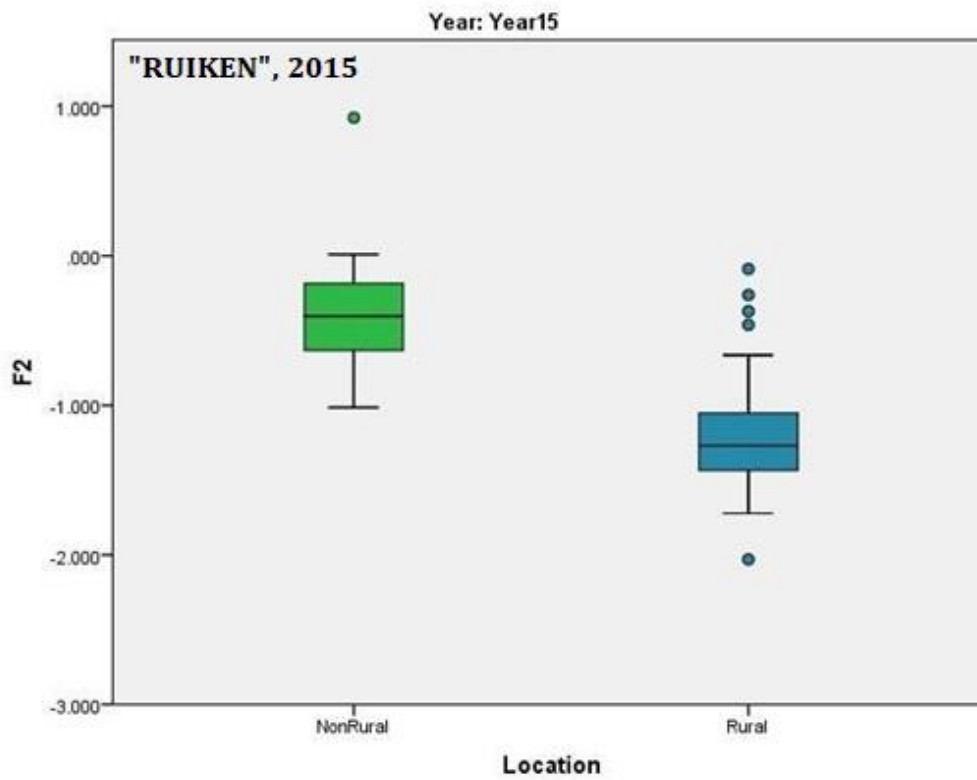


Figure 58: Boxplot showing F2 values for "ruikken" in rural and non-rural speakers, 2015 (N=58)

The vowels in *uit* and *uitging* were analysed separately (see Figures 59 and 60), as with *huis* and *huizen*, due to the possible effects of neighbouring consonants. As *uitging* appeared in the sentence *Het was al licht toen het vuur uitging*, it was possible for there to be a back pronunciation in the vowel in *uitging* following any cases of the preceding /r/. Figure 60 shows that the front vowel was mostly used, but we can see a few instances of the back vowel (as well as the onset of the diphthong [œy]). Linking /r/ was not commonly produced by speakers, so we could assume that this is what resulted in fewer instances of a back vowel in *uitging*. The speakers who produced the most retracted vowels were indeed from rural areas, however they did not combine this realisation with the production of a linking /r/. This suggests that the appearance of a few back vowels in this word is merely a coincidence, and perhaps just a leftover remnant.

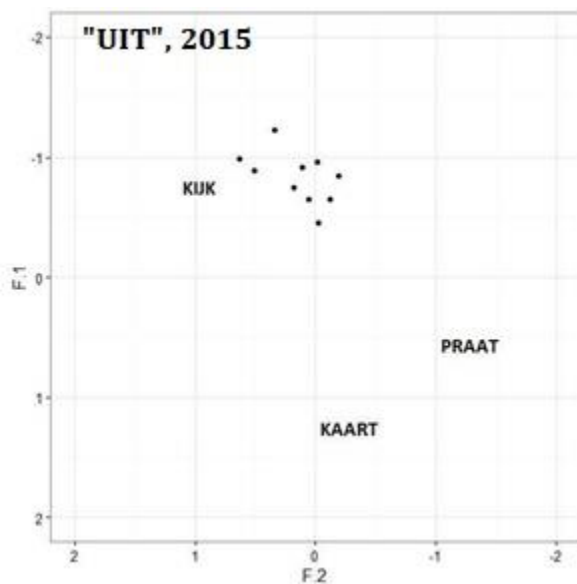


Figure 59: F1/F2: *uit*, 2015 (scatter plot) (N=10)

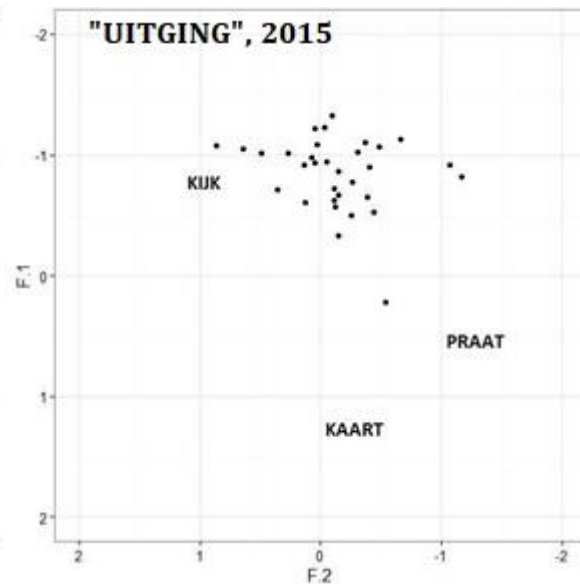


Figure 60: F1/F2: *uitging*, 2015 (scatter plot) (N=32)

There was also one instance of the Standard Dutch variant being used. Regarding *uit*, the vowel in this word was not in the same phonological position as *uitging*, and the results are consistent with the other vowels which do not follow rhotics. This word was uttered during the picture study task where participants typically used the term *uit kijken* for a picture of a man crossing a road (see Appendix 2), and was not part of the sentence list. Regarding an effect of underlying /r/ in codas in general, there was not enough evidence in this study to definitively answer whether they would have an effect or not.

Overall, the scatter plots show that words that include a vowel following a rhotic cover a greater area than those that do not. Only the more fronted and central vowel is used in these

words, with the exception of *huis* and *huizen* (and, to a lesser extent, *uit*), where the onset of the diphthong appears separately from the main clusters of representations. However, the graphs for *kruipen* and *ruiken* show a split between the two monophthongs, with the back vowel being favoured due to the number of rural speakers being greater than the number of non-rural speakers. The vowel in *kruipen* is more often realised as a back vowel than in *ruiken*; this may be attributed to a combination of the effect of /r/ and the labial stop /p/ holding the vowel in a more retracted position. We see only the use of the fronted monophthong in *buiten*, *kuikens* and (mostly) *uit*. This finding is suggestive that there is some property associated with rhotics that is keeping the vowel in a back position in some speakers, although there is no evidence to date as to what that might be.

As suggested, it appears to be the non-rural speakers who are using the front vowel, and the rural speakers who are using the back vowel. To consider this finding in more detail, the number of the type of vowel pronounced after /r/ was calculated, and the percentage results of the use of [u] are shown in the graph in Figure 61.

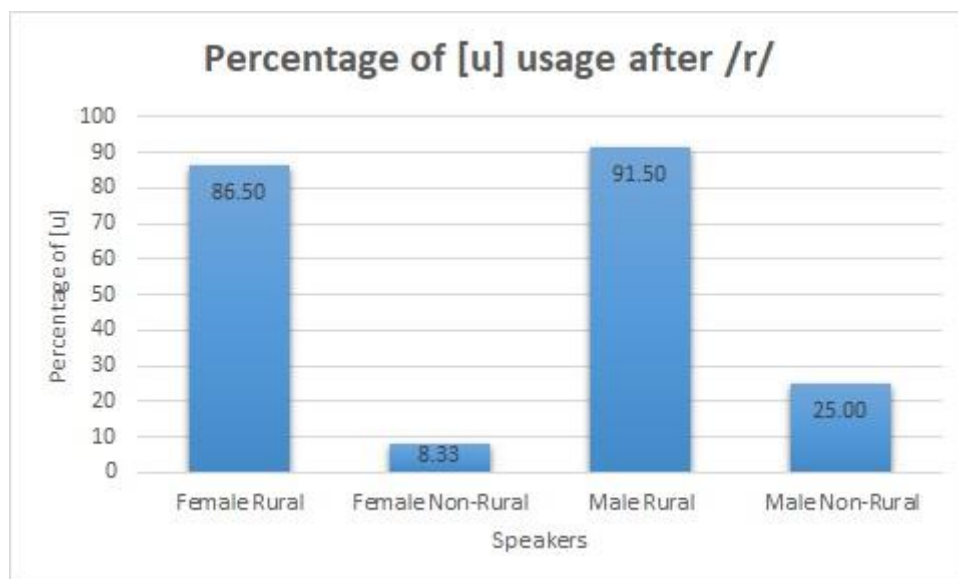


Figure 61: Percentage of [u] usage after /r/ in the words “kruipen” and “ruiken” (and one “bruiloft”) (N=120).

The graph shows the percentage of the number of instances of back vowel-usage amongst all speakers pooled by each group, and differentiates speakers by locality and sex, but not by the task completed (which will be discussed further below). The results here indicate that the back variant is highly favoured by rural speakers, with few instances occurring amongst non-rural speakers. We have already established that it is the rural speakers who are mostly retaining the use of the older variant, but we can also hypothesise that there is a female-led

change occurring, with the percentage of [u] usage being slightly lower than that of the male speakers. The pronunciation of [y] was realised in almost all instances by non-rural female speakers, whereas the non-rural male speakers are retaining usage of the older variant 25% of the time. The latter figure is still much lower than what is recorded for rural speakers, yet it does indicate that the male speakers here are more likely to be holding onto the traditional variant for longer than female speakers.

In addition, an independent samples t-test (the findings of which are summarised in Table 15) determined the variation between the rural and non-rural speakers to be statistically significant, with p-values of .002 for normalised onset F2 and .000 for normalised glide F2. These results include figures for when the vowel also appears in environments other than following /r/, and show how there is a significant difference in the frontedness of the vowel between the rural and non-rural speakers at the 1% level. It is only the onset F1 values which do not show significant change between the rural and non-rural speakers. The p-value of .003 for the offset F1, compared with the onset and offset F1 mean values, suggests some diphthongal qualities in the non-rural speakers' vowels, while the rural speakers' vowels are more monophthongal.

Vowel	Formant	Location	Mean	Significance
HUIS	F1 onset	Rural	-.71320	p = .662
		NonRural	-.67978	
	F2 onset	Rural	-.43120	p = .002
		NonRural	-.22031	
	F1 offset	Rural	-.73250	p = .003
		NonRural	-.92033	
	F2 offset	Rural	-.39894	p = .000
		NonRural	-.11396	

Table 15: Independent samples t-test showing 2-tailed significance for the variation in the HUIS vowel in rural and non-rural speakers (N=352).

The one exception to the general findings was the 33-year-old male speaker from Bredevoort (M33Bredevoort), a rural area with historical town privileges. Although his then-current locality is classed as rural, he was brought up around Uft, a more suburban area where a large proportion of his family lives. This provides an adequate account of why his pronunciations appear to differ from those of other speakers classed as living in rural areas. Only one of his realisations of the HUIS vowel was clearly classified as [u], while F1 and F2 measurements for [y] covered a greater area of the vowel space than most other speakers. This speaker also clarified that his everyday language use lay somewhere between what he viewed as traditional dialect and a regional standard, and that that was his version of dialect; he did not exclusively use one or the other. This habit was somewhat reflected in his results, in comparison to other speakers, who spoke exclusively in what they perceived as a dialectal variety, regardless of whether this was their everyday speech or not. During the picture task, a number of M33Bredevoort's vowels were pronounced using the Standard Dutch variant, although he used the dialectal monophthong later on. This resulted in his pronunciations of *kruipen* and *ruiken* during the picture task being diphthongised, and closer to the standard. During the sentence reading, he produced a back monophthong for *kruipen* and a front monophthong for *ruiken*, indicating that all three vowels appear to be present in his everyday speech. As the plot of his vowel realisations in Figure 62 shows, he is not consistent with his pronunciations in general, displaying a mix of vowels which may be considered to be more representative of the Standard in some instances, and of the dialect in others.



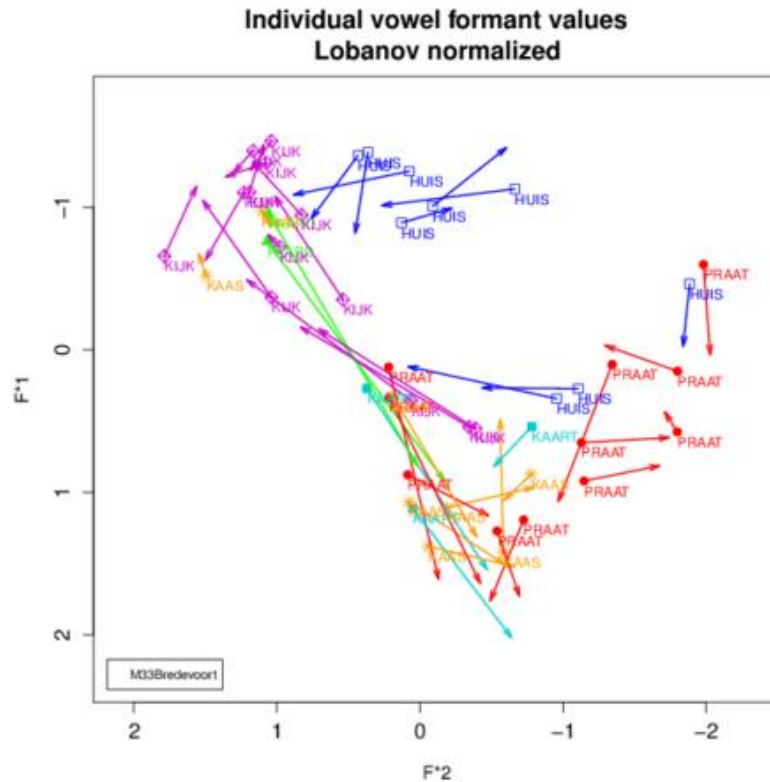


Figure 62: Male, 33, Bredevoort (Normalised values) (N=46).

## 6.2. Comparing the HUIS Vowel in 1979 and 2015

Comparing the realisations of the HUIS vowel in 1979 and 2015, the findings are similar in both groups of speakers. There were more occurrences of [y] following rhotics when the HUIS vowel was observed in speakers from non-rural areas, and [u] in speakers from rural areas. Comparing F2 measurements, first for *kruipen*, and then *ruiken*, in Figures 63 and 64, we see that in both groups of speakers those from rural areas had more use of the back vowel. We also notice that in 2015 there is greater variation in F2 values than in 1979, but we still see a clear difference between rural and non-rural speakers. It looks as if the vowels were discrete in 1979, but both vowels cover almost the whole of the F2 space in 2015, which suggests a sound change in progress.

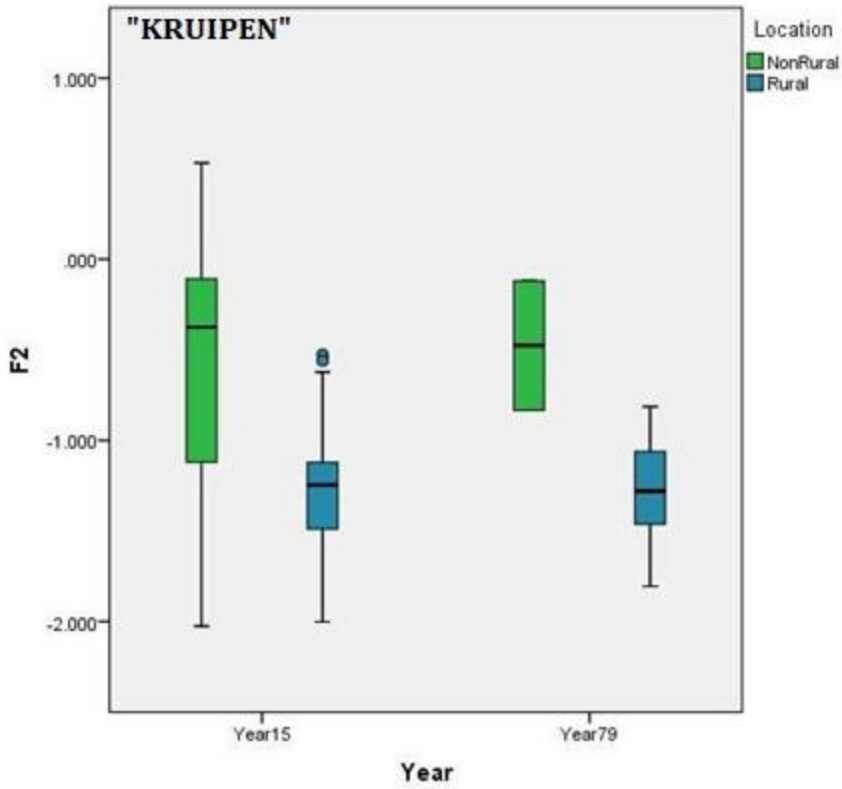


Figure 63: Boxplot comparison of "kruipen" between 2015 (N=61) and 1979 (N=26) speakers

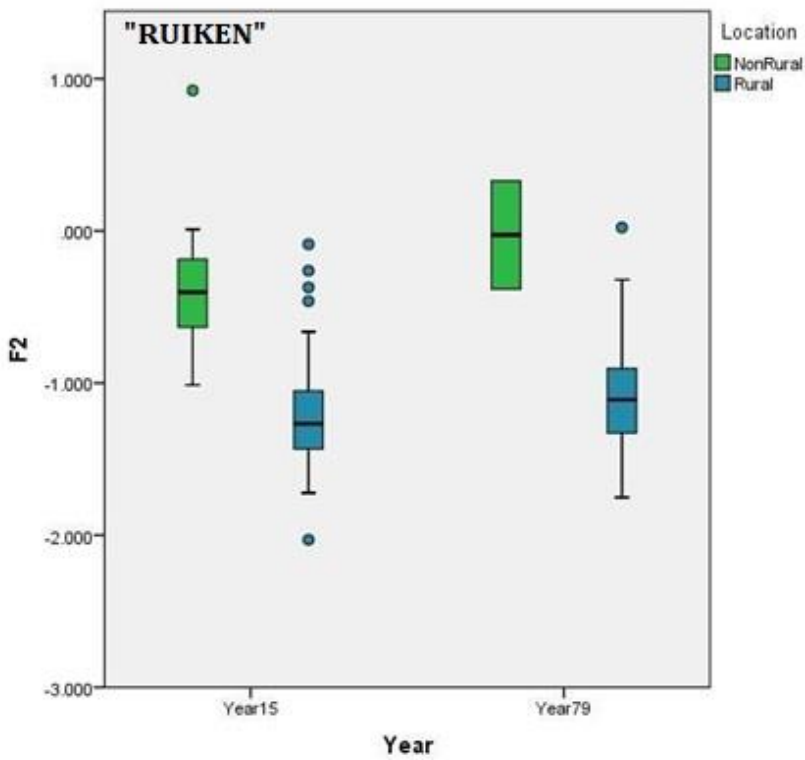


Figure 64: Boxplot comparison of "ruiken" between 2015 (N=58) and 1979 (N=26) speakers

However, the 1979 recordings also revealed a finding not seen in 2015: the realisation of [u] in some words, by some speakers, when the vowel did not follow a rhotic consonant. This was observed in speakers from Ruurlo, Vragender, Winterswijk, and Zwolle, places which can perhaps best be described as being rural, and can be seen represented in the scatter plots for *buiten* and, for comparison, *kruipen* (Figures 65 and 66).

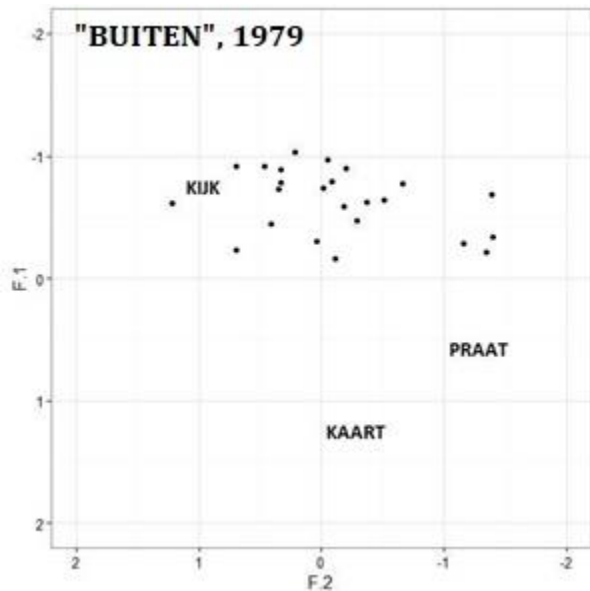


Figure 65: F1/F2: *buiten*, 1979 (scatter plot) (N=25)

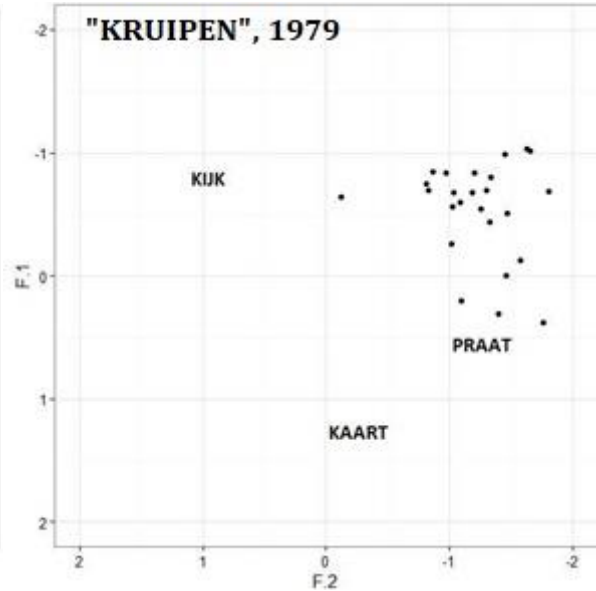


Figure 66: F1/F2: *kruipen*, 1979 (scatter plot) (N=26)

These graphs show considerable differences from their 2015 counterparts, as not only is the vowel in *kruipen* pronounced almost exclusively as a back vowel, but we see a split between front and back realisations in *buiten*. While the majority of speakers recorded in 1979 have fronted the vowel, there are still some back realisations that were recorded in the speakers from Ruurlo, Vragender, Winterswijk and Zwolle. A study by Gerritsen and Jansen (1979) yielded similar results for this time period; they also found that both [u] and [y] were used. This could indicate a very final stage in the transition from back to front vowel, where the remnant vowel was still occasionally observed in positions it no longer occupies today.

In Figure 67, we can compare the results for the word (not the entire lexical set) *huis* between 1979 and 2015. In 2015, we can observe the emergence of the diphthong [œy] represented in the onset position in the small concentration of speakers at the bottom of the figure. But what is perhaps more surprising is that although the 2015 speakers' monophthong occupies a large space, it is still a central-fronted realisation mostly concentrated around what could be perceived as the phonetic values of [y], with no back pronunciations (and, in addition, these graphs represent only onset position of the vowel), whilst the 1979 speakers vary between

back and central pronunciations. The results for the 1979 speakers show that they are mostly not using the back pronunciation, but it still exists for a small number of speakers, whereas by 2015 this realisation has been completely levelled out. The scatter plot highlights the number of speakers using each variant, with the 2015 speakers represented in red, and the 1979 speakers represented in blue. As the plot shows, in 1979 there was still some usage of the back vowel in conditions other than following /r/. However, we can see that in 2015 the back pronunciation of the monophthong are no longer being used. Additionally, we also see the introduction of the Standard Dutch diphthong, with the onset position of this vowel shown in the bottom corner on the plot between the average values of the PRAAT and KAART vowels. This feature was not in use in 1979, and so its appearance in 2015 represents an important change, and possible influence of standardisation. Nevertheless, the front monophthongal [y] is the preferred variant of dialect speakers.

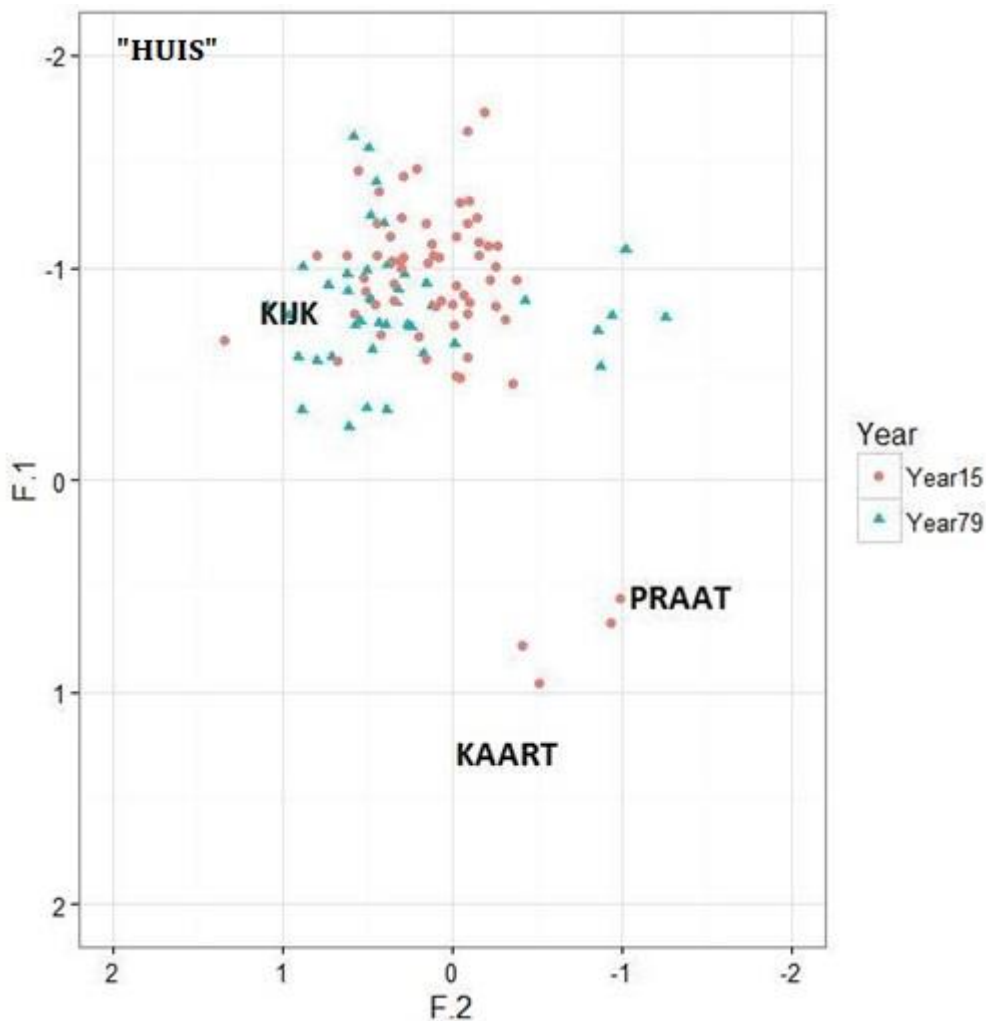


Figure 67: F1/F2: huis, 1979/2015 (scatter plot) (N=105).

Scatter plots such as those above can also be used to further visualise the differences observed between 1979 and 2015 when rhotics are involved. Figure 68 is the plot for *kruipen*, which shows the distribution of speakers using each variant. Again, 2015 speakers are represented in red, and 1979 speakers in blue. In 1979, there was only one recorded realisation of [y] (which is evident amongst the cluster of red 2015 points in the centre of the plot), whereas in 2015 this is more evenly split, and looks less discrete. The back vowel was still narrowly preferred (mostly by rural speakers), but there were also many instances of [y] being used, mostly by non-rural speakers. In addition, we have one diphthongised pronunciation, from our Bredevoort speaker (M33Bredevoort) during the picture task, which is represented in onset position by the bottom red point. It is close to the other points, but is the only diphthongal vowel recorded for this word. There was also more variation in vowel height amongst the 1979 speakers.

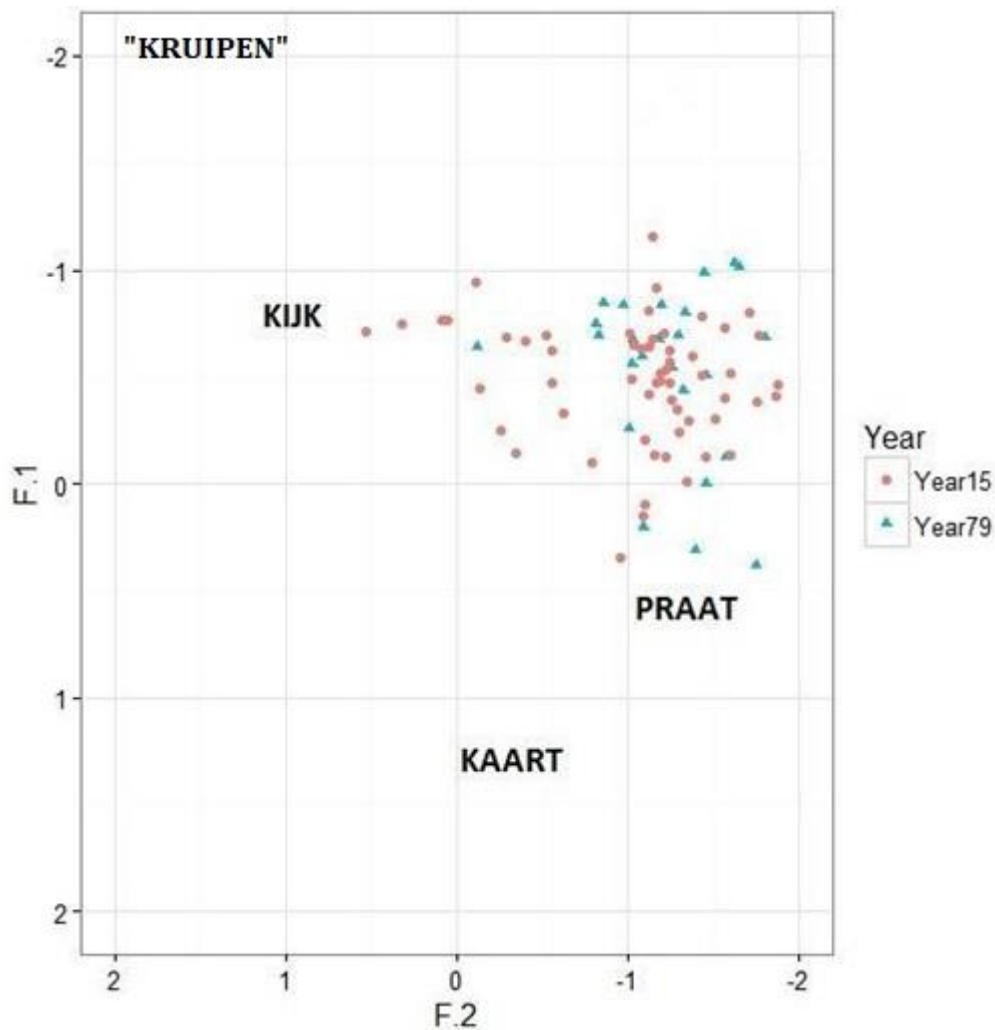


Figure 68: F1/F2: *kruipen*, 1979/2015 (scatter plot) (N=87).

Comparing this with *ruiken*, the other word which tended to show a split between front and back vowel usage, we again see greater use of the back vowel in 1979. Again, there is one standard diphthongal pronunciation, once more from M33Bredevoort during the picture task, the vowel being represented on the scatter plot in its onset position. There were comparatively more instances of the fronted pronunciation amongst both groups of speakers for *ruiken* than there were for *kruipen*; perhaps it is the consonant cluster in *kruipen* that has a greater effect than /r/ in isolation. The role of /r/ will be discussed in Section 6.2.2.

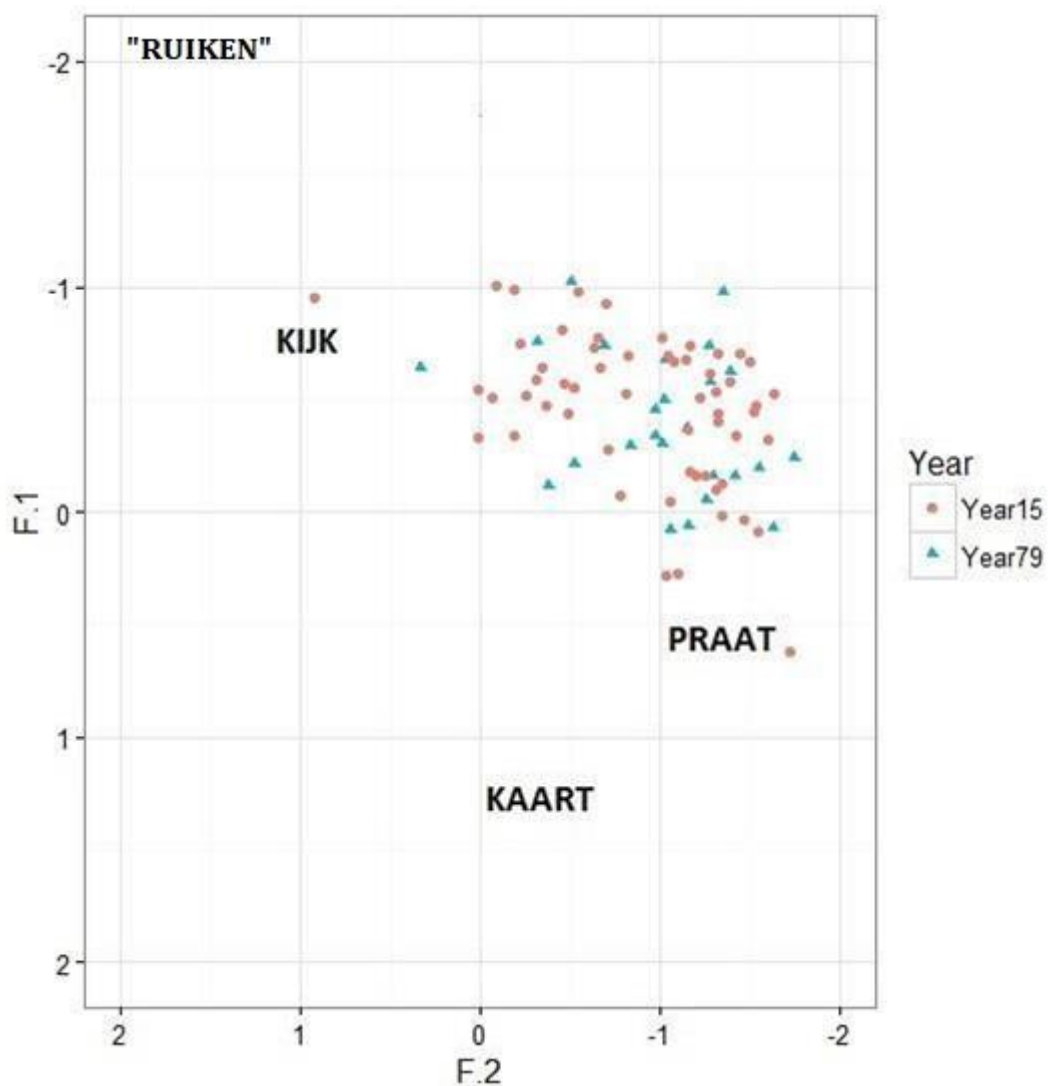


Figure 69: F1/F2: *ruiken*, 1979/2015 (scatter plot) (N=84).

Statistically, the differences in the HUIS vowel between 1979 and 2015 are shown to be significant through an independent samples t-test. As shown in Table 16, normalised onset F2 recorded a p-value of .000 and normalised offset F2 recorded a p-value of .006, showing significance at the level of 1%. Any difference in F1 was not statistically significant, but this

is expected due to the similar vowel heights of [y] and [u] (the examples of the standard diphthong were rare enough in their occurrences that they did not appear to affect the significance rating). These results show an increased usage of the front monophthong, and the decline of the realisation of the back vowel in environments other than those following /r/. However, the analysis of these results also needs to be considered in conjunction with the increase in non-rural speakers in the 2015 corpus.

Vowel	Formant	Year	Mean	Significance
HUIS	F1 onset	1979	-.72867	p = .567
		2015	-.70337	
	F2 onset	1979	-.12825	p = .000
		2015	-.36917	
	F1 offset	1979	-.80838	p = .632
		2015	-.78774	
	F2 offset	1979	-.11636	p = .006
		2015	-.31512	

Table 16: Independent samples t-test showing 2-tailed significance for the variation in the HUIS vowel in 1979 (N=192) and 2015 (N=352) speakers.

### 6.2.1. An Age-Related Change?

As the use of the front vowel increased over time, with the back vowel largely confined to occurrences after /r/, we can determine if there appears to be age-related variation concerning which vowel is used by the modern speakers. The vowel in *huis* and *buiten* (as well as *kruipen* and *ruiken*) was realised occasionally as a back vowel by the modern speakers, but this was still a noticeable reduction from the number of occurrences observed in the 1979 speakers.

Figure 70 and 71 show normalised F2 onset values for the words *huis* and *kuikens* respectively. No realisations of the diphthong were included, only monophthongs. F2 onset has been measured throughout this research in order to accurately compare with the

diphthong onset; although no diphthongs are measured in this section, F2 is still measured at onset, rather than at 50%, for the purposes of consistency. Looking at *huis*, there appears to be a weak correlation between age and the backness of the vowel, with the speakers over 70 displaying generally higher F2 values than younger speakers (although there were also some speakers aged in middle age range who also had high F2 values). This is perhaps the opposite of what would be expected. As a 2015 group, these speakers display higher F2 values than those in 1979 (as evidenced in Figure 67), yet it is the older speakers who display higher F2 values than the younger speakers in the 2015 group. However, for *kuikens* (Figure 71), we see the opposite, where the older speakers have a slightly lower F2 overall than the younger speakers. This is not suggestive that younger speakers are using a different monophthong than older speakers, but that their overall [y] measurements are lower.

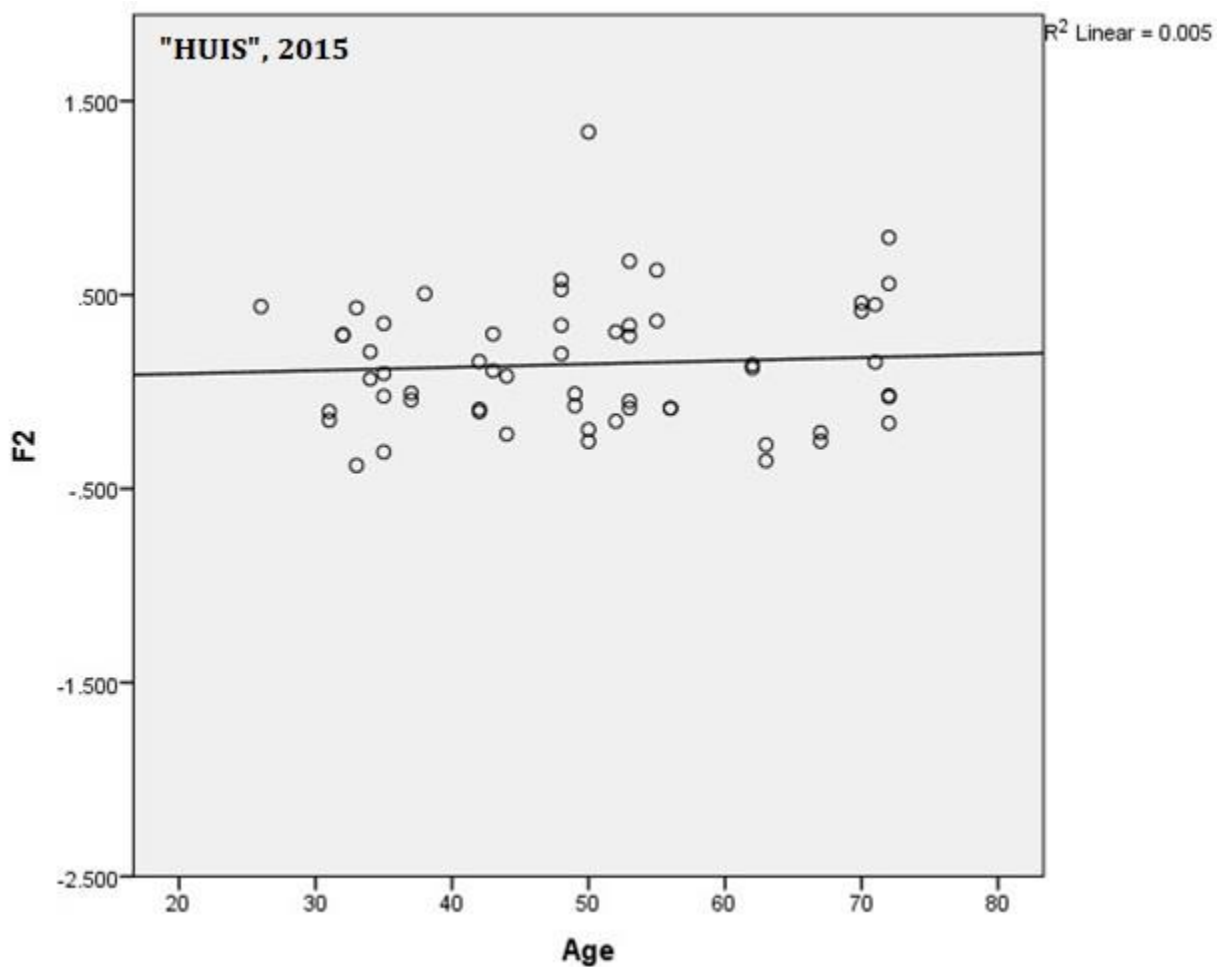


Figure 70: 2015 "huis" (word). Onset F2 x Age. Note results are for the single word "huis", rather than the entire lexical set (N=62).



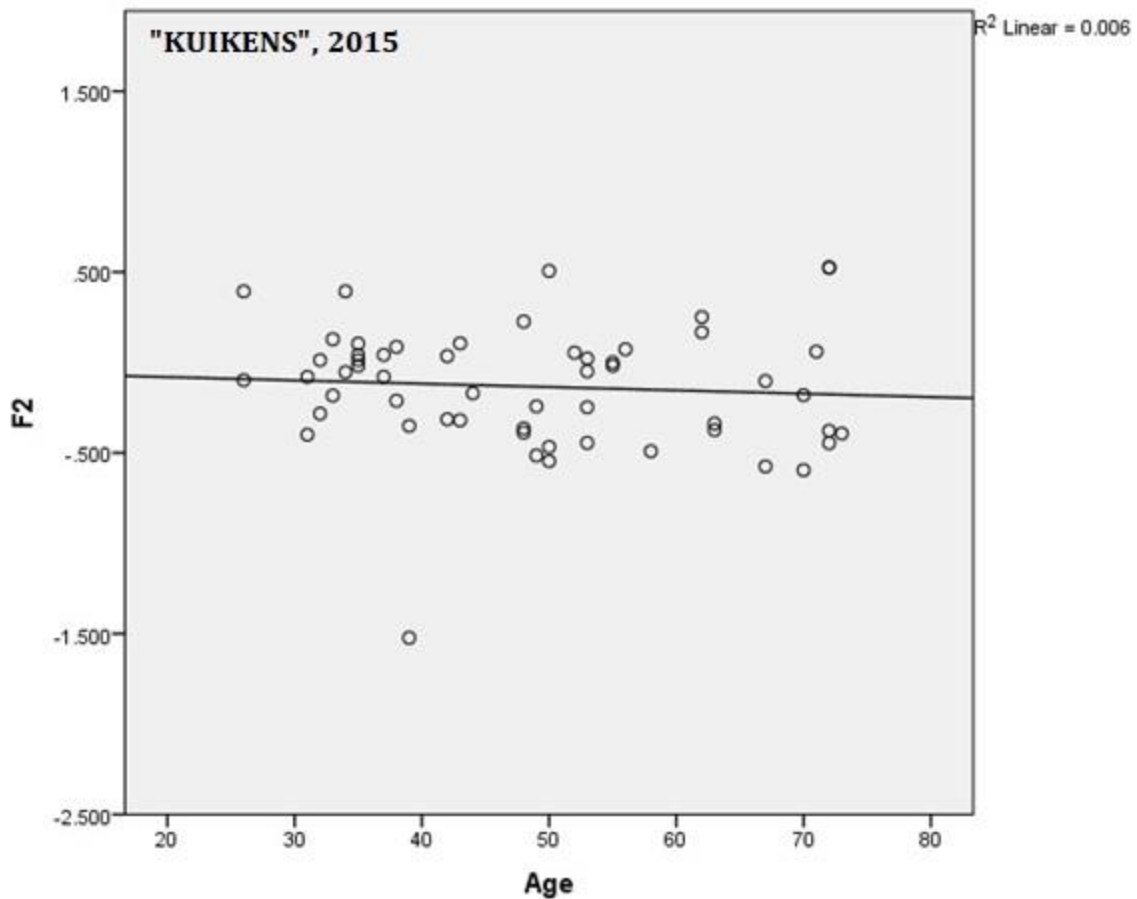


Figure 71: 2015 "kuikens" (word). Onset F2 x Age (N=59).

Furthermore, we can compare the situation where the HUIS vowel appears following /t/. Figure 72 shows the results for *kruipen* by age and onset F2 value. Lower F2 values are observed overall, but the plot displays a mix of higher and lower F2 values within differing age groups. However, there does appear to be a tenuous link between age and pronunciation.

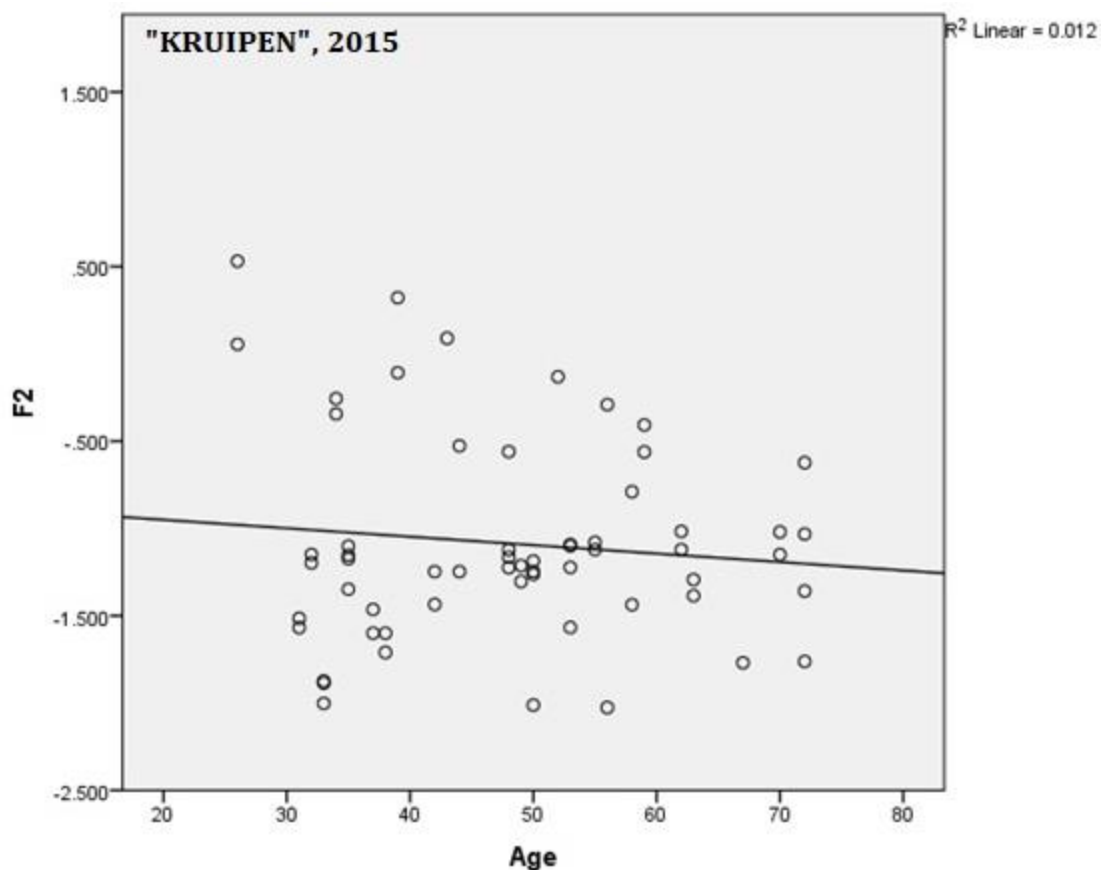


Figure 72: 2015 "kruipen". Onset F2 x Age (N=61).

As Figure 72 shows, we observe a more obvious correlation linking older speakers with lower F2 values. However, it is not as strong as it could be in order to definitively answer whether the position of the HUIS vowel following /r/ is related to the age of speakers. It appears that the older speakers are indeed retaining the back variant more than the younger speakers. Regarding the vowels that do not have a preceding /r/, such as *kuikens* and *huis*, it is probable that the change was largely completed during earlier generations. Figure 73, showing *ruiken*, provides further evidence for a change still undergoing progress in those vowels following /r/. Overall, in addition of there being a likelihood of a rural vs non-rural split, as suggested in Section 6.1, age also appears to play a part in the realisation of the vowel following /r/.

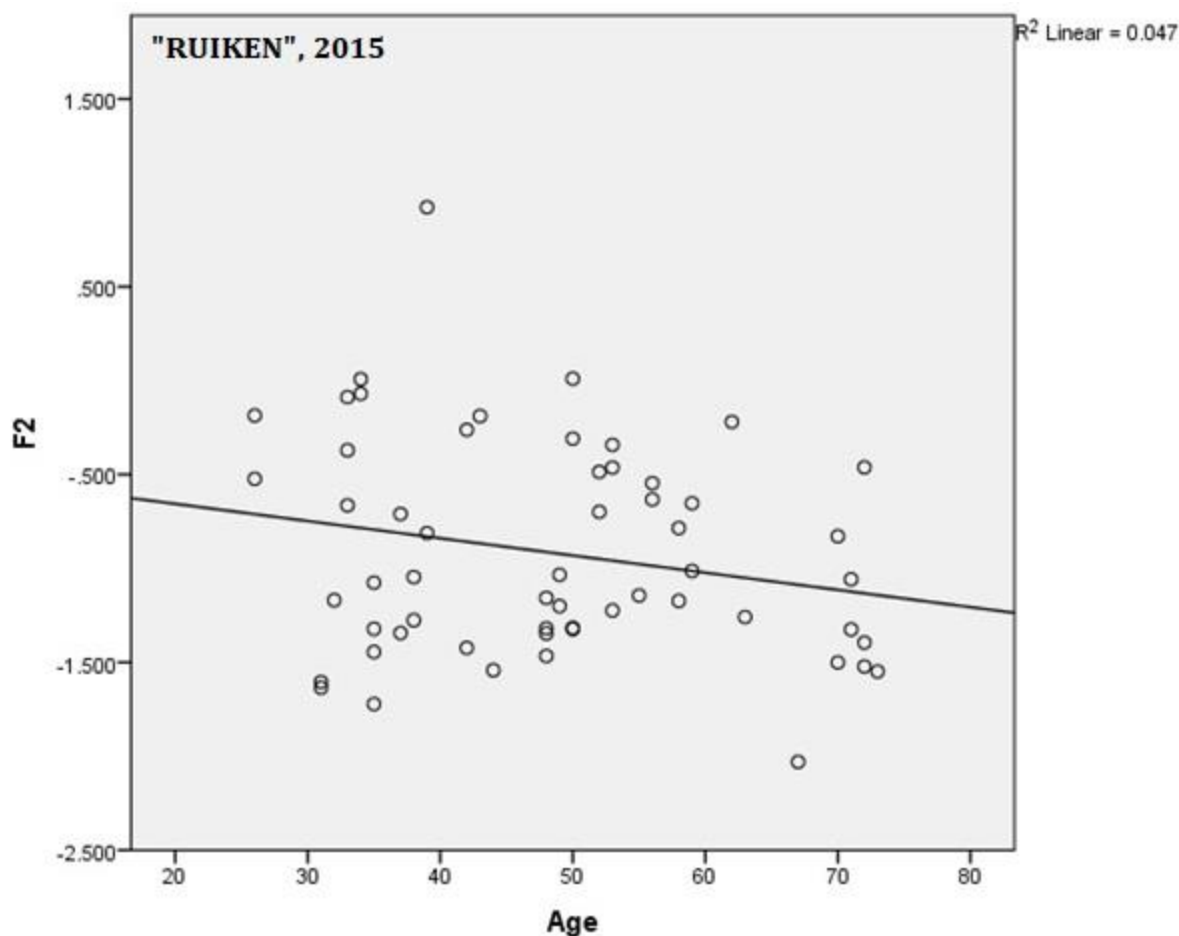


Figure 73: 2015 "ruiken". Onset F2 x Age (N=58).

### 6.2.2. The Role of /r/

As the differing vowels appear to be affected by the rhotic consonant within rural and non-rural speakers, it is important to consider whether the place and manner of articulation of /r/ used by participants is likely to have any effect on the eventual production of the monophthongal HUIS vowel. While most of the literature cited in Section 2.4 focuses on the frequent variation of /r/ post-vocally, here we are considering /r/ in onset position (pre-vocalic and in a word-initial consonant cluster), which is found to typically have four different realisations: the alveolar tap [ɾ], the alveolar trill [r], the uvular trill [ʀ], and the uvular fricative [ʁ] (Strycharczuk and Sebregts, 2014).

Due to the differing findings expressed in the literature over the frequency of occurrence of taps and trills, it is necessary to outline the process which was undertaken in order to differentiate between the two. This involved a combination of making an auditory judgment combined with an analysis of the spectrogram in Praat. Trills typically display a number of

breaks, representing periods of silence, in the spectrogram, whereas taps display only one, so by examining the spectrogram this ensured the correct classification of the manner of articulation. This assisted in cases especially where the articulation was a very weak trill. Acoustic analysis in Praat also assisted in classifying the difference between alveolar and uvular trills, where uvular trills typically display a higher third formant (Sebregts, 2015).

In order to consider the possible effect of /r/ on the following consonant, all tokens of *kruipen* and *ruiken* from the sentence list were considered. These were chosen as the overwhelming majority of participants produced both of these words whilst completing the sentence reading task, whereas they were not always realised during the picture task. Overall, 45 tokens of the back vowel [u] and 19 tokens of the front vowel [y] were recorded in 2015 as part of this task. The graph below shows the spread of different /r/ usage, converted into percentage values against the number of instances of [u] and [y] separately.

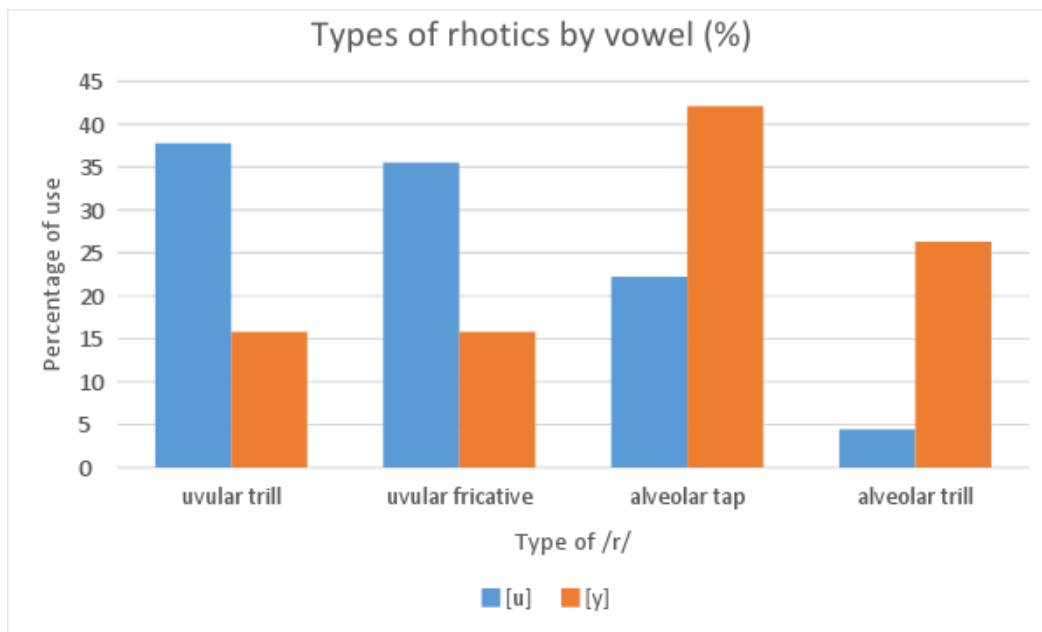


Figure 74: Types of rhotics and vowels (2015) (N=120).

Sebregts (2015) found that many speakers of Nijmegen Dutch (the variety which is, from his study, geographically closest to the area studied as part of this research) use the uvular approximant or fricative (here listed as a fricative) in onset position. This is also reflected in the results here, where the uvular fricative was one of the most used variants, and particularly in conjunction with the back vowel [u], less so with [y]. However, while Sebregts found that younger speakers and females were more likely to use this variant, the data from the analysis of /r/ preceding *kruipen* and *ruiken* show that there is a rather even spread across younger and

older speakers, and the variant was favoured by males, rather than females. There was only one token for the use of the uvular fricative in females present. This could, of course, be due to the fact that this study covers a different area of the Netherlands, and focuses only on /r/ in onset, or onset-cluster, positions before certain vowels; nonetheless, the uvular fricative remained one of the most used variants overall, alongside the uvular trill.

It is important that, if alveolar realisations have traditionally been seen to be more “correct”, in a prescriptive sense, the dialectal variants tend to differ from this. The greater use of taps over trills is also not a surprising result, as despite the Dutch /r/ commonly being described as an alveolar trill, as also introduced in Chapter 2.4, in many cases what is produced may instead be considered a tap (Collins and Mees, 2003; Gussenhoven, 1999). This was disputed by Verstraeten and Van de Velde (2001), however the combination of auditory and acoustic analysis undertaken during the /r/-analysis of this study confirmed a greater use of taps in this area of the Netherlands, for at least the onset position.

Moving to consider whether /r/ has an effect on the following vowel, it appears that there is a weak pattern present. The data appear to show that there is a correlation between the consonant’s place of articulation and whether a front or back vowel is produced. We can see from Figure 74 that uvular articulations are most common when preceding the back vowel, although whether they are produced as a trill or a fricative appears less important. These articulations did occur in front vowel users as well, although occurrences were markedly less common. Alveolar taps and trills correlated with the use of the front vowel, with taps being more common than trills. Additionally, there was minimal usage of these types of /r/ when preceding the back vowel.

Although the uvular fricative was often observed in onset position in the word *ruiken*, we observe it most often in the word initial cluster *kruipen*. Van Reenen’s (1994) observation of /kr/ clusters additionally found that /r/ is more likely to be produced using the uvular articulation, regardless of whether the manner of articulation is a trill or a fricative. The majority of realisations for *kruipen* were indeed uvular realisations (with both fricatives and trills present), and so the results as seen in Figure 74 are in line with the previous research.

Following on from the analysis of the 2015 speakers’ read speech, we can now compare /r/-usage with those from 1979. Here, more uvular realisations are observed, and occasional alveolar usage does not always correlate with the use of the front vowel, where uvular

realisations are also found. This may or may not be significant, due to the fact that both uvular and back vowel pronunciations are more widely used in this group of participants. However, there is perhaps not enough data showing either alveolar or front vowel pronunciations to be able to establish whether there is a positive correlation between the two. Analysing read speech examples of both *kruipen* and *ruiken*, as with the 2015 speakers, the data showed only 6 instances of [y], and 44 instances of [u]. The graph in Figure 75 shows /r/ usage amongst this group of speakers, again converted into percentage values against the number of instances of [u] and [y] separately.

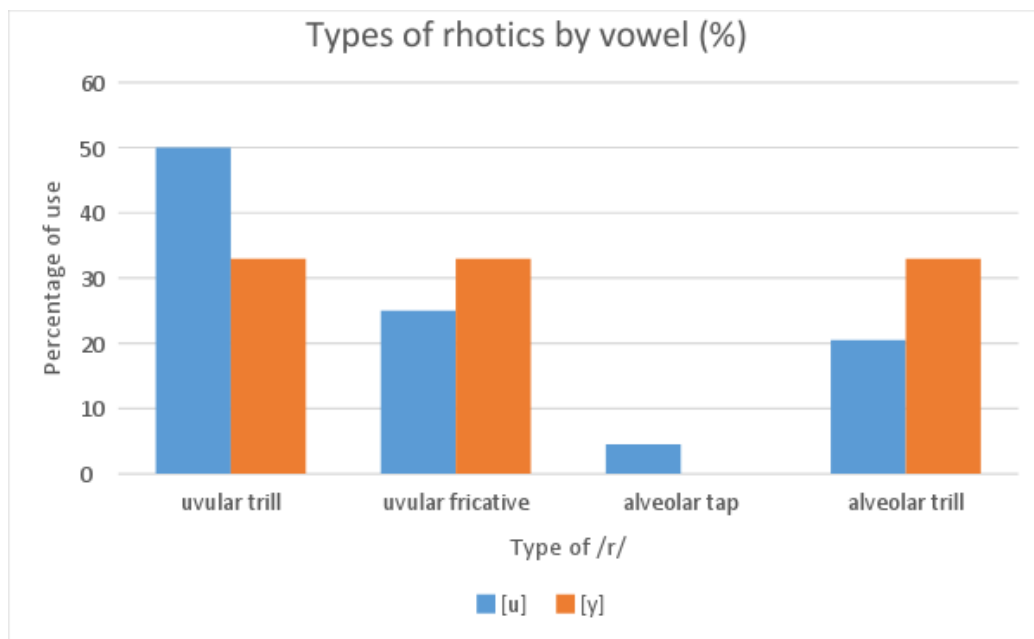


Figure 75: Types of rhotics and vowels (1979) (N=50).

As is the case with the 2015 speakers, the uvular trill is the most widely used variant, particularly when preceding [u]. Use of the uvular fricative was also common, although it would appear that this realisation has increased in frequency in recent years. We again see that uvular articulations tend to precede [u] more frequently than do alveolar pronunciations, and the number of uvular trills, uvular fricatives, and alveolar trills are evenly split when preceding [y]. The lack of taps present in the data is also surprising, given that taps were the preferred variant to occur alongside [y] in 2015. However, the number of instances of [y] occurring within the data is too small for this to be statistically significant.

The findings do appear to confirm the more overwhelming presence of uvular realisations in this area of the Netherlands, particularly when they occur as a trill. Alveolar realisations, especially taps, have increased during the time between the recordings of the two groups of

speakers. Overall, it appears that uvular realisations are more common preceding [u], and alveolar realisations are more common preceding [y]. It may be important that both alveolar realisations and the pronunciation of the HUIS vowel as [y] have increased, suggesting a connection between the type of /r/ and the following vowel.

The manner of articulation appeared less important, and a correlation between manner of articulation and vowel position was not found. This does, however, to some extent contradict the conclusions of Van Reenen (1994), who found that there was no correlation between the place of articulation of /r/ and the vowel following it. Lack of data for both alveolar and front vowel pronunciations in the speech of the 1979 speakers made it not possible to determine if there was a link between the type of rhotic and the type of vowel for that particular group; however, the wider usage of both uvular and back vowel pronunciations could be perceived to correlate with the results obtained from the 2015 speakers.

We can say therefore that /r/ may play a role in the articulation of the vowel, but whether this is due to a phonetic reason, or is sociolinguistic in nature, is another question. The literature in Section 2.4 detailed the fact that alveolar pronunciations have traditionally been viewed as more “correct” than uvular, and here we have the uvular pronunciation occurring alongside the more traditional back vowel [u], rather than the newer fronted variant [y]. This could be suggestive of a dialectal relationship. We can also consider the situation on the other side of the border with Germany, where uvular pronunciations are more common (Wiese, 2001).

There is some evidence to suggest that the phonetic properties of /r/ are directly linked to either keeping the vowel in a retracted position, or allowing it to front as is the case in other phonological conditions. While any suggestion that the uvular articulations are directly linked (at least phonetically) to the retraction of the vowel has to be considered alongside the evidence that does not support such a relationship (Van Reenen, 1994), the results show that the place of articulation does indeed seem to be a factor in the relationship between the HUIS vowel and the preceding /r/. It is evident from the data that /r/ in general is triggering the retention of the back vowel in some speakers, but there is also evidence to suggest that the manner and/or place of articulation is important. We can observe an obvious correlation between uvular /r/ and the back vowel [u], but more future research focussing on /r/ and its relationship with any following HUIS vowels could further confirm this apparent connection.

One other aspect that can be considered in this section refers to the norms of /r/ pronunciation in this area of the Netherlands, when concerning onset and onset-cluster positions. Change in this was observed from 1979 to 2015. Uvular pronunciations appeared to be predominant in the speech of the 1979 speakers; these were still notably observed in 2015, however there was also more use of alveolar pronunciations, particularly taps. This fact perhaps lends support to a theory proposed by Van Reenen (1994), that uvular /r/ entered the Netherlands from Germany. This, at first, appears contradictory to another belief that uvular /r/ spread by contact under French influence (Chambers and Trudgill, 1998, p.170), but the two theories can work simultaneously, as it is possible that the uvular /r/ entering the Netherlands from Germany was originally in the German language due to French contact. Additionally, Van Reenen's belief is that a French uvular /r/ was confined to the Hague area. However, the theory of French influence has been rejected by scholars such as Runge (1974), who proposes that uvular /r/ is indeed of German origin, and that researchers who suggested otherwise "failed to recognise the wide distribution of [ʀ] or other uvular/velar realisations of /r/ among the many dialects of German" (p.19).

### **6.3. The Case of KAART, PRAAT, KAAS and PAARD**

Included in the data from both 1979 and 2015 are differing realisations of the vowel that would be pronounced as [a:] in Standard Dutch when considering the keywords (see Section 2.3.2). Here, as in the pilot study, I will refer to them using the keywords I developed in order to differentiate between the Dutch and Achterhoeks systems. These are the KAART, PRAAT, KAAS and PAARD vowels, which each correspond to a different vowel realisation in Achterhoeks, even though in Standard Dutch, all of these words are pronounced using the lengthened [a:]. As outlined earlier in both the Background and Pilot Study chapters, the phonological systems are separate, and so while Standard Dutch has the same [a:] vowel for each of these sets, the Achterhoeks variants are typically realised in one of four ways (see also Section 2.3.2):

-PRAAT: as the back vowel [ɔ:] which is arguably the most common realisation

-KAART: as [a:], usually in loanwords such as *kaart*

-KAAS: as a front vowel [i] or [e:], including (but not limited to) third person singular verb forms such as *gaat*



-PAARD: as the diphthong [iə] before /r/

as in the pilot study, These vowels are, analysed together due to the fact that in Standard Dutch these words all use the same vowel, and the results of this study show that there is often variation between realisations which show a blurring of the vowel boundaries (particularly between the KAART and PRAAT vowels). This may be due to interference or a standardisation process. Overall, in 1979 there were more F1/F2 value concentrations around both the front and back vowels than in 2015, and a number of the front KAAS vowels have begun to lower and retract. Conversely, a number of the back PRAAT vowels are fronting. There are limited occurrences of umlaut in *paaltje*, fronted from the dialectal pronunciation of the back vowel. This observation is more common in 1979 than 2015, where there was umlaut, back, and standard pronunciations observed (see Section 6.3.2). There is also less consistency seen in the F1/F2 values overall, with a slightly larger proportion of the vowel space being occupied in 2015.

An independent sample t-test was run to determine if there was significance between the onset and offset F1 and F2 values between 1979 and 2015.

Significant change is observed within the KAAS and PAARD lexical sets. For the PAARD set, this change is observed in onset F1 and F2 values, suggesting a notable move towards the monophthong, rather than the dialectal diphthong. Predictably, the null hypothesis is retained for the KAART vowel, as there is no significant difference between dialect and standard realisations. Change is observed in the PRAAT vowel, but not as noticeably as in the KAAS and PAARD lexical sets.

### **6.3.1. The KAAS and PAARD Vowels**

Instead of looking at the vowels separately, we can isolate a number of words that have shown particular variation in the realisation of the vowel over the years, indicating a shift in perception of the dialectal variant: those words that have been seen to include either KAAS or PAARD vowels, which are typically more fronted in Achterhoeks than KAART and PRAAT. Three of these words are analysed in more detail below.

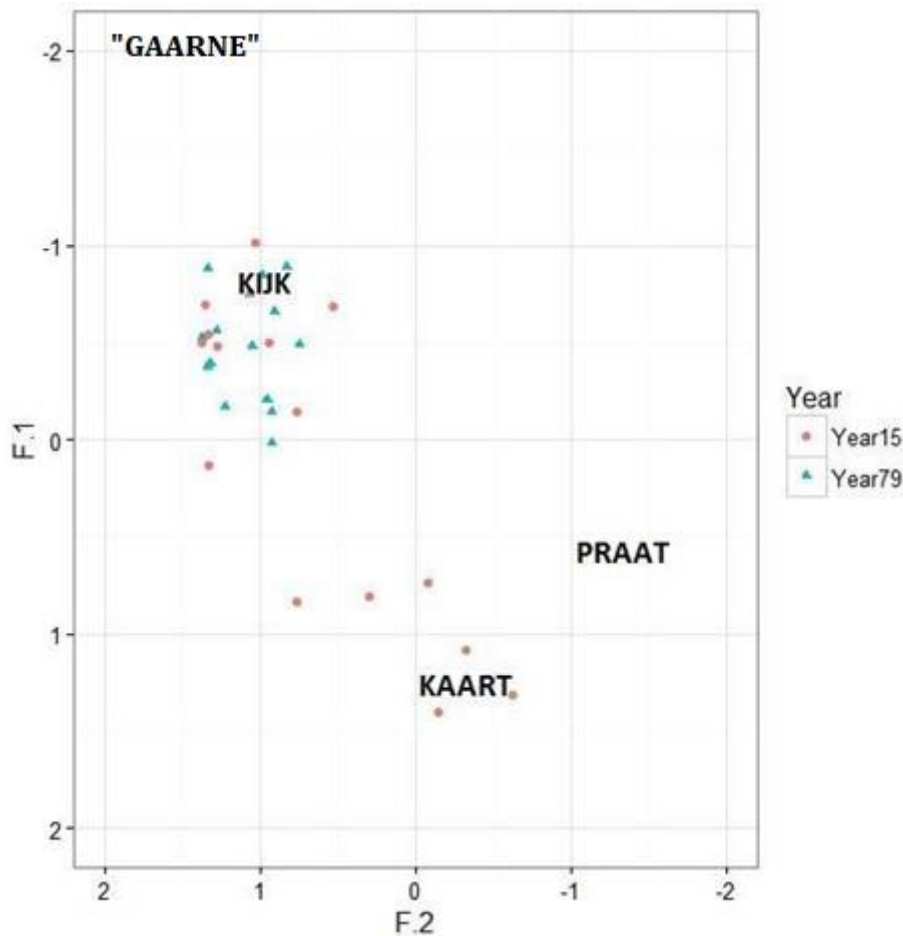


Figure 76: F1/F2: gaarne, 1979/2015 (scatter plot) (N=33).

First we can consider the change observed in *gaarne* (of the PAARD lexical set) from 1979 to 2015. The scatter plot in Figure 76 shows the vowel's onset position across all speakers, with 2015 speakers represented in pink, and 1979 speakers in blue. There is markedly more variation observed in 2015, with a split of speakers using the diphthong, which is represented as a front vowel in onset position, and the Standard Dutch monophthong. However, in 1979, the scatter plot shows only the onset position for the diphthong, with no use of the Standard Dutch vowel /a:/. Although there is still slightly more usage of the more traditional dialectal variant in 2015, the incipient use of the monophthong /a:/ represents a shift to Standard usage over the years between recordings, and much more variation within F1/F2 values is observed in the plot, suggesting a lack of uniformity over the perceived dialectal vowel. The plot shows that there is still, in 2015, a bimodal distribution, but also some blurring of vowel boundaries.

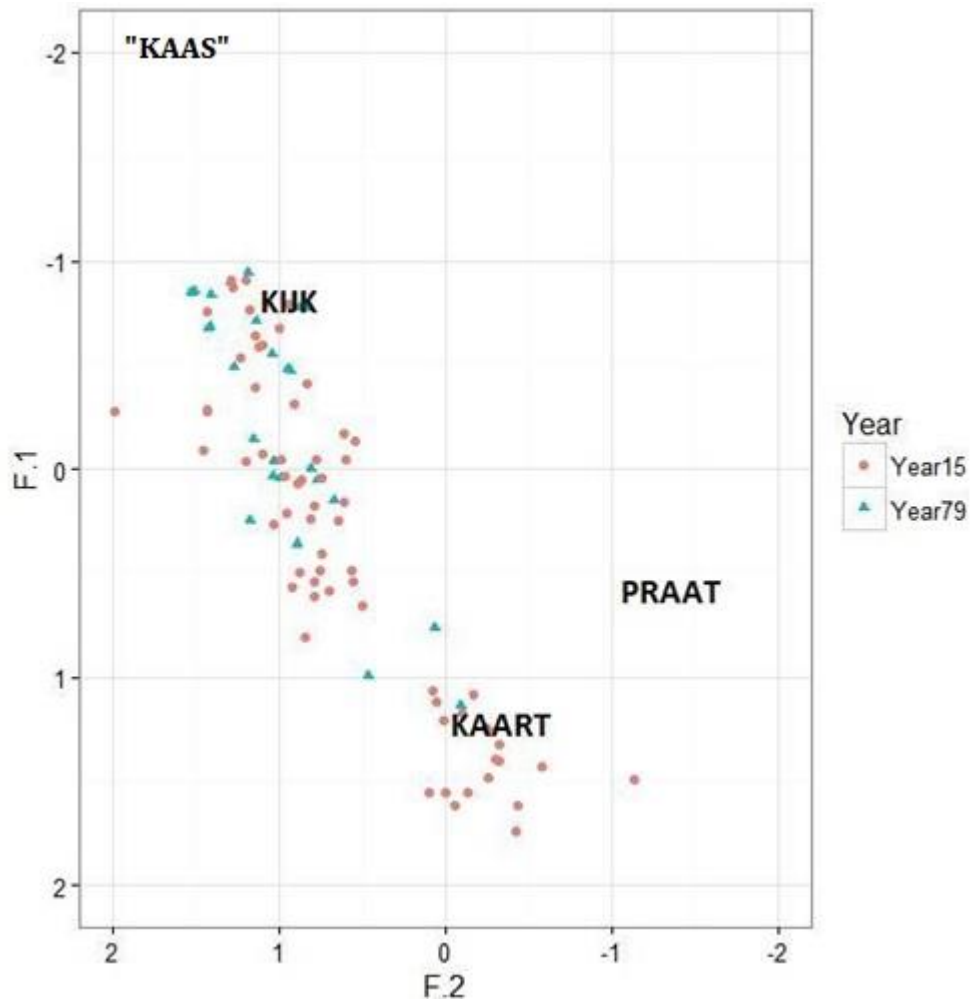


Figure 77: kaas, 1979/2015 (scatter plot) (N=92).

The vowel in *kaas* (of the KAAS lexical set) shows some use of a closer representation of the standard vowel in 1979, and this has increased in 2015. Despite this increase, there is a near even usage of the front close vowel, front mid vowel and standard vowel. Similarly to *gaarne*, greater variation in F1/F2 values is observed, and the vowel /a:/ is generally realised as more open than in 1979. The greatest concentration of front vowel usage is slightly more open among the 2015 speakers, and, while still a bimodal distribution, perhaps represents a gradual lowering of the vowel even amongst those speakers that tend to use the fronted, dialectal variant.

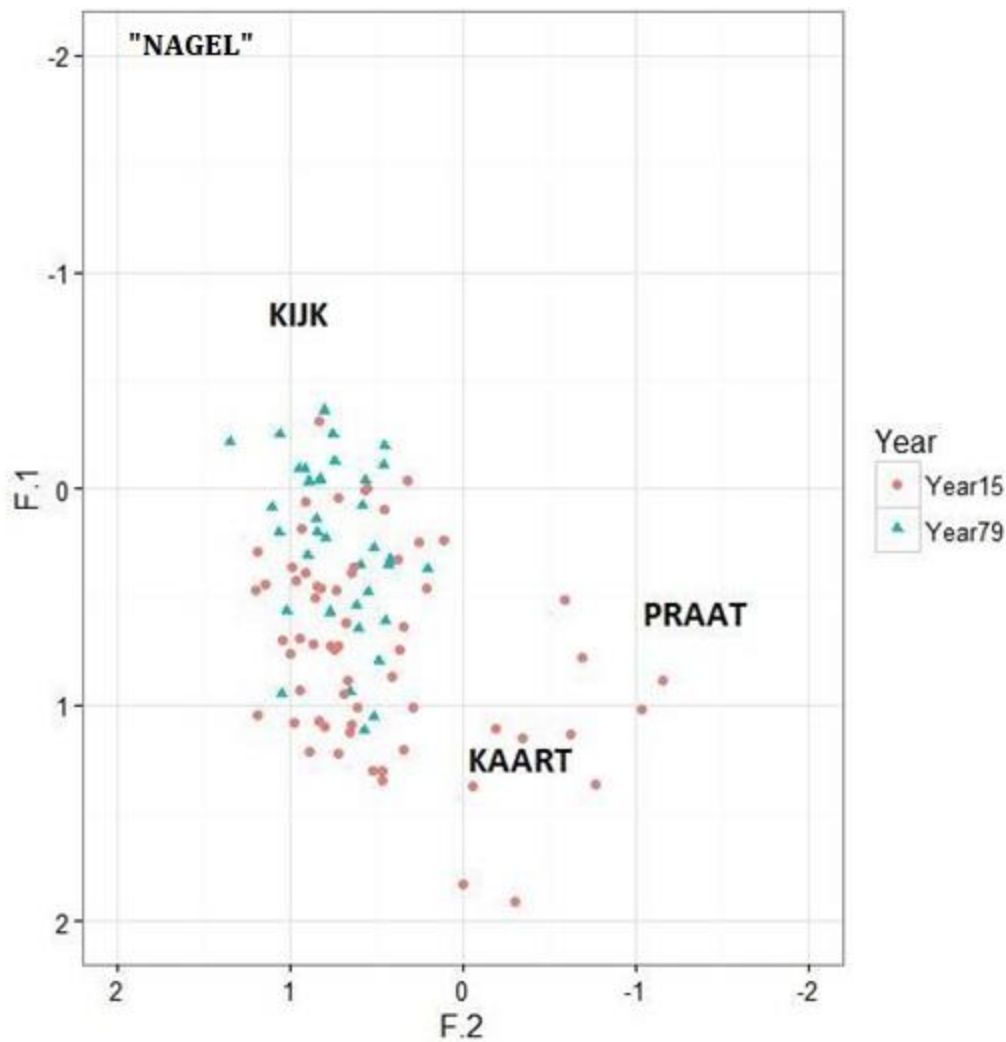


Figure 78: F1/F2: *nagel*, 1979/2015 (scatter plot) (N=104).

Speakers still favour the front vowel in *nagel* (of the KAAS lexical set), yet there is some lowering and retraction and a tendency towards a standard-like realisation. While the 1979 speakers were split only on [i] or [e] pronunciations, speakers from 2015 are beginning to realise the vowel with Standard Dutch pronunciation. The vowel in *nagel* is lower than that in *kaas*, and there is more blurring of boundaries. But additionally, as with *gaarne* and *kaas*, there is less uniformity in F1/F2 values, which suggests the absence of a set norm within the speakers. Figure 78 shows the increase of the Standard Dutch vowel [a:] in 2015, as well as the lowering of the fronted variant, which then suggests that the more traditional fronted vowel is beginning to converge on the Standard Dutch variant.

Statistically, the changes in both of these vowels between 1979 and 2015 can be deemed to be significant. Table 17 shows the results of an independent samples t-test, showing the normalised means for each formant in mean and offset position, and the p-value to determine

significance. For the KAAS vowel, there is a significant change towards the standard vowel, with onset F1, offset F1 and offset F2 all recording p-values at below the 1% level. For the PAARD vowel, changes in the onset F1 and F2 are significant, suggesting a move away from the use of the diphthong in 2015.

Vowel	Formant	Year	Mean	Significance	
KAAS	F1 onset	1979	.23435	p = .000	
		2015	.56422		
	F2 onset	1979	.48636	p = .100	
		2015	.36743		
	F1 offset	1979	.41113	p = .000	
		2015	.80915		
	F2 offset	1979	.40443	p = .004	
		2015	.20672		
	PAARD	F1 onset	1979	-.59693	p = .000
			2015	-.32075	
F2 onset		1979	1.09404	p = .011	
		2015	.93471		
F1 offset		1979	.79437	p = .104	
		2015	.97633		
F2 offset		1979	.24867	p = .097	
		2015	.09656		

Table 17: Independent samples t-test showing 2-tailed significance for the variation in the KAAS and PAARD vowels in 1979 (KAAS: N=155; PAARD: N=41) and 2015 (KAAS: N=242; PAARD: N=110) speakers.

The only word from these sets whose vowel does not seem to have changed as dramatically as the others is that of *paard* (although the change in F1 onset indicates some more standard usage), perhaps because it is viewed by speakers as a different lexical item rather than a different vowel, as was suggested earlier (see Table 18). The Achterhoek area is a farming area, and lexical items related to different farming and building terms differ throughout the region (Van Prooijje, 2011; Schaars, 1987). This difference in lexical items is widely accepted throughout the region, and as a term that would fall into this category, it is reasonable to suggest that *paard* – or “*peerd*” – is considered as a dialect word, rather than the vowel being considered a dialect vowel. This finding needs to be considered in line with the fact that the independent samples t-test showed there was a significant difference in the use of the PAARD vowel between 1979 and 2015; this can be attributed to an increase in the use of the standard vowel in *gaarne*, rather than *paard*. Table 18 shows the significance ratings for both *gaarne* and *paard* within the PAARD lexical set, which is necessary to examine due to the differing results of each word contributing to the overall significance of the changes observed within the lexical set in general.

Word	Formant	Year	Mean	Significance	
<i>gaarne</i>	F1 onset	1979	-.4903	p = .009	
		2015	.3263		
	F2 onset	1979	1.0853	p = .011	
		2015	.5642		
	F1 offset	1979	.8234	p = .113	
		2015	1.1278		
	F2 offset	1979	.2457	p = .015	
		2015	-.1297		
	<i>paard</i>	F1 onset	1979	-.6193	p = .032
			2015	-.4355	

	F2 onset	1979	1.0883	p = .100
		2015	.9928	
	F1 offset	1979	.8092	p = .220
		2015	.9590	
	F2 offset	1979	.2327	p = .237
		2015	.1419	

Table 18: Independent samples t-test showing 2-tailed significance for the variation in the words "gaarne" and "paard" in 1979 ("Gaarne": N=15; "Paard": N=26) and 2015 ("Gaarne": N=18; "Paard": N=92) speakers.

The results show that the differences between 1979 and 2015 in the vowel in *gaarne* are more significant than the vowel in *paard*, even in offset. This therefore confirms the aforementioned explanation that significant differences in the lexical set overall can be attributed to *gaarne*, rather than *paard*, which has more or less retained traditional pronunciation. There is, however, some slight statistically significant change in the F1 onset, which shows that the front vowel has lowered over the years, without losing its frontedness. In order to determine the significance of all of the above findings more accurately, more tokens from this set (PAARD) would need to be analysed in a future research project.

### 6.3.2. The PRAAT and KAART Vowels

It was the realisation of the PRAAT vowel as [ɔ:] which appeared to show the most resistance to change. Figure 79, which depicts the results for the third vowel in *allemaal* (everybody) shows that there has been little movement of this vowel in this word over time, though the F1/F2 values appear to be concentrated in a slightly more retracted position in 2015 than 1979. Both years show quite a lot of variation in F1, which suggests instability. However, there was less change overall than was observed in the other vowels.

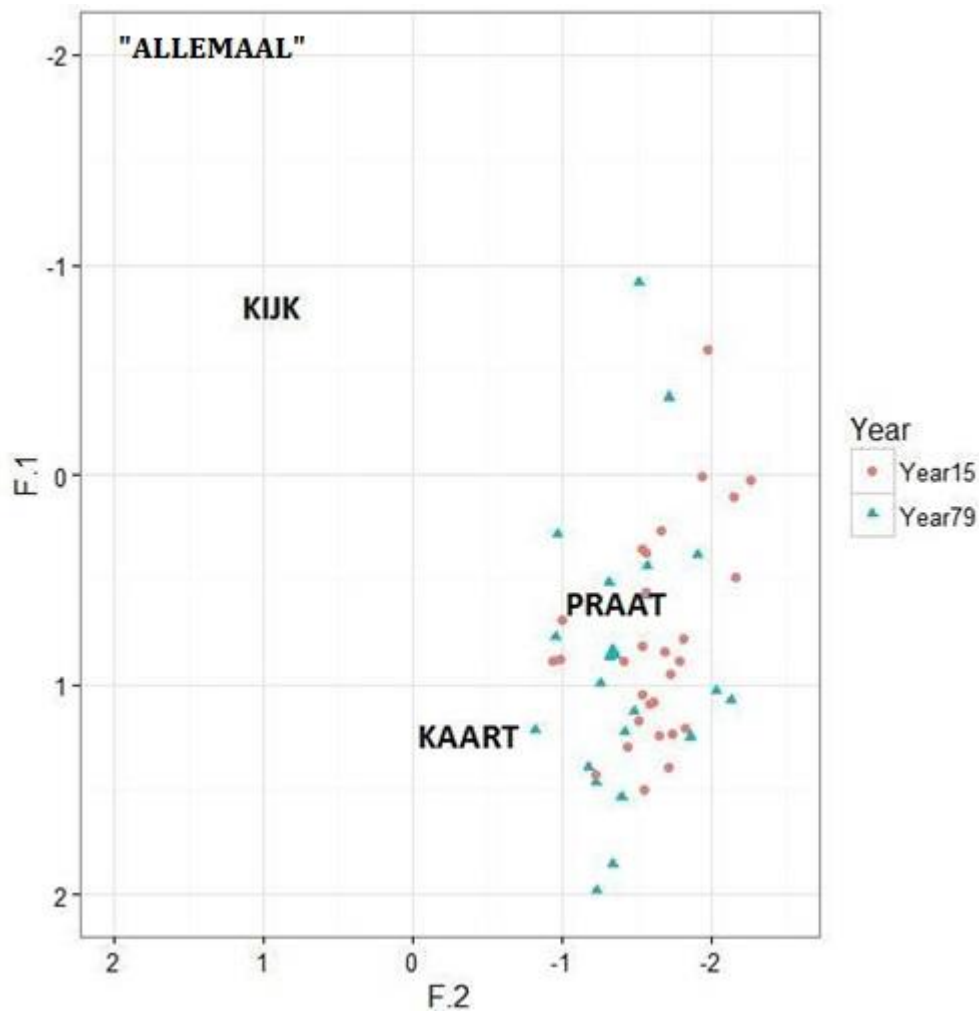


Figure 79: F1/F2: *allemaal* (third vowel), 1979/2015 (scatter plot) (N=54).

This finding can be contrasted with the results for *blaar* (‘blister’) in Figure 80, which shows more usage concentrated around the phonetic values for the Standard Dutch vowel in 2015 than in 1979. In the 1979 recordings, this vowel was realised almost exclusively as a back vowel, but there has been some substitution by 2015. It is interesting that this gives a bimodal distribution which is absent for *allemaal* (even the low versions of *allemaal* sound as if they belong to the PRAAT set, rather than the KAART set). The fact that *blaar* has shown these changes could potentially be indicative of phonetic reasons for the continued resistance to change in the vowel in *allemaal* (Figure 79), which contrasts with the findings here. An observation mentioned during the pilot study suggested that the following /l/ has a retracting effect on the vowel (Botma, Sebregts & Smakman, 2012), which in essence keeps it realised in a further back position: “/l/ exerts a retracting effect on both tense and lax vowels, signalled acoustically by a lower F2” (p.292).



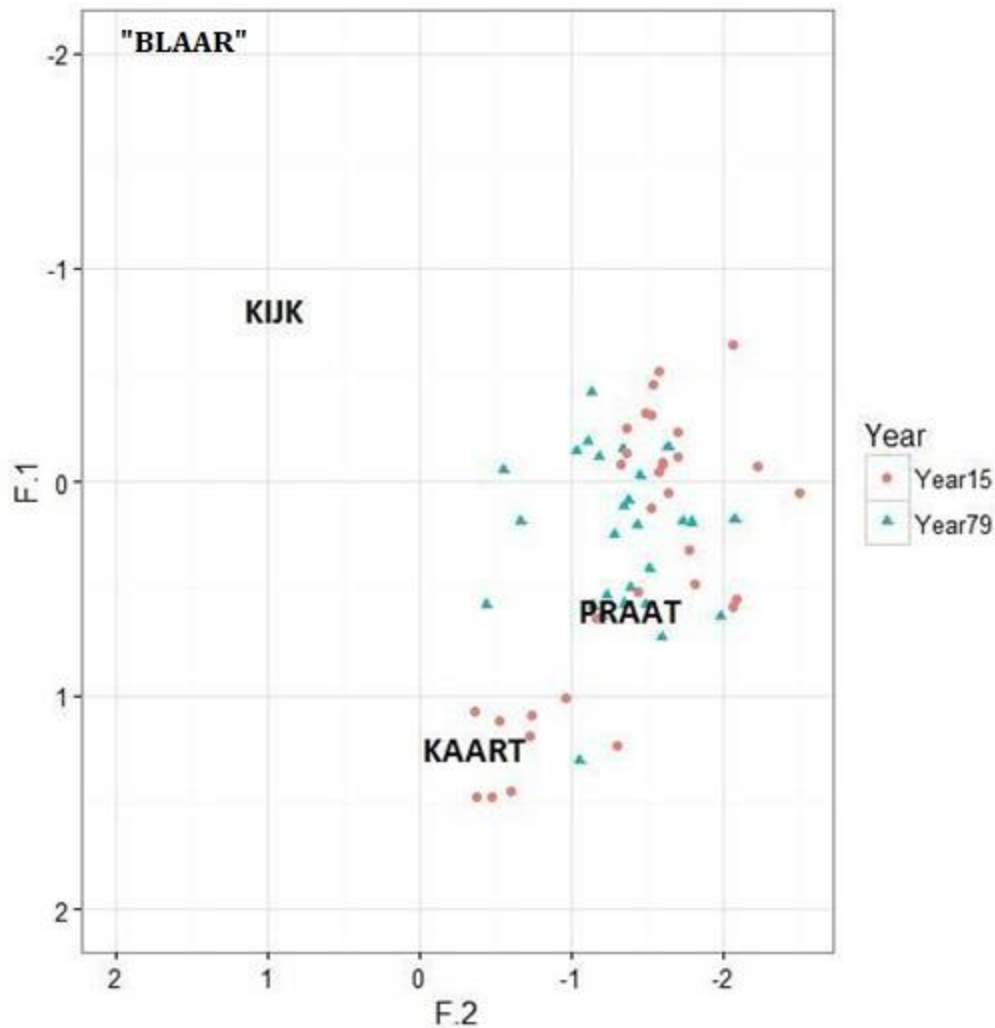


Figure 80: F1/F2: blaar, 1979/2015 (scatter plot) (N=59).

There were a number of words that participants pronounced with the standard vowel [a:], in both the 1979 and 2015 recordings; these words commonly correspond to the KAART lexical set. Regarding the word *kaart* in particular, one participant in 2015 did pronounce the vowel using the front diphthongal variant commonly seen in *gaarne* and *paard*; I would attribute this to a hypercorrection based on how this vowel commonly behaves when it appears before /t/. If this finding had been more common, it could have led to a more widespread hyperdialectism, whereby a feature of the dialect becomes overextended to appear in other domains (Swanenberg & Van Hout, 2013, p.325).

As stated briefly earlier in this chapter, umlauted pronunciations were evident only in *paaltje* ('pole') as [pø:ltjə], but the back variant was also a common realisation (see Figure 81). There was increased use of the back vowel in 2015, and some use of the standard variant.

This suggests a lack of stability in the umlaut feature for the dialect, with speakers accepting different pronunciations as being representative of dialect.

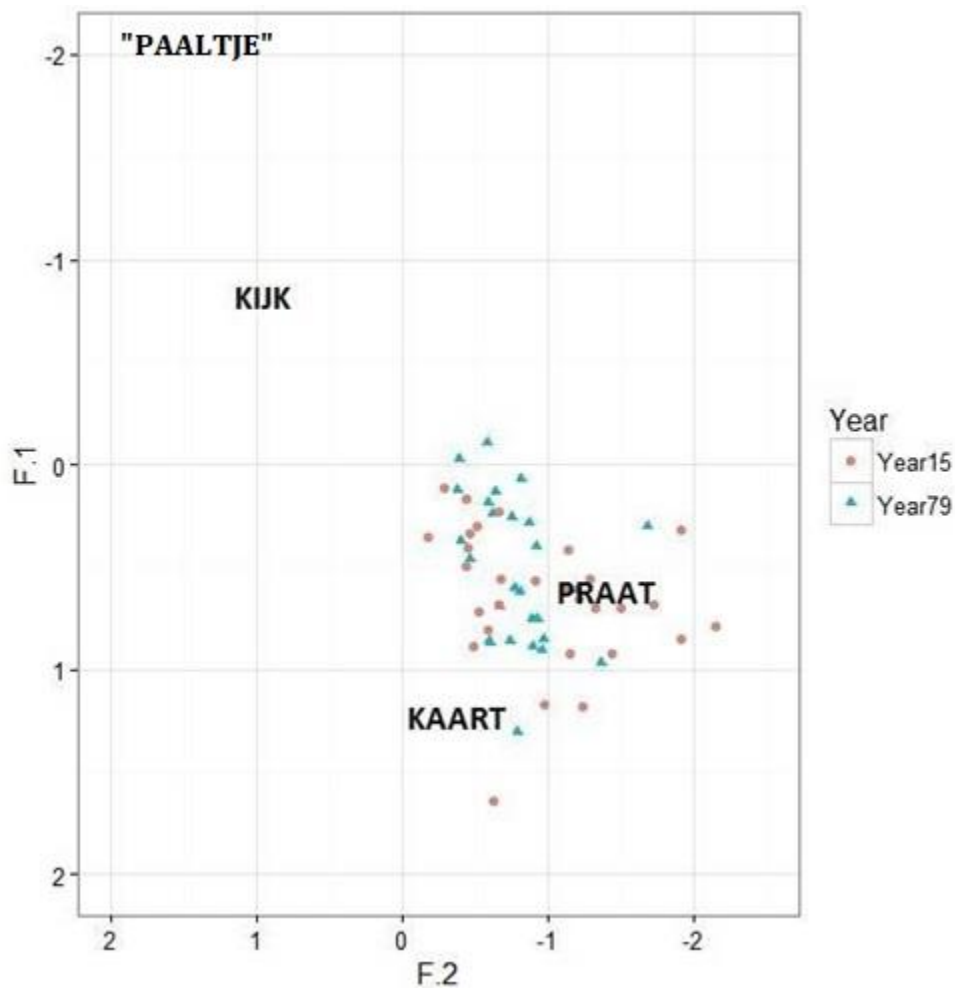


Figure 81: F1/F2: paaltje, 1979/2015 (scatter plot) (N=56).

Statistically, there is not a significant difference in either of the PRAAT or KAART lexical sets between 1979 and 2015. Table 19 shows the results of an independent samples t-test; unsurprisingly, there is no significant change noted with the KAART vowel, due to the fact that the vowel realisation is the same in both Standard Dutch and Achterhoeks. Regarding the PRAAT vowel, change in the normalised offset F1 value suggests some slight diphthongisation amongst the 2015 speakers, but otherwise there is no significant move towards the use of the standard vowel.

Vowel	Formant	Year	Mean	Significance	
PRAAT	F1 onset	1979	.62149	p = .436	
		2015	.65954		
	F2 onset	1979	-1.19777	p = .771	
		2015	-1.20847		
	F1 offset	1979	.80912	p = .005	
		2015	.95779		
	F2 offset	1979	-1.14985	p = .601	
		2015	-1.16916		
	KAART	F1 onset	1979	1.39246	p = .460
			2015	1.32390	
		F2 onset	1979	-.38429	p = .737
			2015	-.36137	
F1 offset		1979	1.60727	p = .370	
		2015	1.72261		
F2 offset		1979	-.37851	p = .770	
		2015	-.39934		

Table 19: Independent samples t-test showing 2-tailed significance for the variation in the PRAAT and KAART vowels in 1979 (PRAAT: N=249; KAART: N=76) and 2015 (PRAAT: N=394; KAART: N=81) speakers.

Overall, despite variable F1 measurements, the fact that there is little change observed in the words in which the back vowel is typically used indicates that the PRAAT vowel is a more recognisable dialect feature, whereas the front vowels (as in KAAS and PAARD) is more susceptible to change. These vowels may not be as easily recognised as a dialect feature as

the PRAAT vowel, and hence are possibly more susceptible to levelling and convergence on the standard vowel.

We also notice that the PRAAT vowel is diphthongising downwards into a vowel which is something like [ɔa], where the offset of the vowel has lowered towards the standard. This finding could be considered to be some sort of accommodation, however the backness of the vowel has remained unchanged.

### 6.3.3. Two Realisations of “gaat”

Noted briefly during the pilot study, the two realisations of the vowel in *gaat* continued to occur in the 2015 participants’ speech. It was observed during the pilot study that when *gaat* was used in a plural verb phrase, the back vowel was used; however, when in the third person singular form, the fronted vowel was used. What this means is that *gaat* can belong to either the PRAAT (back vowel) or KAAS (front vowel) lexical sets, depending on whether it is being used as a singular or plural verb form.

This observation was further noted in the main part of the study. Therefore, the explanation (see below) still stands:

1. *We gaan* (Standard Dutch) → *We gaot* (Achterhoeks) : back vowel [ɔ:]
2. *Het gaat* (Standard Dutch) → *’t geet* (Achterhoeks) : front vowel [e:] / [i:]

The second and third person singular form of verbs (as it is in Standard Dutch) is regularly used in plural position in Achterhoeks, and the dialect displays something of a two-form system in which singular forms are common and plural forms are not, ie. in terms of the use of the *-t* ending, and not of the *-en* ending. There is not usually a distinction between the vowels used; however, in the case of some verbs, such as the Achterhoeks forms of *gaat/gaan*, there appears to be a different pattern. This suggests that, at least for these verbs, singular and plural distinctions actually are observed, albeit differently from the Standard Dutch system. It has been established by Bloemhoff et al. (2013b) that, in Achterhoeks, a strong verb in the third person singular position requires a different vowel, and this is what we are seeing here. This also provides an explanation for why the vowel in *staat* (another strong verb, from the infinitive *staan*) is also a front vowel; although there is not a back realisation with which to compare it, in the sentence *In de keuken staat een oventje*, the word

*staat* occupies the position of a third person singular verb, and thus the front vowel [e:] or [i:] is also used here<sup>41</sup>.

The F1/F2 distributions of front and back realisations of *gaat* from both 1979 and 2015 speakers are shown in Figure 82. The distribution regarding singular and plural pronunciations was fairly consistent in both corpora, although there were slightly more realisations of the plural form in 2015.

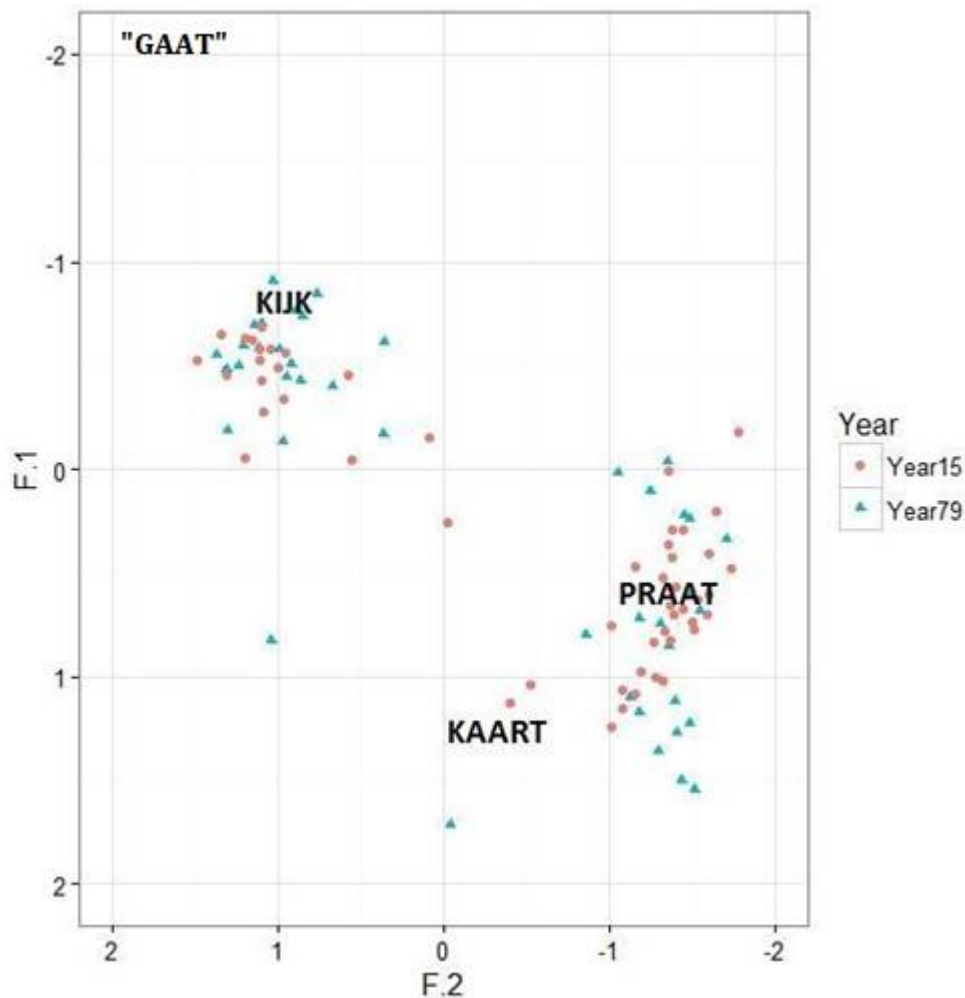


Figure 82: F1/F2: *gaat*, 1979/2015, showing both front and back vowel realisations (scatter plot) (N=95).

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<sup>41</sup> Another example noted throughout the research, although not documented as part of the main corpus of results for this study, was in *Daar loopt een oud lam*, where the Standard Dutch *loopt* was often replaced in third person singular position as *löp*.

### 6.3.4. Overview

Overall, looking at the vowels PRAAT, KAART, KAAS and PAARD, of which the vowels all correspond to /a:/ in Standard Dutch, we can see that there are differences relating to which vowels have converged the most on Standard Dutch.

Firstly, PRAAT is still realised in Achterhoeks with the back vowel in most cases; however, we do see some slight movement towards the Standard Dutch realisation, and in some cases there appears to be some diphthongisation (see Table 19). Overall, however, the change is not statistically significant.

Regarding KAART, it was not expected that there would be any difference in the pronunciations of the vowel between 1979 and 2015, as both Standard Dutch and Achterhoeks use /a:/. However, there was the potential for hypercorrection to the diphthong realised in dialectal pronunciations of the PAARD vowel, which was noted in one case in 2015 (with the word *kaart*); this is perhaps due to the vowel being in the same phonetic environment as those vowels belonging to the PAARD set (ie. preceding /r/).

There were differences in pronunciation of the KAAS vowel; these pronunciations alternated between the Standard Dutch [a:] and the Achterhoeks [e:] in 2015, whereas in 1979 the pronunciations alternated between [e:] and [i:], both dialectal variants. The loss of [i:] in 2015 and the increase of [a:] deemed the change within the KAAS vowel to be statistically significant.

Finally, the results for PAARD were split, with statistically significant change in the vowel in *gaarne*, but not in *paard*.

The results for Section 6.3 are summarised together in Table 20, and further discussion follows in Section 6.5.

Vowel	Formant	Year	Mean	Significance
PRAAT	F1 onset	1979	.62149	p = .436
		2015	.65954	

	F2 onset	1979	-1.19777	p = .771
		2015	-1.20847	
	F1 offset	1979	.80912	p = .005
		2015	.95779	
	F2 offset	1979	-1.14985	p = .601
		2015	-1.16916	
KAART	F1 onset	1979	1.39246	p = .460
		2015	1.32390	
	F2 onset	1979	-.38429	p = .737
		2015	-.36137	
	F1 offset	1979	1.60727	p = .370
		2015	1.72261	
F2 offset	1979	-.37851	p = .770	
	2015	-.39934		
KAAS	F1 onset	1979	.23435	p = .000
		2015	.56422	
	F2 onset	1979	.48636	p = .100
		2015	.36743	
	F1 offset	1979	.41113	p = .000
		2015	.80915	

	F2 offset	1979	.40443	p = .004
		2015	.20672	
PAARD	F1 onset	1979	-.59693	p = .000
		2015	-.32075	
	F2 onset	1979	1.09404	p = .011
		2015	.93471	
	F1 offset	1979	.79437	p = .104
		2015	.97633	
	F2 offset	1979	.24867	p = .097
		2015	.09656	

Table 20: Independent samples t-test showing 2-tailed significance for the variation in the PRAAT, KAART, KAAS and PAARD vowels in 1979 and 2015 speakers.

#### 6.4. The KIJK Vowel in Achterhoeks

The KIJK vowel is, as noted earlier, frequently pronounced as [ɛi] in Standard Dutch, and [i] in the Achterhoeks dialect, and this appears to be the vowel that has most consistently retained its pronunciation from 1979 to 2015. In fact, comparing the positions of this vowel as pronounced in *kijken* (which had the most realisations of the KIJK vowel in both the picture and sentence tasks) in the scatter plot of the F1/F2 onset position in Figure 83, there is almost no change from 1979 to 2015, with the vowel occupying roughly the same space over the years (the average position of the KIJK, KAART, and PRAAT vowels are provided for reference, as they were for the previous graphs). This continues the pattern observed in the small sample of 2014 speakers in the pilot study, and confirms the conclusions made then that there are perhaps stronger retention tendencies observed in this vowel than others.



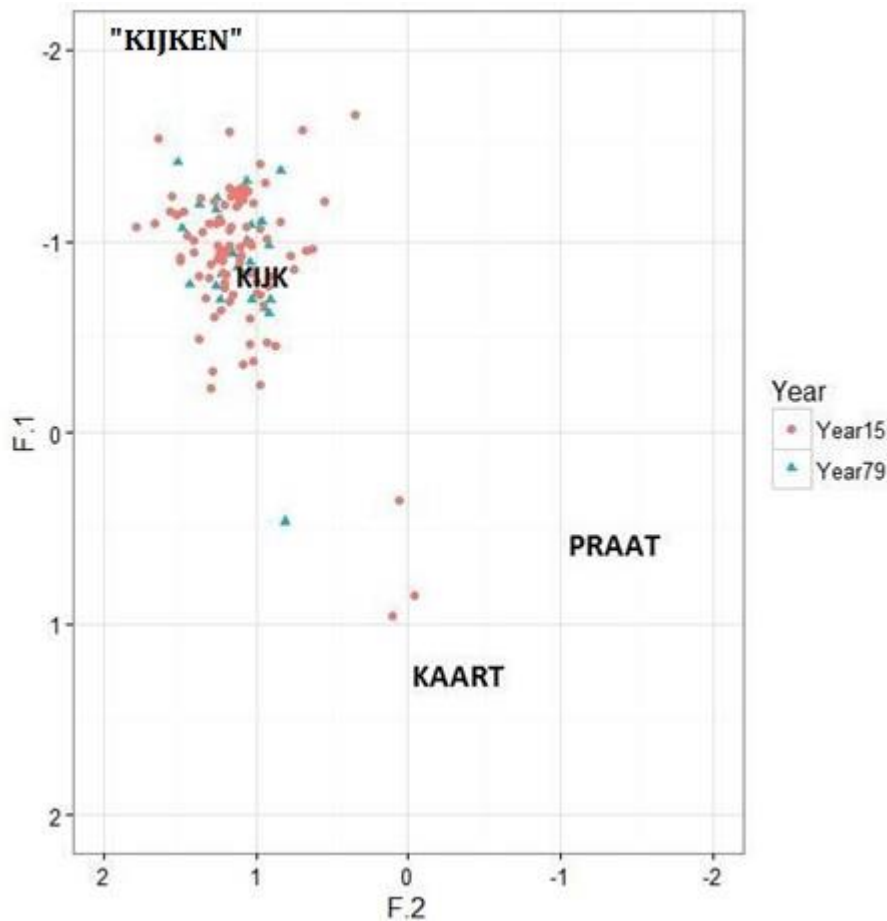


Figure 83: F1/F2: kijken, 1979/2015 (scatter plot) (N=123).

The scatter plot in Figure 83 showing F1/F2 onset position of the vowel in *kijken* visualises the onset of diphthongs for three speakers in 2015 and only one in 1979. It also shows, however, that for those speakers who use the monophthong, little has changed in the production of this particular vowel. The graphs for *spijkers*, *stijf* and *prijzen* in Figures 84-86 also show comparable results. What this suggests is that the [i] realisation in Achterhoeks of the KIJK vowel is a particularly obvious feature of the dialect that is not showing any significant signs of convergence.

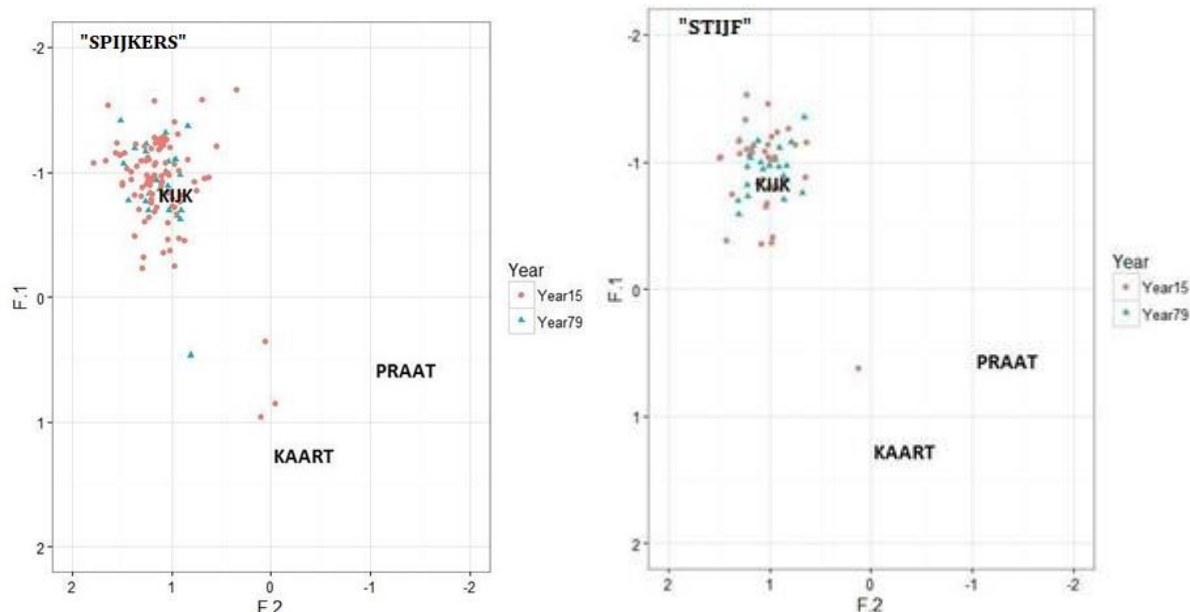


Figure 84: F1/F2: *spijkers*, 1979/2015 (scatter plot) (N=136)    Figure 85: F1/F2: *stijf*, 1979/2015 (scatter plot) (N=58)

Looking specifically at the results for the word *prijzen* (prices) in Figure 86, we can see that a small number of speakers in 2015 have begun to diphthongise the vowel (represented in onset position nearer the average phonetic values for KAART and PRAAT), and this is also evident in *spijkers* (Figure 84) and *stijf* (Figure 85). This diphthongisation is a marker of Standard Dutch, and was notably absent in 1979, but appeared in the speech of some non-rural speakers in 2015. While the number of speakers who have used the diphthongised vowel in 2015 is probably not, at this stage, particularly substantial, it is worth noting the occurrences in order to ascertain in future studies whether these pronunciations were merely outliers or the very beginning of convergence in the vowel of this word to Standard Dutch. These occurrences are represented by the pink circles in Figures 84-86, which show the onset position of the diphthong, which was absent in 1979. The onset position of the diphthong in *prijzen* appears to also be further back than might be expected, closer to the average phonetic values for the KAART vowel. The monophthong, however, shows little change in F1/F2 position between 1979 and 2015. This discreteness shows an interesting contrast with the results for *nagel*, as shown in Figure 78. During the pilot study, *prijzen* showed more tendency towards convergence than the other vowels of the same set; it is therefore important to watch.

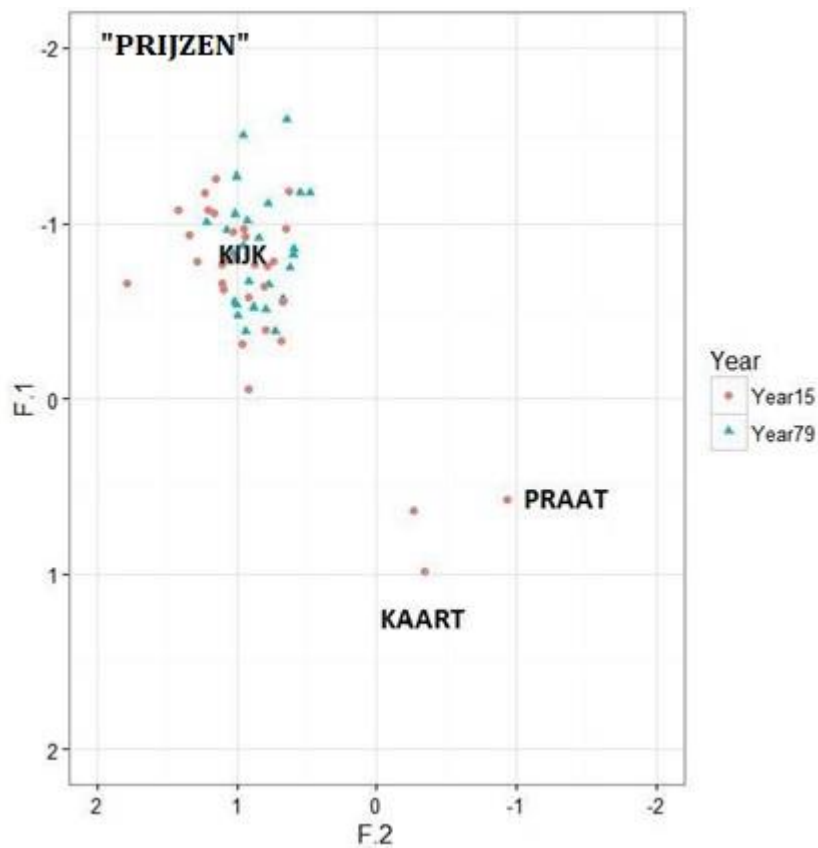


Figure 86: F1/F2: prijzen, 1979/2015 (scatter plot) (N=58).

The aforementioned observations do not point to significant change within the KIJK vowel between 1979 and 2015, and an independent samples t-test confirms that. The p-values for normalised onset F1 and F2 are .293 and .173 respectively, indicating that no significant change has taken place. However, the p-values for normalised offset F1 and F2 are .084 and 0.41 respectively, which although are not significant at the level previously observed in the KAAS, PAARD and HUIS vowels does indicate that there may be some increased diphthongisation within the 2015 speakers.

Vowel	Formant	Year	Mean	Significance
KIJK	F1 onset	1979	-.81294	p = .293
		2015	-.77413	
	F2 onset	1979	1.01285	p = .173
		2015	.96324	

F1 offset	1979	-.87812	p = .084
	2015	-.82501	
F2 offset	1979	1.06008	p = .041
	2015	1.11695	

Table 21: Independent samples t-test showing 2-tailed significance for the variation in the KIJK vowel in 1979 (N=243) and 2015 (N=477) speakers.

## 6.5. Summary

Overall, the results indicated that there has been some change in speakers' vowel realisations between 1979 and 2015. The HUIS vowel has undergone fronting, and there was emergent use of the diphthong [œy] in a small number of cases. We see that the back vowel is still used when following /r/, particularly in speakers from rural areas. 1979 saw a small number of speakers using the back vowel in other phonetic conditions; these instances have been all but eliminated by 2015, and back vowel usage is confined to situations where the vowel appears after /r/.

Standard pronunciations of the KAAS vowel have increased since 1979. Although many speakers still showed front realisations of the vowel, the increase in standard pronunciations was enough to be deemed statistically significant. There appears to be a contrast between front and Standard pronunciations in 2015; however, in 1979, there was more of a contrast between how fronted the vowel was, and whether realisations corresponded to the phonetic values of either /e:/ or /i:/.

Only two words from the PAARD set were analysed (*paard* and *gaarne*), so it is evident that more research could be undertaken on this vowel in the future. However, differences were noted between the two words studied. *Paard* ('horse') appeared to mostly retain the dialectal diphthong, whereas *gaarne* showed movement towards more use of the Standard monophthong. These differences could possibly be attributed to the actual usage of these words within the Achterhoek region; *paard* would be a common word for the region, with its dialectal pronunciation perhaps encouraged amongst Low Saxon-speaking areas by folk songs such as "Peerd van Ome Loeks" in the Gronings dialect. Conversely, *gaarne* acts as a

function, rather than content, word. However, as stated earlier, more research would need to be done on this vowel, including the addition of more tokens to be analysed.

No change was observed in the KAART vowel, except for an instance of possible hypercorrection based on the fact that the word *kaart* looks as though it may follow the same conventions as the PAARD vowel (where the vowel precedes /r/). The PRAAT vowel also showed some resistance to change, with a back realisation of the vowel being the most common result. There were some slightly more instances of pronunciations similar to the Standard Dutch pronunciation in 2015 than in 1979; however, these were not shown to be statistically significant.

The KIJK vowel has also not seen a significant amount of change, but the results indicated that there may be some slightly more diphthongisation occurring in the 2015 speakers than in the 1979 speakers.

The overall picture indicates that certain features of the Achterhoeks dialect are more noticeable to speakers than others. For example, the PRAAT and KIJK vowels continue to be pronounced using dialectal realisations, but change has been observed in the KAAS vowel. Additionally, the frontedness of the dialectal pronunciation of HUIS differs depending on the speaker, and there is some emergent use of the Standard diphthong in 2015.

## **6.6. Survey Results**

As detailed in Section 5.4, a perception study was also conducted in order to determine how other Dutch speakers perceived Achterhoeks speakers. This part of the study refers to Research Question 3 (*What is the sociolinguistic profile of the typical Achterhoeks speaker according to other Dutch speakers?*). Survey respondents listened to a sentence read by an Achterhoeks or regional standard speaker, and then were required to rate the speaker on a number of dimensions in order to build a sociolinguistic profile.

This section analyses the results of the perception study in two parts. Firstly, an overall comparison of the perceptions of dialect and regional standard speakers is presented. This considers overall trends in how dialect and regional standard speakers are perceived, and can give an idea of the “typical” Achterhoeks speaker as compared to the regional standard, as observed by participants across the Netherlands. The second part looks more deeply at the impact each vowel may have had on speaker perception, and compares the sentences

individually. This leads to a judgment concerning which vowels have contributed the most to the overall perceptions of the dialect and of regional standard speakers, and whether there is a correlation between speaker perception here, and what it means to speak in dialect according to the participants in the sentence reading and picture task components of this research. There are three categories of speakers discussed: a regional standard speaker (RS), non-rural dialect speaker (NRD), and rural dialect speaker (RD).

### 6.6.1. Perceptions of Dialect Speakers vs. Regional Standard Speakers

Overall, regional standard speakers were more likely to be perceived as younger and from a town or a city. This correlates with the demographics of the survey participants: the younger participants were less likely to report being speakers of a dialect than the older speakers (see Section 5.4.2 for a breakdown of participant demographic information). In general, the dialect speakers were more likely to be rated as older and from a town or rural location (see Table 22), and participant judgments did not necessarily match their actual ages.

Speaker	Perceived Location			Perceived Age		
	Rural	Town	City	20-39	40-59	60+
Rural	61.05	33.67	5.28	16.17	43.33	40.63
Non-Rural	42.77	47.35	9.89	27.18	63.09	9.73
Standard	9.52	63.66	26.83	53.87	42.73	3.4

Table 22: Perceived age and location of dialect and regional standard speakers. The number shown is the average of the percentage of the total responses to the relevant questions (N=40).

Table 22 shows the percentages of the perceived locations and ages of the speakers. In actuality, there was only one standard speaker (aged 35), who provided the voice for all of the standard sentences (of which there were four in total), and he was from a non-rural location. Most other speakers were within the 40-59 age range (six in total), with one speaker in the 18-39 age range, and one in the 60+ age range. Four speakers were from rural locations, and four were from non-rural locations (not including the regional standard speaker). None of the speakers resided in a city (yet the regional standard speaker was perceived to be from a city 26.83% of the time).

Ladegaard (2001), in studies which examined perceptions of regional Standard Danish speakers, hypothesised that the respondents' backgrounds would influence their perceptions of the speakers; it turned out that the subjects would identify the Standard speaker as coming from the nearest large urban area in their region, and would be more likely to nominate a speaker from their own region as sounding more standard. Ladegaard indeed found a strong correlation between participant background and speaker perception, and he states that "what is perceived as standard by people in one part of the country is likely to be perceived as regional and non-standard by people in other regions" (Ladegaard, 2001, p.35). The results from the present survey follow on from, and correlate with, Ladegaard's earlier results. While this survey did not test respondents' opinions about the exact origin of the speakers who they were asked to listen to (they were asked only to nominate an urban, rural or non-rural location), it was also apparent here, as in the research conducted by Ladegaard, that the respondents' own linguistic backgrounds did influence their perceptions of the speakers in the present study. As described in Section 5.4.1, respondents were asked to listen to a series of recordings, and rate each speaker on a number of attributes. Respondents who self-identified as being speakers of a Low Saxon dialect, or nominated a more specific subgroup of Low Saxon dialect by town (such as Winterswijk in the Achterhoek), gave more favourable ratings of the dialect speakers than did the Low Franconian or Standard speakers, rating the former more highly on the personal attributes of Friendliness, Intellect, Education and Trustworthiness, and the language attributes of Correctness and Pleasantness. For each sentence presented to them, this group showed a preference for the speaker who represented the more traditional dialect (for example, a dialect speaker over an RS speaker, or an RD speaker over an NRD speaker).

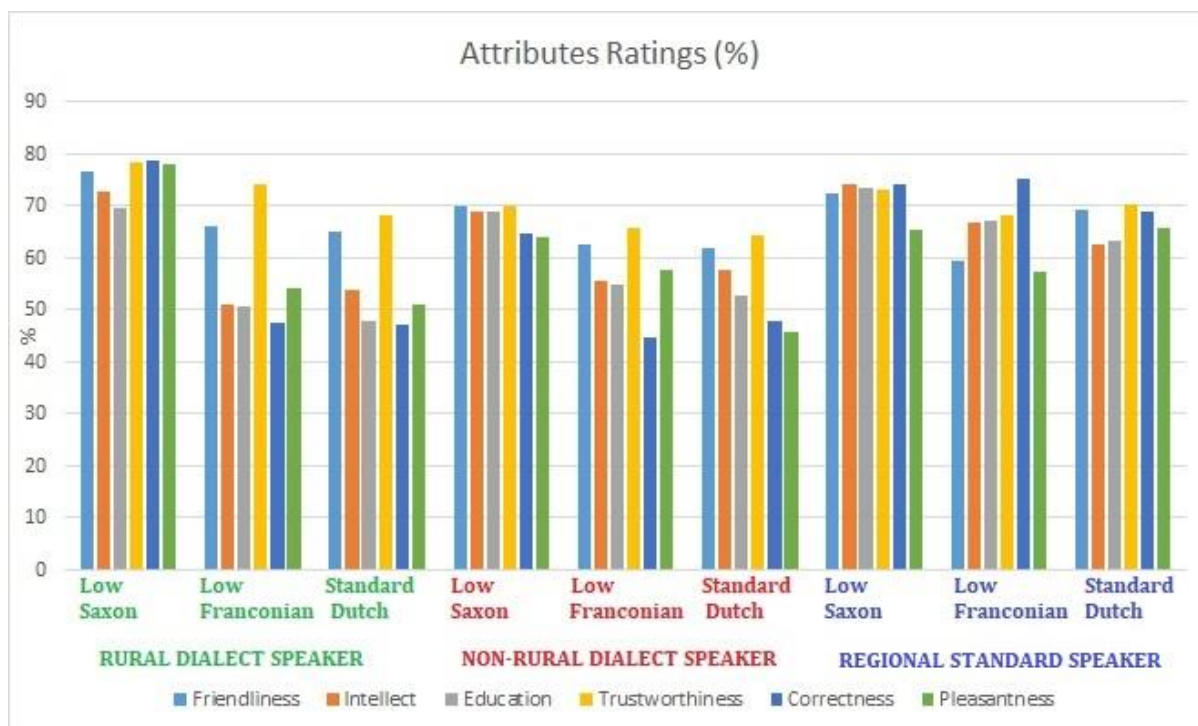


Figure 87: Attributes ratings (Mean). The result shown is the average of the percentage of the total responses to the relevant questions (N=40).

Survey respondents were separated by their own self-reported dialect in order to ascertain whether there was any link between their dialect and the perceptions they had of Achterhoeks. The results show that in general, across all groups, the sentences read by the RS speaker scored slightly higher on Intellect and Education, but slightly lower on Friendliness and Trustworthiness. Figure 87 shows the ratings with respect to how self-identified speakers of Low Saxon, Low Franconian, and Standard varieties perceived dialect and non-dialect speakers in respect of these language attributes. The graph separates the RD, NRD and SD speakers by how each dialect group perceived the six characteristics. These results have been averaged from the results for each sentence, which are discussed separately in Section 6.7.2.

As Figure 87 shows, there appears to be a pattern between dialect and non-dialect speaking participants' perceptions of the speaker attributes of Friendliness, Intellect, Education, and Trustworthiness. The results for all of these attributes tend to be slightly higher overall among the Low Saxon-dialect speaking participants. All of the dialect groups scored higher on Friendliness and Trustworthiness than they did on Intellect and Education, except for the RS speaker, whom the Low Franconian group rated lower for Friendliness. The Low Franconian and Standard Dutch-speaking groups rated the latter two attributes of Intellect and Education more highly for the RS speaker than they did for either of the dialect speakers.



However, the largest difference in perception between the groups of survey respondents is seen in how the language attribute of Correctness (and to a lesser extent, Pleasantness) is rated.

The Low Franconian-speaking group rated all three dialect categories similarly on the attribute of Pleasantness, with an average score for each. The other two groups, conversely, appeared to have a set opinion about which type of speech they preferred, with the Low Saxon group giving the highest rating to the RD speaker, and the Standard Dutch group giving the highest rating (albeit not excessively high) to the RS speaker. If we are to hypothesise that the Low Franconian group of respondents are not presented throughout the survey with a dialectal variety close to what they themselves indicated they speak, then it follows that they are not as likely as the other two groups to have strong views on the pleasantness of the varieties to which they have been exposed. This is because they do not have their own varieties presented in order to compare with differing varieties. The Low Saxon groups would, predictably, according to Ladegaard's research, find the variety closest to their own speech the most pleasant to hear, whereas the Standard Dutch-speaking group would find the RS speech to be the closest to their own, and therefore the most pleasant. However, it is hypothesised that they would not feel as strongly about the RS speech as the Low Saxon-speaking group would about their own variety. It therefore also makes sense that the Low Franconian group perhaps do not have strong feelings either way regarding this category.

A two-way multivariate analysis was run in order to determine how significant the effect between the listeners' dialect group (either Standard Dutch, Low Franconian or Low Saxon) and origin of the speaker (either RS, RD or NRD) was when considering the listeners' overall scores for the different attributes. The Wilks' Lambda Test recorded a p-value of .000, indicating that there is a significant effect between the different dialect groups and RS, RD and NRD versions of Achterhoeks, on the attributes scores given by the listeners. This is based on the speakers' *actual* locational backgrounds; however, when examining the effect between the listeners' dialect group and their *perceived* location of the speaker (City, Town or Rural), the p-value remained unchanged. This result indicates that listeners' perceptions of where a speaker comes from appear to be in line with the reality, and also that their own dialectal backgrounds inform their perceptions on speaker attributes.

When they were asked their opinion of what they thought each speaker's profession might be, the survey respondents appeared to react to the words in the sentence when making their choice, as well as the pronunciation of the vowels in these words. For example, when presented with the sentence *Hij heeft al sinds 1940 een paard* in dialect, 82.5% of respondents thought the speaker to be a farmer (with 15% of respondents giving no response). For the sentence *In de keuken staat een oventje*, the most common response was a cook, *Kun je rauw vlees ruiken?*, the most common response was a butcher, and for "Hij gaan het huis in de breedte bouwen", the most common response was a construction worker. Interestingly, the self-reported (and especially rural) dialect speakers were more likely to be assigned jobs that involved a trade or manual work (with "farmer", "butcher" and "construction worker" being the most common choices), whereas the standard speaker, when perceived as coming from a city, was more likely to be viewed as having a job that involved administrative work. We see here that the survey participants are reacting both to the dialectal aspect of the sentence as well as the sentence subject when making their choice of assumed profession. There appeared to be a clearer consensus on the speaker's type of work when the sentence presented to them was read by a self-reported dialect speaker; when the sentence was read in regional Standard Dutch, participants tended to be more split on what they perceived the speaker's work to be.

To compare the perceptions of cultural interests of the speakers, we first need to ascertain which interests were thought to be mostly aligned with each other, or most often chosen together. To do this, a multiple correspondence analysis was run using the FactoMineR package in R (Lê, Josse & Husson, 2008), similar to the technique used by Savage et al. (2013) (see Section 5.4.1). This method helps analyse the relationship between a number of qualitative variables; in this case it was chosen because it allows us to visualise a distance between perceived interests of the speakers, whereby interests that are grouped together were most often perceived to be interests of the same speakers. For example, referring to Figure 88, we can see that that the interests of "Stately Homes" and "Classical Music" are grouped together, indicating that respondents who thought a speaker enjoyed visiting stately homes also thought they enjoyed listening to classical music.

The choices participants were given were similar to those included by Savage et al. (2013), in order to allow for an accurate comparison. However, there were some regional-specific choices also included, such as the option to suggest that speakers may often travel within the

Netherlands. The analysis run included all set choices, and some “Other” options, where the same answer was suggested by participants. This includes the additions of:

- Music: Anything under the title of “Regional” music, such as Hoempa, Dutch repertoire, or, specifically, the well-known dialect-singing band, Normaal
- Travel: Germany. Other suggestions were included under “Other EU” or “Other Non-EU”
- Food: Anything under the title of “Dutch” food, including suggestions of “Hollandse pot” or a traditional stew or meat and potatoes dish

There were, of course, other suggestions which were not listed, but due to a low recurrence rate, they were not included in the final analysis.

We can also use Savage et al’s (2013) study to determine which of these cultural interests tend to be considered to be more “highbrow” than others, and whether these have been grouped together by similarity in these results as well. The multiple correspondence analysis included all the responses given by listeners, and relate to all the speakers, rather than a specific sub-group.

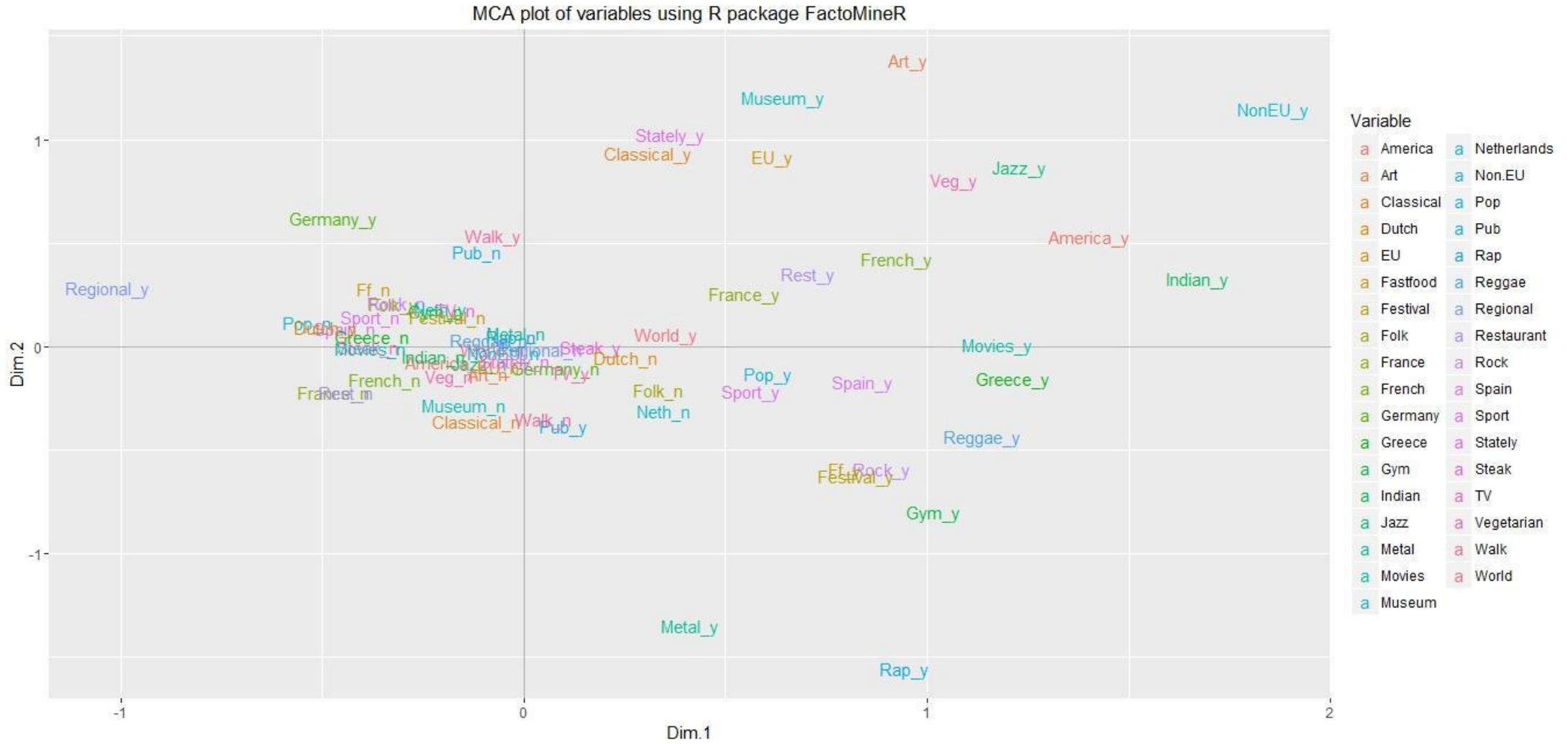


Figure 88: Multiple Correspondence Analysis of variables included in survey

Each variable (or “interest”) is represented on the graph preceding “\_y” (when the variable was perceived as a potential interest of speakers) or “\_n” (when it was not perceived as a potential interest of the speakers). We can then see not just which variables are chosen together, but also which are not chosen together. In a similar vein to Savage et al. (2013), we can determine different perceived groups of speakers in each quadrant of the graph (Figure 88): clockwise from top, a culturally engaged “highbrow group”, a culturally engaged “popular” group, a culturally disengaged group, and an “emerging” group.

However, the results did not pattern exactly with the study by Savage et al. (2013), in that not all of the variables were typically grouped in the same way, and there is less suggestion of no cultural engagement whatsoever. What this means is that the listeners all believed each speaker to have certain interests, whether these were chosen from the list or were given as a suggested alternative by the listeners. However, some similar patterns emerged. Firstly, activities typically deemed to be “highbrow”, such as visiting stately homes, art galleries and museums, and listening to classical or jazz music were often perceived to be enjoyed by the same speakers; these speakers were also often deemed to like vegetarian food, which was also liked in conjunction with these other interests in Savage et al.’s (2013) study. Secondly, other activities that showed a level of cultural engagement, such as enjoyment of other musical genres or interest in activities such as sport or the gym tended to be chosen together, in a pattern similar to the study (Savage et al., 2013) on which this was based (see Figure 88).

How does this relate to our dialect and RS speakers? In general, the RS speaker is perceived to have more interests than the dialect speakers. The profile of the “typical” dialect speaker tends to be someone who listens to folk music, travels within the Netherlands and Germany, enjoys going for walks, and usually eats traditional Dutch food. They are also likely to enjoy watching television or going to the pub, and also may eat steak; however, these variables did not occur together as often as those listed above. Somewhat in contradiction to the earlier results by Savage et al. (2013), these speakers were more associated with an interest in classical music than their RS counterparts, yet when classical music was chosen as an interest for RS speakers, this was more often accompanied by an enjoyment of visiting stately homes or art galleries than it was for dialect speakers. They (dialect speakers) were sometimes also perceived to listen to types of regional music, such as songs in regional dialect or traditional Dutch and German music. This response occurred less often, and did not tend to be chosen in

conjunction with any of the less observed interests among dialect speakers. Occasionally, these dialect speakers were thought to have other interests, but these other variables did not always occur together with the most widely chosen ones as listed earlier. These other choices were generally distributed fairly evenly across RS and dialect speakers, but it was the RS speakers who were more often perceived to visit places such as museums, to holiday outside the Netherlands, to listen to pop rather than traditional folk music, or to enjoy vegetarian food.

In general, overall the survey respondents did match the dialect speakers to rural areas most of the time, whereas the sentences read in RS Dutch were ascribed to non-rural locations. The standard speaker in actuality lives in a non-rural location, but not in a city – however, many participants viewed the use of standard vowels as evidence to place his location in an urban area (although many also recognised his non-rural yet also non-urban location, which places him within the “regional standard” category). The survey results therefore present evidence that, from a folk-linguistic point of view, dialect belongs in rural areas, and these speakers tend to be older people in manual professions, whereas standard speakers are viewed as younger, working in administrative professions, and from non-rural locations. Overall, this is perhaps what one would expect.

It is important to note that these perceptions may or may not be accurate in relation to the actual speaker, or other Achterhoeks speakers, but they do provide an insight into how the rest of the Netherlands tends to view the “typical” dialect speaker. In most instances, the listeners did appear to differentiate between the different speaking styles of each pair or trio of speakers to whose speech they were exposed, and seemed to ascribe certain interests to each group in a consistent way. This is evident in their associations of travel within the Netherlands, and enjoyment of regional food and music with the dialect speakers, and a wider variety of travel, food, and leisure activities associated with the RS speaker. We also see how the three dialect groups of survey respondents view dialect and RS speakers differently, with Low Saxon speakers more likely to rate the dialect speakers higher on personal attributes than the other groups of Low Franconian and Standard Dutch speakers were.

### **6.6.2. Perceptions by Vowel and Word**

Auer and Hinskens (1996) state that “it appears to be more common for dialects to trade in their most characteristic features for the standard language equivalents when intermediate

varieties emerge” (p.9), and this appears to be reflected in participants’ perceptions of the dialect speakers vs. the RS speakers. The speech of the RS speaker could be identified as an intermediate variety, and most listeners appeared to react to it as such. This speaker used Standard Dutch vowels in the target words, but was most often perceived by the listeners as coming from a town, as opposed to an urban centre, indicating that his version of Standard Dutch was still perhaps different from what they would be accustomed to hearing in the cities of the Netherlands. His use of the standard vowels, however, is most likely what led the majority of listeners to perceive his age to be within the 20-39 band (his actual age was 35), suggesting that even outside of the urban centres, Dutch speakers perceive the use of a standard, rather than dialectal, variant to be indicative of a younger age group and becoming more common within non-standard Dutch speech.

The sentence *Hij heeft al sinds 1940 een paard* read by the dialect speaker (using the diphthongal PAARD vowel) elicited the strongest responses from participants, indicating that the dialectal pronunciation [iə], as opposed to [a:] is a strong marker of regional dialect. 100% of respondents believed that this speaker came from a rural location, with the certainty rate of this at 89.9%. This speaker was also widely believed to be over 60, with no respondents judging him to be within the 20-39 age range (his actual age, however, was 42, placing him in the middle age group of speakers, with his voice quality not suggestive of the older age). A more neutral sentence, such as containing the word *gaarne* instead of *paard* perhaps would have yielded different results, given the perceived associations of *paard/peerd* with farming life, and thus perhaps further connotations of dialect speech also being associated with such an area. These results are summarised with more information, including a comparison with the perceptions of the RS speaker for the same sentence, in Section 6.6.2.1.

The other sentence that provided strong results, if not quite as much so, was *Hij was stijf van de pijn*. This showed that the pronunciation of the Dutch *ij* as [i:] was another strong dialect marker, just as the results from the reading and picture task also showed. The (standard) speaker of this sentence was more likely to be viewed as a 20-39-year-old inhabitant of a town or a city, whereas the standard speaker of *Hij heeft al sinds 1940 een paard* was viewed as 20-39 years old (in reality the speaker was aged 35), but more likely to reside in a town than a city. The NRD speaker of *Hij was stijf van de pijn* was correctly identified as belonging to a non-rural area, with the most common age groupings being 40-59 and 60+ (his

actual age was 59). However, the rural speaker was more often identified as being from a rural area, with 66.67% believing him to be aged 60+, and 27.78% believing him to be aged 40-59. This speaker was actually aged 55. The different responses to this sentence show a clear pattern, with respondents reacting to the vowels used.

In comparison, the reactions to the different monophthongal vowels used by dialect speakers in the sentence *Kun je rauw vlees ruiken?* were not as strong. This is suggestive of the fact that the type of vowel used here is perhaps not as important, and just the use of a monophthongal variant of either [y] or [u] marks the speaker as dialectal. In the sentence *Wij gaan het huis in de breedte bouwen*, the non-dialectal vowels used in both *huis* and *gaan* (those being [œy] and [a:]) indicated to the listeners that the speaker was more likely to be from a non-rural location, in contrast to the dialectal speakers of both sentences *We gaan het huis in de breedte bouwen* and *Kun je rauw vlees ruiken*, where the dialectal vowels [ɔ:] and [y] or [u] were realised.

#### **6.6.2.1. Hij heeft al sinds 1940 een paard (PAARD vowel)**

This sentence aimed to test the survey respondents' reactions to the vowel used in *paard*; whether it was the Standard Dutch pronunciation [a:], or the Achterhoeks [iə]. Respondents were presented with the sentence *Hij heeft al sinds 1940 een paard* ("He has had a horse since 1940"), read once by a RD speaker (M42Zelhem), and once by the RS speaker (M35Uft). Overall, the most common perceived demographic information for each speaker by the respondents was found to be:

- Dialect speaker (M42Zelhem): Rural location, aged 60+
- Regional Standard speaker (M35Uft): Non-Rural location, aged 20-39

The first striking piece of information concerning the responses to this sentence, or rather the reactions to the dialectal pronunciation of *paard*, is that all survey respondents identified the speaker as coming from a rural area. The RS speaker, however, was not perceived as such, and the majority of participants believed him to be from a non-rural town. This is the first indication that the different vowels used had an influence on how the listeners viewed the speaker, with the dialectal pronunciation eliciting a response of perceived rurality, and the non-dialectal pronunciation setting the speaker, for the most part, in a different type of location. A high degree of certainty was attached to the perception of the dialect speaker



coming from a rural location: the average rating for certainty was 89.9%, with 12 out of the 40 respondents stating that they were 100% sure of their response.



Figure 89: Graphs comparing perceived location of dialect and regional standard speakers for sentence "Hij heeft al sinds 1940 een paard" (RD: N=40; RS: N=36).

The differences in perceptions of the two speakers are further cemented in the respondents' perceptions of speaker age, where the results indicate a connection between the use of the standard vowel corresponding to a younger age group. Both speakers had a large proportion of survey respondents believing them to be within the middle age range of 40-59 (32.5% for the dialect speaker, and 40% for the RS speaker). However, the majority of respondents believed the dialect speaker to be aged 60+ (67.5%), and the RS speaker to be aged 20-39 (54.2%). In fact, no respondents perceived the dialect speaker to be within the ages of 20-39. There could be an association with speakers' actual ages here, as well as voice characteristics of the speakers perhaps being more in line with their real ages, especially given that the dialect speaker was in fact aged 42 (cf. Hay et al., 2006). However, it could also indicate the belief in dialect forms such as *peerd* being more widespread across the older population, while younger speakers are moving to use the more standard form of *paard*, with the Standard Dutch vowel. It suggests that they believe the dialectal pronunciation to perhaps be representative of an older time, and coupled with the results for perceived location, speakers do not necessarily have to be from an urban area to use the Standard Dutch pronunciation (although they are more likely to be perceived as being from a town than a city). Thus, this Standard Dutch pronunciation may be perceived as common in the speech of younger dialect speakers from this region, suggesting a decline in the use of the form *peerd* (with the diphthongal [iə] vowel) in years to come.

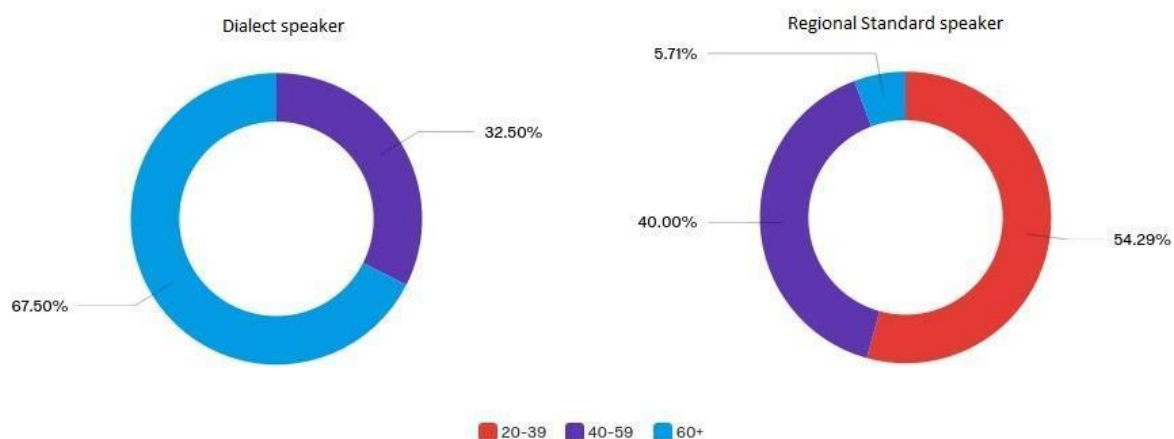


Figure 90: Graphs comparing perceived age of dialect and regional standard speakers for sentence "Hij heeft al sinds 1940 een paard" (RD: N=40; RS: N=36).

Of the participants who gave a response, all except one perceived the dialect speaker to be a farmer. However, the results were much more varied concerning the RS speaker. The lexis is clearly important here, but it is also telling that the listeners' judgements of the RS speaker differed from those of the RD speaker. Figure 91 shows the spread of results, based on the number of respondents who answered this question, and where the speakers are coded by colour (the dialect speaker in blue, and the RS speaker in orange). Where there was more than one profession which received only one suggestion, these have been grouped under "Other". In the case of this sentence *Hij heeft al sinds 1940 een paard*, these were all only relevant for the RS speaker<sup>42</sup>. The results for the perception of the dialect speaker's job as a farmer appear to correlate with the earlier described folk-linguistic perception that associates dialect speakers with this profession. Additionally, the more varied results seen for the RS speaker suggest that the non-dialectal pronunciation is not marked for an association with a specific profession, and a mix of different types of professions are represented in the results.

<sup>42</sup> These included: stableboy, ICT, horse breeder, construction, seller (type not specified), student, clerk, factory worker, librarian, accountant, secretary, and car salesman.

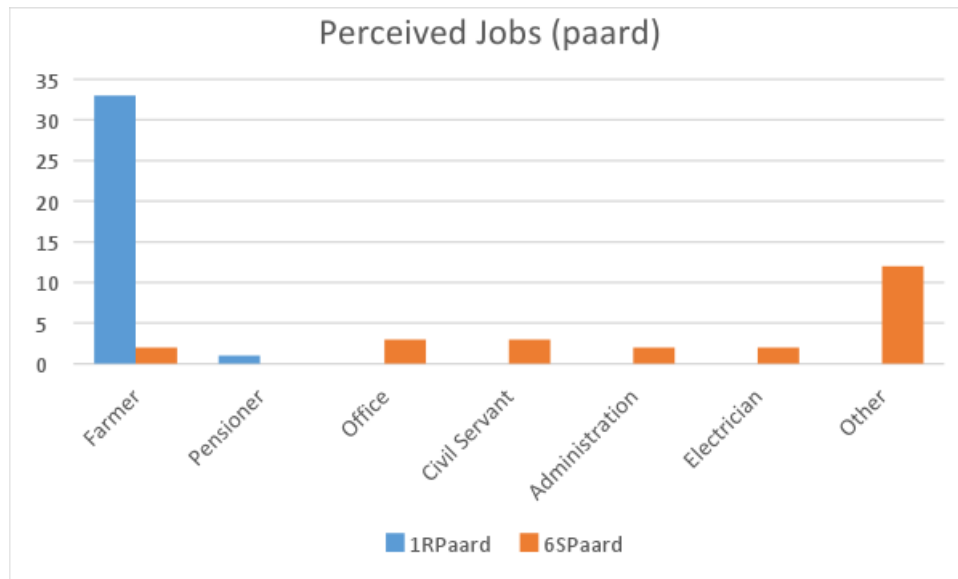


Figure 91: Survey respondents' perceptions of the professions of dialect and regional standard speakers of the sentence "Hij heeft al sinds 1940 een paard" (RD: N=40; RS: N=36).

Figure 92 considers the attitude ratings given by the groups of survey respondents towards both the rural speaker and the RS speaker for this sentence. There are a number of things to note. Firstly, concerning the attributes, the Low Saxon-speaking group of listeners gave much higher ratings of the rural speaker in most categories than the other two groups did. This speaker received high ratings from all groups concerning Friendliness and Trustworthiness, although the ratings from the Low Saxon-speaking group were slightly higher. Overall, when considering the mean, the attributes of Friendliness and Trustworthiness were rated higher than Intellect and Education. However, there is a more obvious difference between ratings when concerning the speaker attributes of Intellect and Education, and the language attributes of Correctness and Pleasantness. Here, we can see that the Low Saxon-speaking group have given considerably higher ratings on these attributes than the Low Franconian and Standard Dutch groups have done.

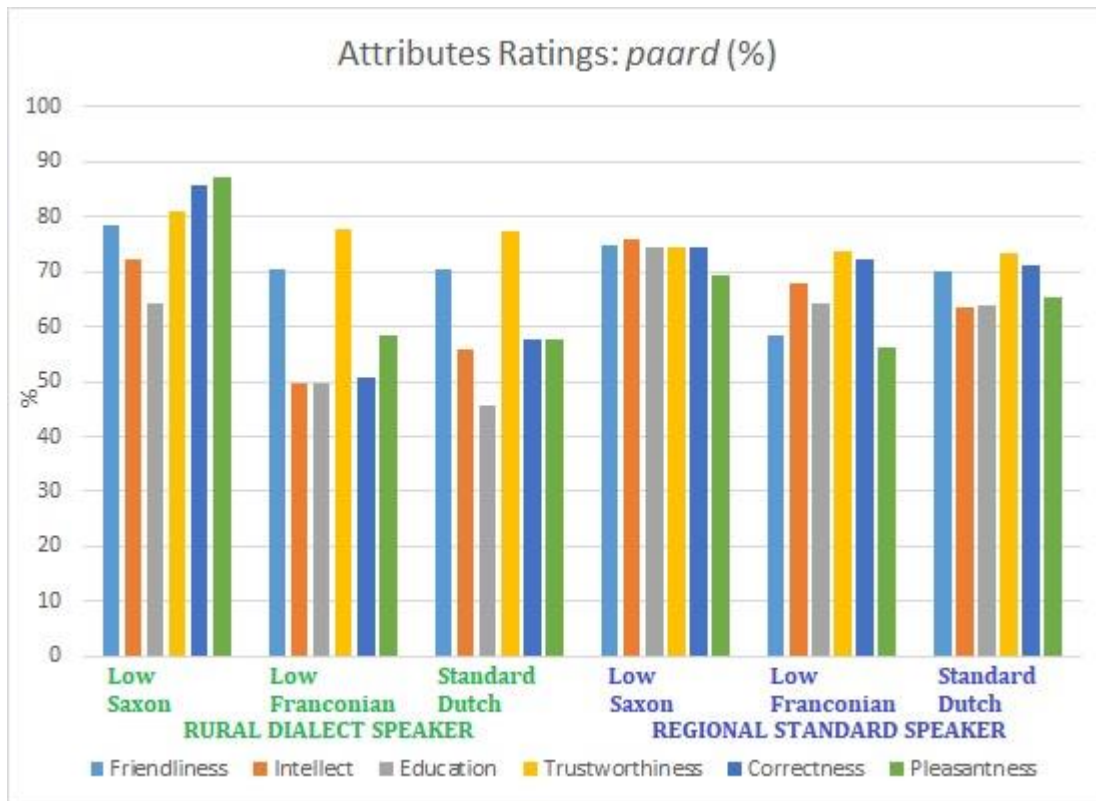


Figure 92: Attributes ratings (*Hij heeft al sinds 1940 een paard*) (RD: N=40; RS: N=36).

For the RS speaker, his overall ratings were similar to those of the dialect speaker, except that the scores were higher for Intellect and Education and slightly lower for Pleasantness. The Low Saxon-speaking group's ratings concerning this speaker were similar to their ratings for the dialect speaker regarding Friendliness and Intellect, but while their rating went up considerably for Education (from 64.19 to 74.5), their ratings for the remaining attributes were lowered. Regarding Correctness, the Low Saxon group rated this speaker highly, although the score was still considerably lower than their rating for the dialect speaker (74.5 for the RS speaker, compared to 85.75 for the dialect speaker). This is suggestive of the idea that this group of speakers is basing their score of Correctness on how close they feel the speech is to their own regional dialects and ideas of traditionalism; a regional speaker would thus receive a high rating, but not as high as that of a traditional dialect speaker. This score difference thus indicates that *paard* as *peerd* is quite a strong marker of traditional dialect. Conversely, the Low Franconian and Standard Dutch groups rated the RS speaker higher on this attribute than they did the dialect speaker, suggesting that this speaker's use of the Standard Dutch vowel had an impact on their ratings. Further to this, both dialect groups rated the RS speaker lower on Pleasantness, while the Standard Dutch group rated him higher, perhaps indicating the dialect groups' preference for more dialectal varieties over the

Standard. The other groups also rated this speaker slightly lower on Friendliness and Trustworthiness, but higher on Intellect and Education, than they did the dialect speaker.

We now look at the results for the perceptions of speaker interests. Figure 93 shows the results by percentage for the perceived interests (music, travel, food and leisure activities) of both the RD and RS speakers. Survey respondents were able to select multiple answers when asked what they perceived the speakers to enjoy from each category, and so the graph displays the percentage score for the popularity of each choice.

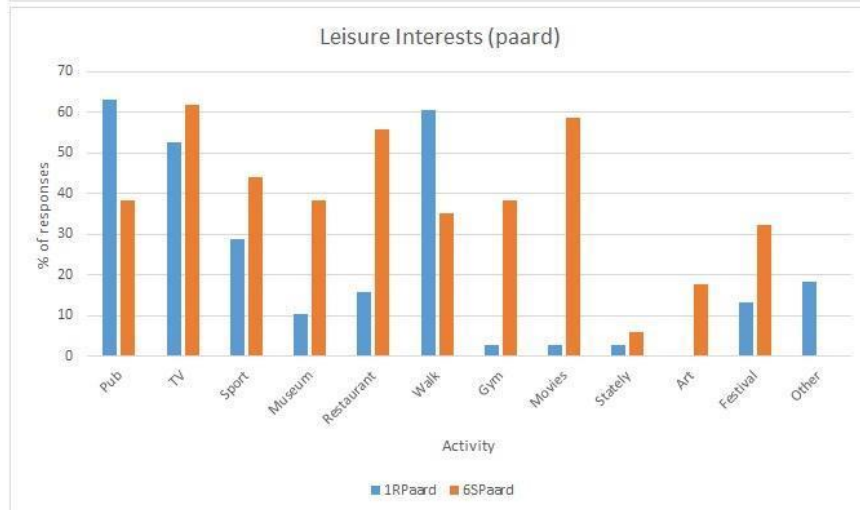
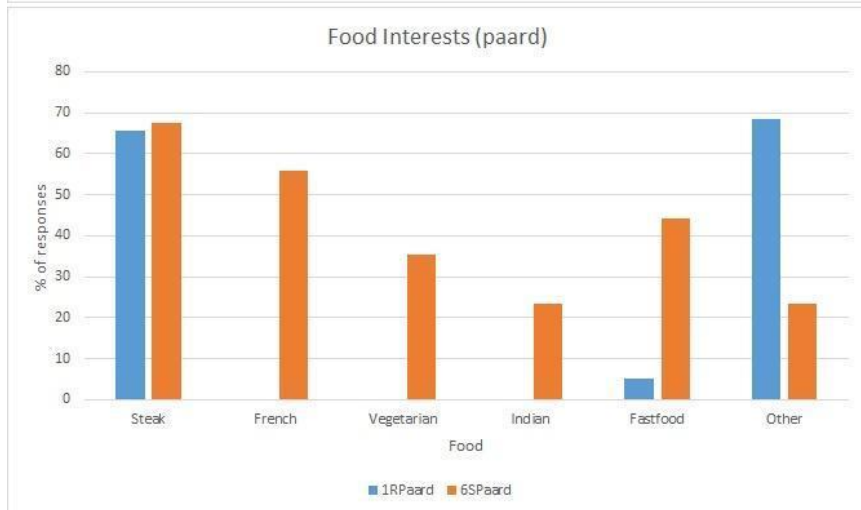
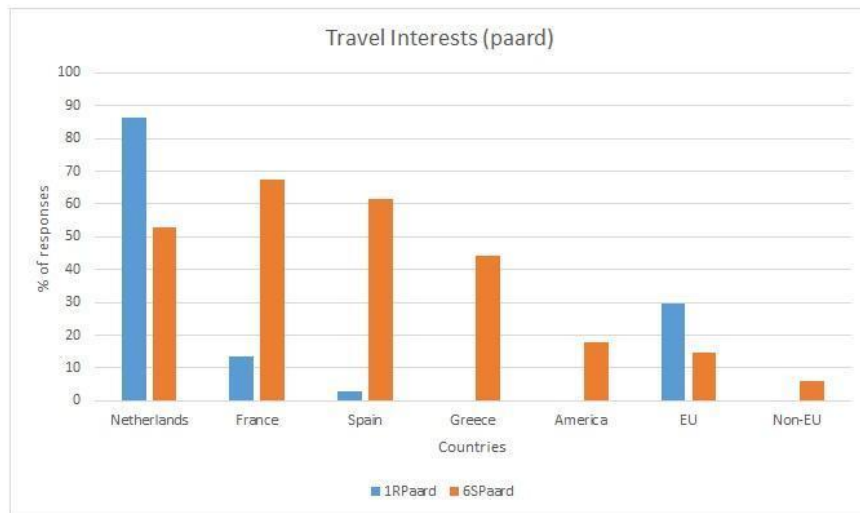
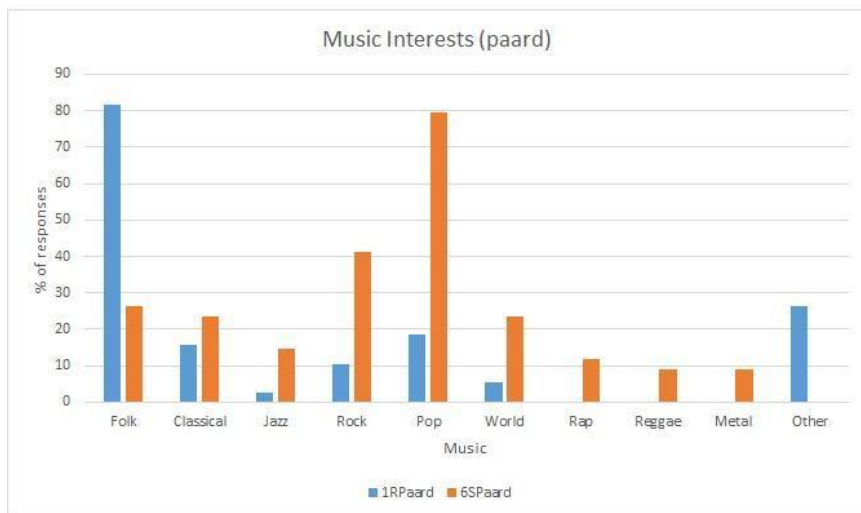


Figure 93: Survey respondents' perceptions of the interests of dialect and regional standard speakers of the sentence "Hij heeft al sinds 1940 een paard" (RD: N=40; RS: N=36).

Concerning music, the dialect speaker is overwhelmingly perceived to enjoy traditional folk music, and the choices suggested under the heading of “Other” most often referred to specific music from the region of the eastern Netherlands. The RS speaker is sometimes perceived to enjoy folk music, but he was most often thought to listen to pop music, followed by rock. The RS speaker was also more often perceived to travel outside of the Netherlands than the dialect speaker, who was perceived to travel mostly within the Netherlands, as well as Germany (included under the heading of “Other”). Respondents also perceived the RS speaker to eat a wider variety of food types, and to enjoy a wider variety of leisure activities than the dialect speaker. It is possible that the relatively high number of listeners who chose Fast Food as a culinary preference of the RS speaker, but not of the dialect speaker, may also be linked to perceptions of youth.

#### **6.6.2.2. *In de keuken staat een oventje (KAAS vowel)***

This sentence aimed to elicit reactions to the word *staat*, which in third person singular is included in the KAAS lexical set. Since this is a strong verb, the dialectal vowel is pronounced as in *gaat* in the same position, i.e. with a front vowel. Respondents were again presented with two speakers, one speaking in dialect, and one speaking in regional standard. There was no discernible difference between the RD and NRD speakers’ pronunciation of this vowel, and the dialect speaker for this sentence was represented by a non-rural speaker in order to test this. However, the RS speaker used the Standard Dutch variant of [a:]. The most common perceived demographic information for each speaker was found to be:

- Dialect speaker: Rural location, aged 40-59
- Regional Standard speaker: Non-Rural location, aged 40-59

As with the previous sentence, most of the survey respondents perceived the RS speaker to be from a town, as opposed to a city or rural location. The dialect speaker was mostly believed to be from a rural area (even though the speaker himself was from a non-rural area), but differing from the previous sentence, this was not a unanimous perception. The respondents who said they thought this speaker was from a rural location tended to be surer of their answers than those who suggested other areas; however the spread of answers nevertheless suggests that the dialectal pronunciation of *staat* is not as strong a marker as that of the dialectal pronunciation of *paard*, at least concerning rurality.



Figure 94: Graphs comparing perceived location of dialect and regional standard speakers for sentence "In de keuken staat een oventje" (RD: N=27; RS: N=37).

Both speakers were perceived to most likely be within the 40-59 age range (57.69% for the dialect speaker, and 65.57% for the RS speaker). A smaller proportion of respondents judged the dialect speaker to be 60+ (26.92%), but none of them believed the RS speaker to be within this range. 32.43% of respondents believed him instead to be within the age range of 20-39, and a smaller percentage (15.38%) believed the dialect speaker to also be within this age range. What these results suggest is that, when reacting to the vowel in *staat*, the dialect speakers are more likely to be perceived as older than the non-dialect speakers overall, which is not a surprising result. However, this is not as strong as was seen in *Hij heeft al sinds 1940 een paard*, again indicating that if we follow the axiom “the older the speaker, the more likely dialect is to be used”, perhaps the KAAS vowel is not as strong a dialect marker as the PAARD vowel (as the results for perceived location also showed). We also need to consider the fact that the speakers’ actual ages were 35 (RS speaker) and 43 (NRD speaker), so it is also possible that their actual ages had an effect on the respondents’ judgements.





Figure 95: Graphs comparing perceived age of dialect and regional standard speakers for sentence "In de keuken staat een oventje" (RD: N=27; RS: N=37).

Regarding the speakers' professions as perceived by the survey respondents, most respondents again judged the dialect speaker to be a farmer. This included some more specific descriptions of the type of farming the speaker was perceived to do, such as pig farming or apple farming. However, as was not the case with the sentence *Hij heeft al sinds 1940 een paard*, there were also some more varied suggestions as to what this speaker did for a living. Most of these tended to be working-class type jobs. The respondents differed in their choices of the RS speaker's perceived occupations. Whilst some chose a landlord, a baker or a farmer (each was mentioned once each), which were also thought to be occupations of the dialect speaker, the other professions listed tended to be different from those of the dialect speaker, with a cook being the most common. These professions were a mix of traditionally working-class or middle-class jobs, with one respondent simply stating that they believed the speaker to be just in some "middle-class" type of profession<sup>43</sup>.

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<sup>43</sup> "Other" positions (dialect speaker): rancher, mason, pastry chef, carpenter, pensioner, contractor, butcher, train driver. "Other" positions (regional standard speaker): technician, worker, comedian, plumber, middle class (no further information given), bus driver, clerk, painter (type not specified).

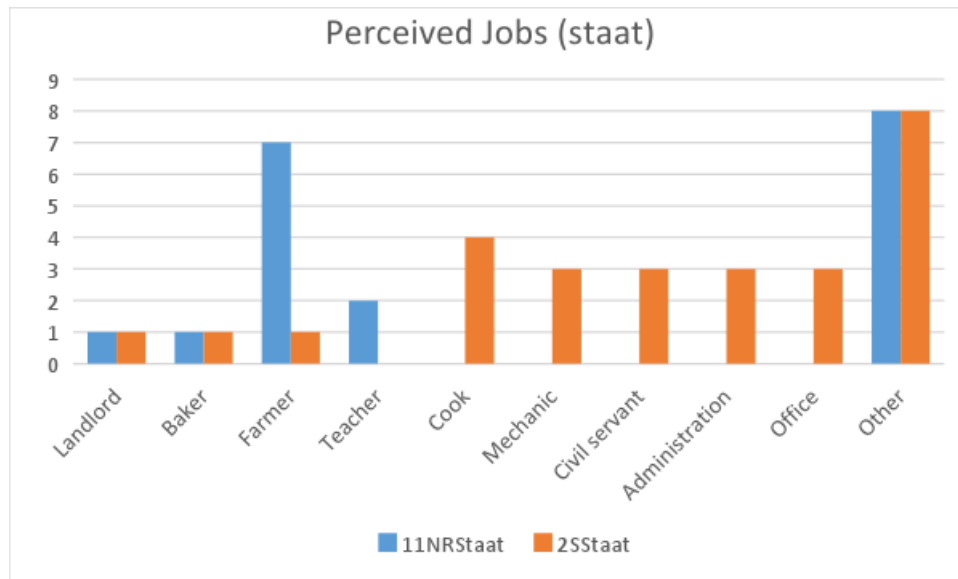


Figure 96: Survey respondents' perceptions of the professions of (non-rural) dialect and regional standard speakers of the sentence "In de keuken staat een oventje" (RD: N=27; RS: N=37).

We will now consider the attitude ratings for this sentence. The Low Franconian and Standard Dutch groups in general rated the RS speaker slightly lower on most dimensions for this sentence than they did the previous one. Perhaps it is that the third person singular vowel alternation present in the dialectal pronunciation of *staat* is not as widely considered a dialect marker as is the fronted diphthong in *peerd*. Therefore, the linguistic difference between the dialect and RS speakers is not seen to be as great for *staat*. The difference was noted, however, as the Low Franconian and Standard Dutch groups judged the RS speaker's sentence to be considerably more "correct" than that of the dialect speaker. Although it was not as strong as that seen for the previous sentence, the trend still remained at least within the non-Low Saxon groups, in that speakers were generally rated higher on Friendliness and Trustworthiness, but lower on Intellect and Education, with the RS speaker receiving higher scores than the dialect speaker.

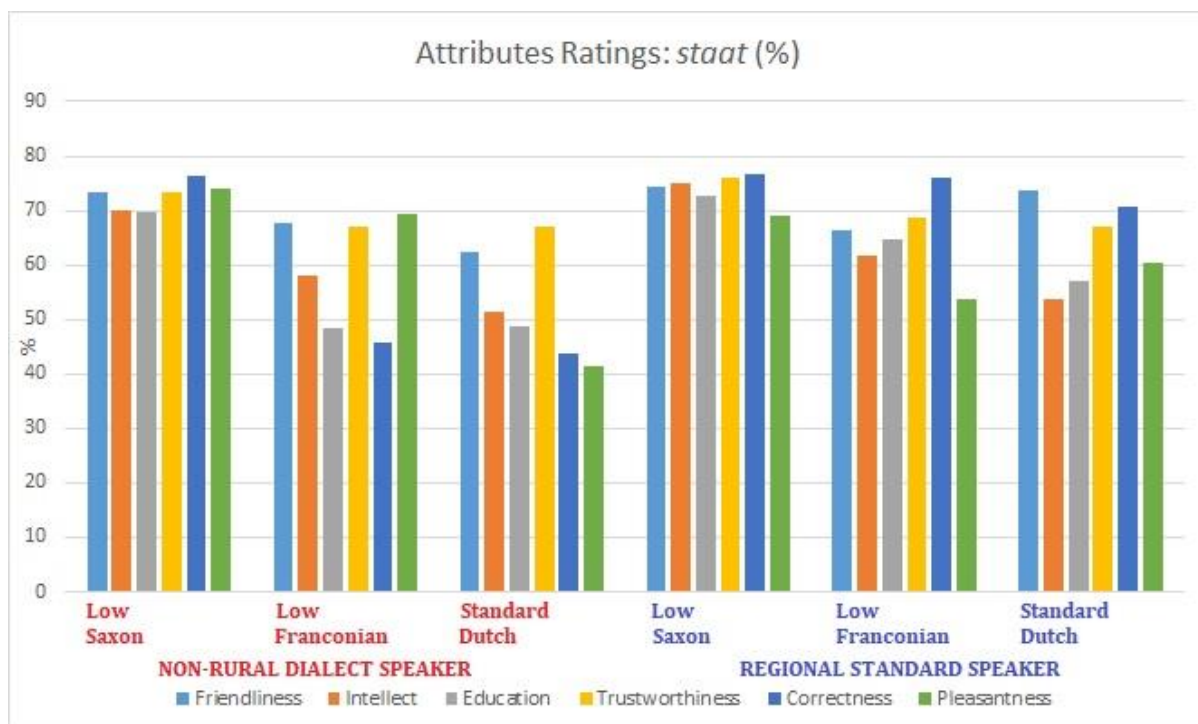


Figure 97: Attributes ratings (*In de keuken staat een oventje*) (RD: N=27; RS: N=37).

It was particularly with respect to Education and Correctness that the Low Franconian and Standard Dutch-speaking groups gave noticeably different ratings for the two speakers. The dialect speaker had a rating of 48.33 from the Low Franconian group and 48.67 from the Standard Dutch group for Education, but these scores were much higher for the RS speaker, with 64.83 from the Low Franconian group, and 56.89 from the Standard Dutch group. The NRD was scored 45.67 by the Low Franconian group, and 43.60 by the Standard Dutch group for Correctness, which contrasted with a much higher 76.36 from the Low Saxon group. While the Low Saxon group rated the RS speaker similarly on Correctness (76.67), the Low Franconian and Standard Dutch groups also considerably increased their ratings for this speaker, with scores of 76.00 and 70.75 respectively. This indicates a reaction on the part of the listeners to the use of the Standard Dutch vowel /a:/, rather than its Achterhoeks counterpart, in so far as the use of the standard variant apparently elicits the belief that the language is seen as more correct (this is with the exception of the Low Saxon group, who viewed their own variety to be just as correct as the standard).

Looking at the perceptions of speaker interests, again the RS speaker was seen to prefer pop music, and the NRD speaker was seen to prefer folk. These numbers were, however, not as high as those for the previous set of speakers. If the interest in folk music is accepted to be viewed as something in which those who speak dialect are more likely to engage, then the

slight decline in the percentage of respondents who chose that option perhaps indicates, as has been relatively consistent for this sentence, that the dialectal vowel [e:] in *staat* is not as strong a dialect marker as is the pronunciation of *paard*, with the vowel [iə]. Regarding travel, the dialect speaker of this sentence was perceived to also travel outside of the Netherlands more than the previous dialect speaker (for the sentence *Hij heeft al sinds 1940 een paard*) was. The dialect speaker of this sentence (*In de keuken staat een oventje*) was also seen to have a wider taste in food, but similar leisure interests. They were more often perceived to enjoy traditional Dutch food (which is included under the heading of “Other”) than the RS speaker, who was also thought to have a wide range of food tastes and leisure interests. However, we must consider these results in conjunction with the fact of the inclusion of a NRD speaker instead of a RS speaker, despite there being no observable differences in their pronunciations of the KAAS vowel.

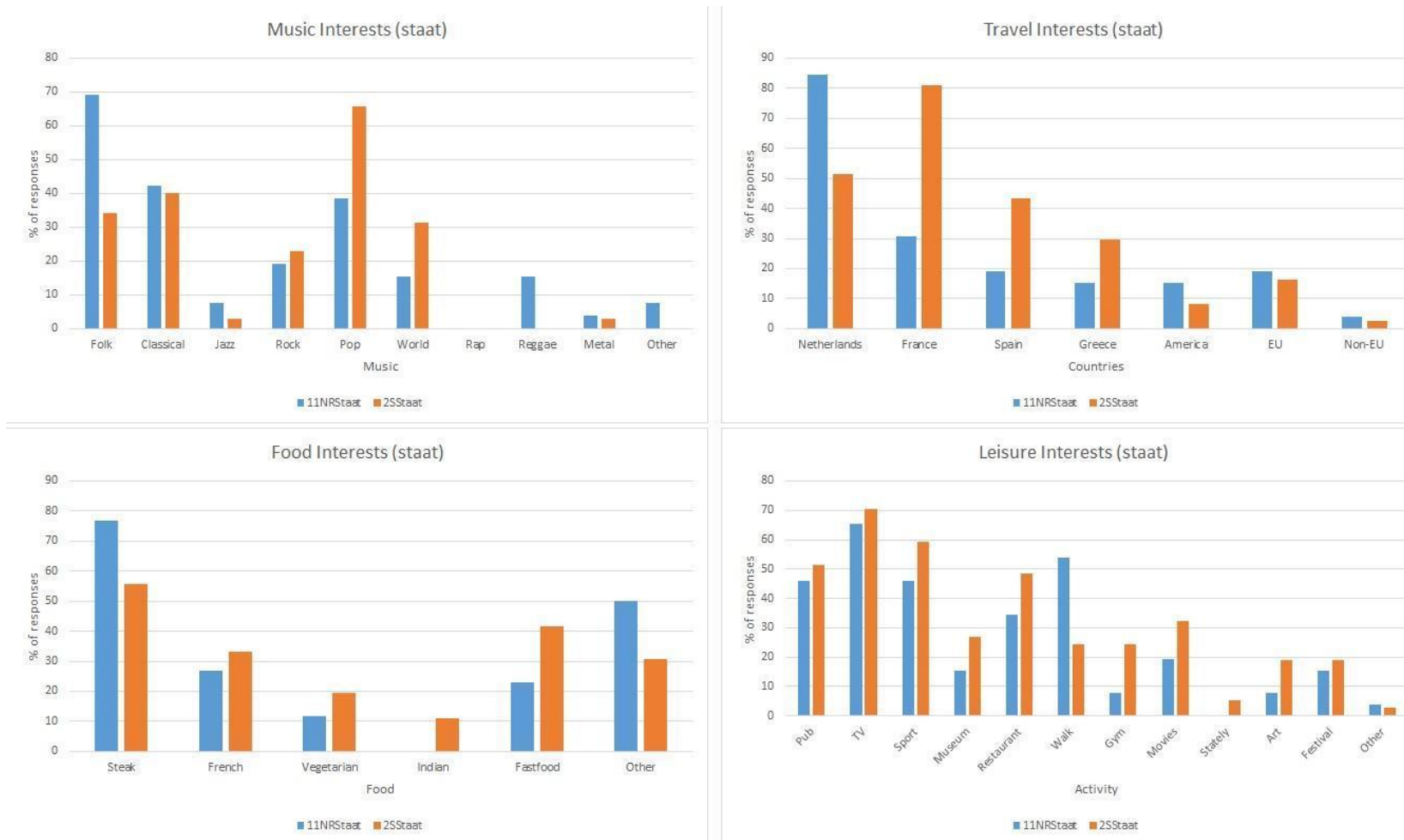


Figure 98: Survey respondents' perceptions of the interests of dialect and regional standard speakers of the sentence "In de keuken staat een oventje" (RD: N=27; RS: N=37).

### 6.6.2.3. *Hij was stijf van de pijn (KIJK vowel)*

Respondents were presented with all three groups of speakers reading the sentence *Hij was stijf van de pijn*. The three groups were all included due to differing vowel pronunciations (the RS speaker used standard vowels, the RD speaker used dialectal vowels, and the NRD speaker used a mix of both dialectal and standard vowels). It is likely that most of the survey respondents viewed the RS speaker as being from a city due to his use of the Standard Dutch diphthong [ɛi] in *stijf* and *pijn*. As shown in the results of the reading and picture tasks, the Achterhoeks pronunciation of the vowel has not changed much over the years, and has retained its status as an eastern dialect marker. Thus, a RS speaker's use of the Standard Dutch vowel instead of the dialect vowel would perhaps place him in a more urban location than his use of the Standard Dutch vowel [a:] would, when investigating the PRAAT or KAAS vowels. It has been established that the Standard Dutch /a:/ has more vowel equivalents in Achterhoeks (as in the PRAAT, KAART, KAAS and PAARD lexical sets) than /ɛi/ does, where it corresponds only to [i] (the KIJK lexical set). Use of the diphthong therefore suggests to the listener that the speaker is not speaking in the traditional dialect. Overall, the most common perceived demographic information for each speaker were age- and location-graded:

- Dialect speaker (Rural): Rural location, aged 60+
- Dialect speaker (Non-Rural): Non-Rural location, aged 40-59
- Regional Standard speaker: Urban location, aged 20-39

Half of the survey respondents identified the RS speaker as being from a city, considerably more than for the sentences investigating the vowels in *paard* and *staat*. Regarding the previous sentences, most respondents believed the RS speaker to be from a non-rural, but also non-urban, area. The consistent use of the Standard Dutch diphthong [ɛi] in the words *stijf* and *pijn* in this sentence probably contributed to the listeners' perceptions of this speaker being more likely to originate from a more urban area than the others. There was, however, a rather large component of listeners (42.86%) who identified the RS speaker as being from a town as opposed to a city or rural location, but this was still a lower percentage than for the previous sentences analysed.

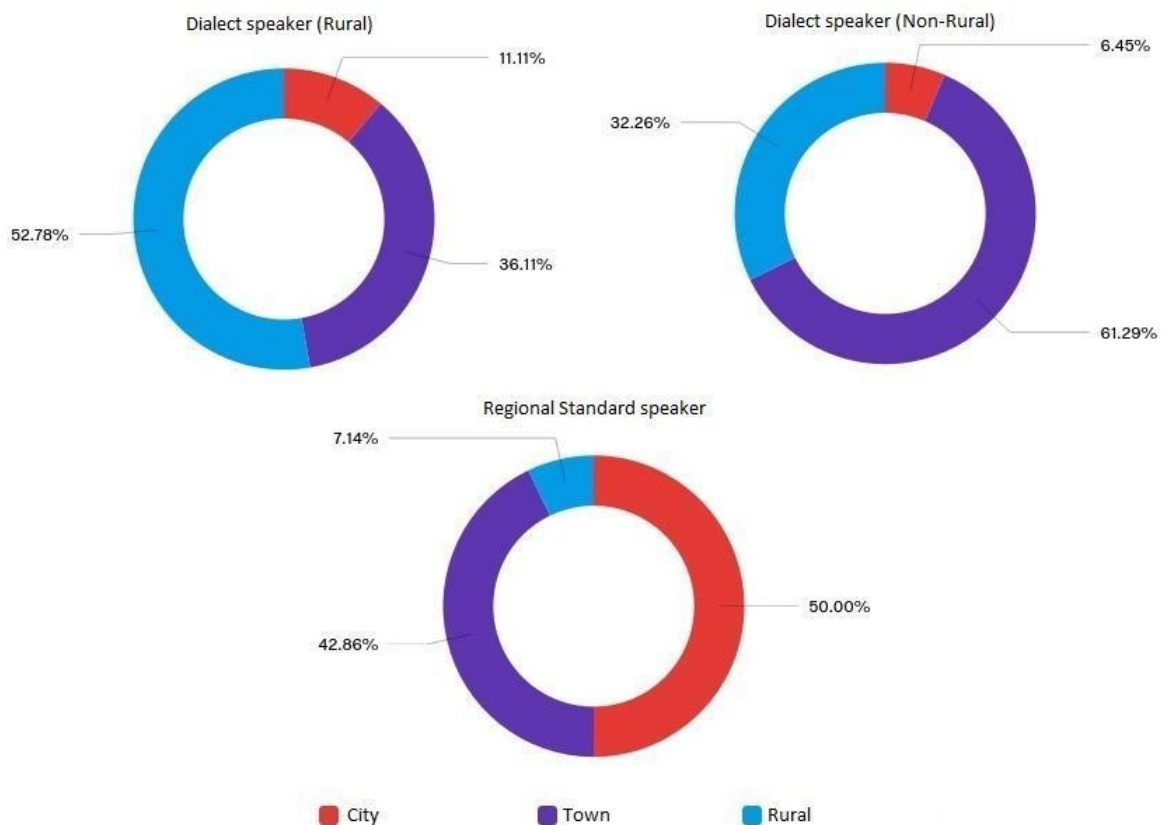


Figure 99: Graphs comparing perceived location of dialect and regional standard speakers for sentence "Hij was stijf van de pijn" (RD: N=36; NRD: N=31; RS: N=28).

A difference in perceived age was noted between the three speakers, and it appeared to follow the axiom of “the older the speaker, the more likely dialect is to be used”, as before. The majority of respondents, whether or not they were speakers of a dialectal or standard variety themselves, viewed the RS speaker as more likely to be within the 20-39 age range (as already established, his actual age was 35), and the RD speaker to be 60+ (his actual age was 55), with the NRD speaker within 40-59 (his actual age was 59). This is suggestive of the fact that the use of the diphthong indicates the speaker to be younger; that is, that dialectal variants are more likely used by older speakers, and the intermediate variety represents the mid-way point between use of traditional dialect and regional standard. It provides a good perceptual analysis of what change in progress might look like for this particular vowel. As the reading and picture tasks showed, this vowel [i] appears to have mostly retained its prominence amongst self-reported dialect speakers. These results, however, suggest that it is associated more with older generations, and that younger speakers are less likely to use it.

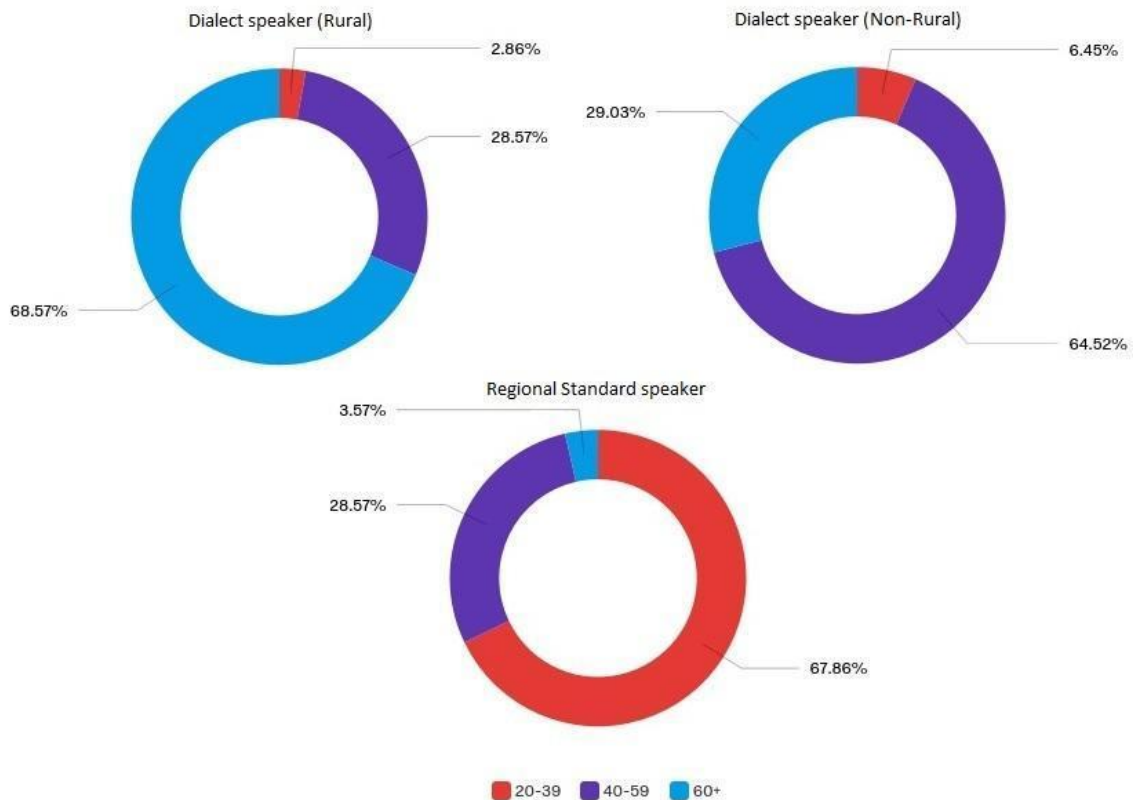


Figure 100: Graphs comparing perceived age of dialect and regional standard speakers for sentence "Hij was stijf van de pijn" (RD: N=36; NRD: N=31; RS: N=28).

The most common perceived occupation of the rural speaker was again a farmer, but the listeners also frequently believed the speaker to be a pensioner, with a varied range of other jobs also suggested. Similar occupations were mentioned for the NRD speaker as well, and while a farmer was the most popular suggestion, it was not as frequently proposed for this speaker as it was for the rural speaker. Only one respondent suggested this job for the RS speaker. Only the RD speaker was suggested to be a pensioner, whereas the RS speaker was perceived by a number of respondents to perhaps be a student, office worker, or physiotherapist, occupations which were not considered for either of the dialect speakers. Both the rural and RS speaker were each once perceived to be a doctor. A number of other professions were also suggested once each by the respondents for the three speakers<sup>44</sup>.

<sup>44</sup> "Other" positions (RD speaker): gravedigger, gardener. "Other" positions (NRD speaker): ambulance officer, lodger (no further information given), musician, technical, bus driver, company employee, shepherd. "Other" positions (regional standard speaker): administration, planner, hardware manager, clerk, vet, website builder, lab worker.



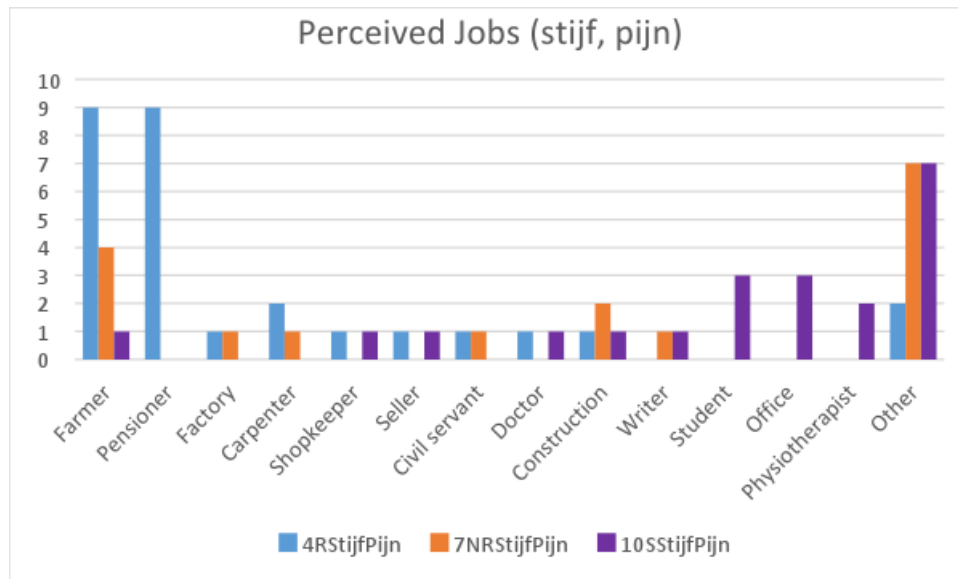


Figure 101: Survey respondents' perceptions of the professions of dialect and regional standard speakers of the sentence "Hij was stijf van de pijn" (RD: N=36; NRD: N=31; RS: N=28).

Again, we see the highest scores on Friendliness and Trustworthiness for the dialect speakers, with the highest scores coming from the Low Saxon-speaking group. They also rated the dialect speakers considerably higher on the attributes of Intellect and Education than the other groups did. Similar figures were seen for both the RD and NRD speakers, but the Low Saxon group tended to give slightly lower ratings overall to the NRD speaker than to the rural speaker. Perhaps the most striking observation is that of the Low Saxon groups' high ratings for the RD speaker's language attributes of Correctness and Pleasantness, compared to the comparatively low ratings from the other groups, particularly the Standard Dutch speakers. Yet they found the NRD speaker to be less correct than the RD speaker, and so invariably judged the NRD speech as also less pleasant. This suggests that, for the Low Saxon group, the notion of the pleasantness of speech is attached to its correctness, and as the trend is that these speakers tended to rate speech higher if they judged it to be closer to the traditional dialect, they have reacted to the NRD speaker's speech as being linguistically further away from their own notions of pleasantness and correctness than that of the rural speaker. This NRD speaker tended to switch between the monophthongal and diphthongal variants, and the Low Saxon group appear to have picked up on that more than the other groups have. Interestingly, though, the Low Franconian group rated the NRD speaker's language as less correct and pleasant, while the Standard Dutch group rated it as more correct, but less pleasant, than that of the RD speaker.

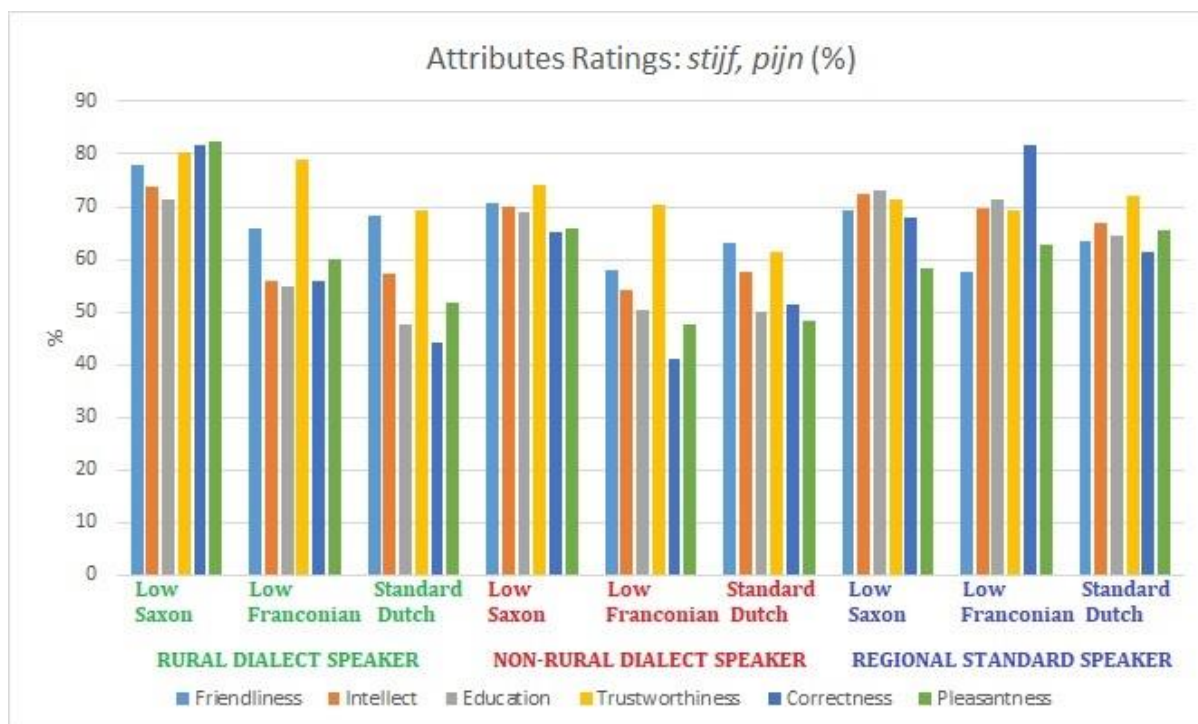


Figure 102: Attributes ratings (*Hij was stijf van de pijn*) (RD: N=36; NRD: N=31; RS: N=28).

We will now compare the dialect speakers' results to those of the RS speaker. The Low Saxon group gave similar ratings for Intellect and Education to the RS speaker as they did for the dialect groups, but their ratings for Friendliness and Trustworthiness were considerably lower for both the RS and NRD speakers than they were for the RD speakers. The Low Franconian and Standard Dutch speaking groups gave lower scores for Friendliness. However, the Standard Dutch group rated the RS speaker higher on Trustworthiness. Both of these groups also increased their Intellect, Education, Correctness and Pleasantness scores for the RS speaker. However, the Low Saxon group found the RS speaker's language to be markedly less correct and pleasant than that of the RD speaker. There were varying scores from this group when comparing these attributes to those of the NRD speaker: the Low Saxon group reported not much difference in Correctness, but perceived the RS speaker's language to be less pleasant.

The attitude measurements for this sentence suggest that for the Low Saxon speakers there is less linguistic difference between the NRD and RS speaker than there is between the RD and NRD speakers. However, the trend seemed to be the opposite for the other two groups. This is particularly evident in the scores for the speaker attributes of Intellect and Education, and for the language attribute of Correctness, where the two non-Low Saxon groups give similar

scores to one another for both dialect speakers, but markedly increase these for the RS speaker.

Regarding speaker interests, folk music was again the most popular perceived choice of the dialect speakers; more survey respondents chose it for the rural than the NRD speaker, perhaps again highlighting its perceived association with traditional dialect speech. The rural speaker was most often perceived to visit the Netherlands and Germany for his holidays, and to eat steak or traditional Dutch food for his meals. The NRD speaker was perceived to travel outside of the country more, as well as to have a slightly wider variety of food tastes and to be less likely to eat traditional Dutch food. As with the dialect speakers of the other sentences, both RD and NRD speakers were most often perceived to spend their leisure time at the pub, going for walks or watching television. The NRD speaker was also commonly perceived to enjoy eating out at restaurants.

In contrast, the RS speaker was again perceived to enjoy pop music. This speaker was also thought to travel to the most places, to eat a wide variety of food, and to enjoy more leisure activities than the two dialect speakers.

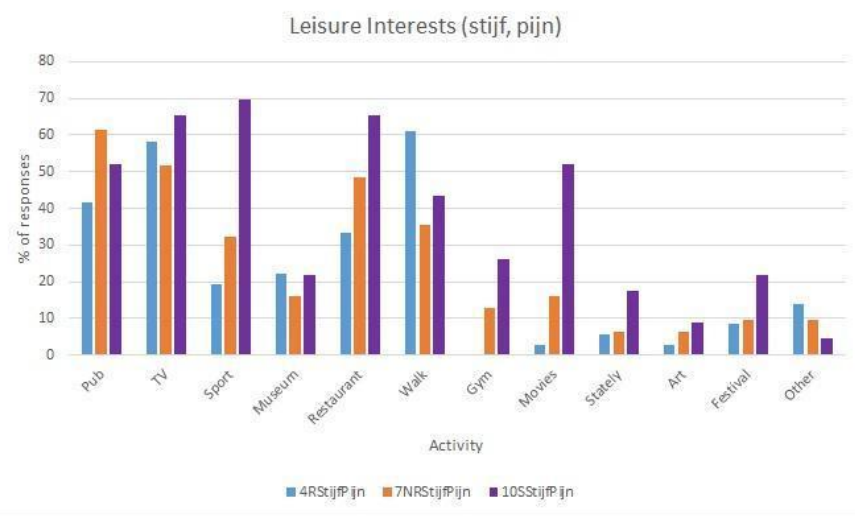
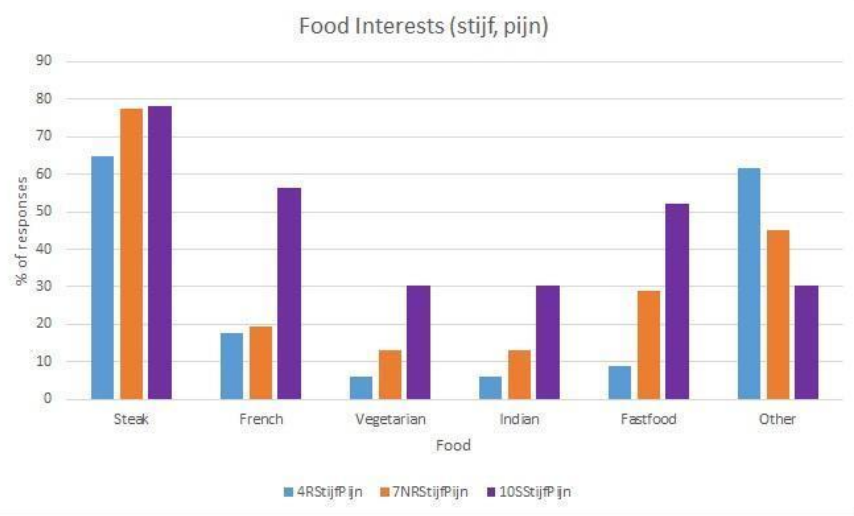
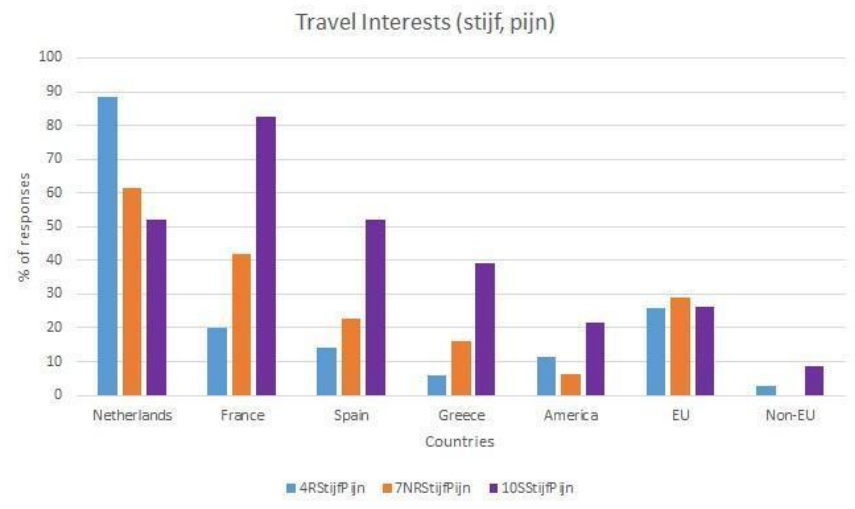
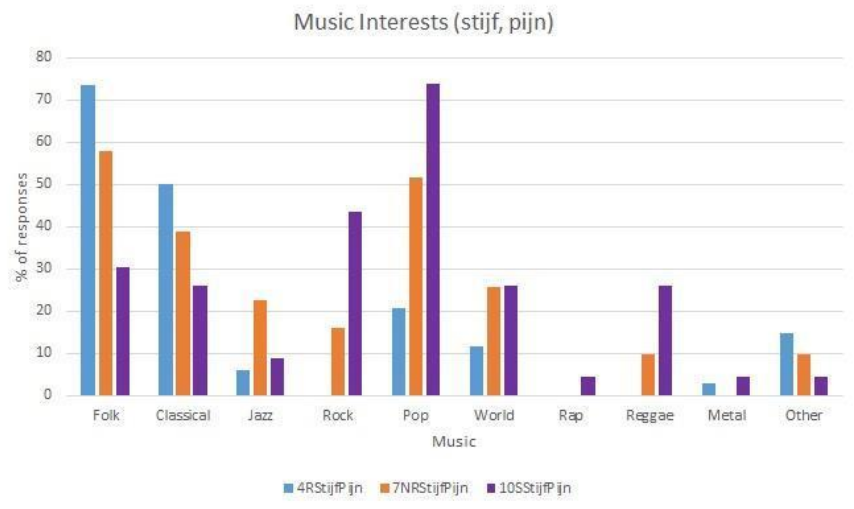


Figure 103: Survey respondents' perceptions of the interests of dialect and regional standard speakers of the sentence "Hij was stijf van de pijn" (RD: N=36; NRD: N=31; RS: N=28).

#### 6.6.2.4. *Kun je rauw vlees ruiken? (HUIS vowel)*

The results for the perception of speaker location were the only set of results to not follow the pattern of the more traditional dialectal speaker<sup>45</sup> being perceived as more likely to reside in a rural area, or as older than the less traditional dialect speaker. The most common perceptions are as follows:

- Dialect speaker (Rural): Non-Rural location, aged 20-39
- Dialect speaker (Non-Rural): Rural location, aged 40-59

The results for perceived locality indicate that the listeners felt the RD speaker to be less likely to be from a similar area than the other rural speakers, or the NRD speaker of the same sentence. There appears to be a degree of uncertainty regarding these perceptions of this vowel, as although the RD speaker was actually thought of as being more likely to be from a town than the NRD speaker, he was also slightly less likely to be thought of as coming from a city. In other words, these results do not seem to be as consistent as those for the other sentences, and is the first indication that the type of monophthong used is not as marked as the use of other dialect features such as the [i] vowel rather than the diphthongal Standard Dutch variant [ɛi] in the KIJK lexical set, or the vowel in *paard* as *peerd*.

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<sup>45</sup> The measure of “tradition” here is whether the speaker used the older vowel [u], or the newer vowel [y]. As monophthongs, both of these variants would be considered to be more dialectal than the Standard Dutch diphthong [oey].

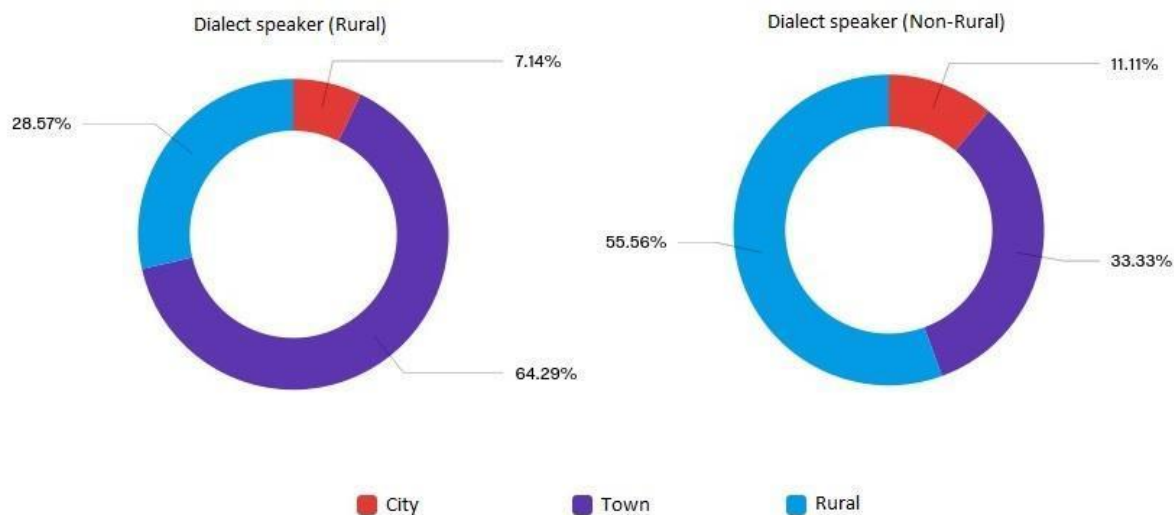


Figure 104: Graphs comparing perceived location of rural and non-rural dialect speakers for sentence "Kun je rauw vlees ruiken?" (RD: N=28; NRD: N=36).

The listeners' perceptions of speaker age were also mixed. This was the only sentence where the respondents perceived the RD (arguably more traditionally dialectal due to the use of the older [u] vowel) speaker as more likely to be younger than the NRD speaker. The results were split between whether the speaker was more likely to be within the 20-39 or 40-59 age ranges, but perhaps what is most interesting is that only a very small minority of respondents perceived either speaker to be aged 60+. This is quite a departure from what has been observed in the responses to the other sentence stimuli: whilst the NRD speaker has so far been perceived to be most likely aged between 40-59, many respondents have also believed this type of speaker to be 60+, and the RD speaker has so far been overwhelmingly perceived to be aged 60+. Coupled with the mixed results seen above for the speakers' perceived localities, the data appear to suggest that use of any monophthongal variant is characteristic of all speakers of this region, and not so much a marker of traditional dialect use as the other variants observed within this study. That is, this particular variant is not necessarily perceived always to be associated with older rural speakers, which does not seem to be the case with the other dialectal vowels. The survey respondents here clearly believe that a monophthongal vowel is just as likely to be found in the speech of younger, less rural (although not urban) speakers as it may be within older rural speakers. It is still a marker of a non-urban dialect, but does not appear to be affected by the variable of age, according to the respondents in the survey.

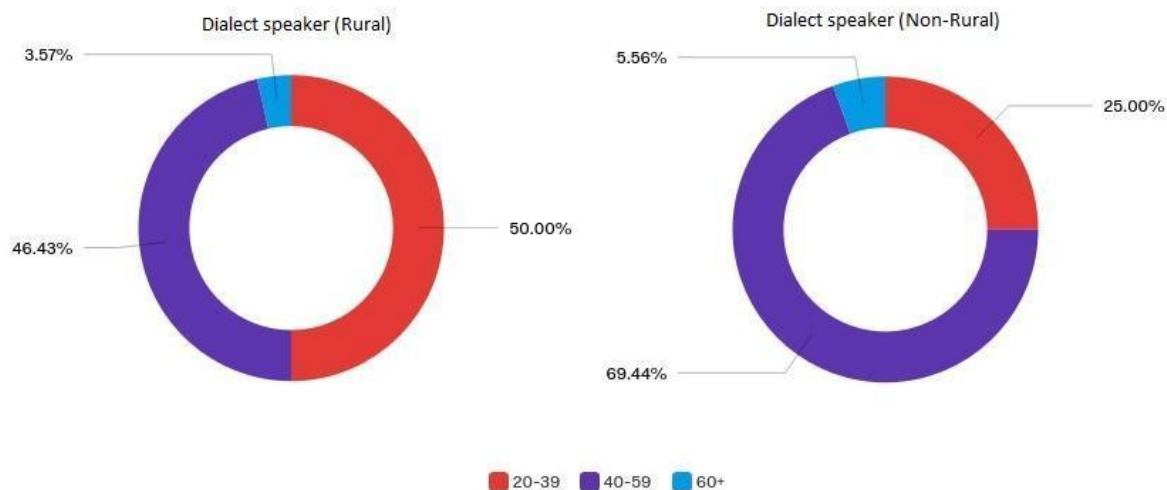


Figure 105: Graphs comparing perceived age of rural and non-rural dialect speakers for sentence "Kun je rauw vlees ruiken?" (RD: N=28; NRD: N=36).

There were more responses given for the perception of occupation for the NRD speaker than the RD speaker. The most common response for each speaker was a butcher, but a farmer was also a popular suggestion (interestingly, more so for the NRD speaker than for the RD speaker), but the overall number of responses for each speaker also has to be taken into account here. There was not a lot of consensus as to the occupation of these speakers, as there were a lot of suggestions that were mentioned only once for each speaker<sup>46</sup>. The relatively high number of perceptions of the speakers as butchers could be potentially be explained by the listeners reacting to the subject of the sentence, *Kun je rauw vlees ruiken?*, which translates into English as "Can you smell raw meat?". Nonetheless, it does not appear that there is any particular pattern attached to either speaker, with each recording a number of participants suggesting both typical middle-class and working-class professions for each.

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<sup>46</sup> These included, for the RD speaker: student, chauffeur, construction worker, contractor, craftsman, hardware sales, IT, and landlord. For the NRD speaker: technical, gardener, road worker, greengrocer, plumber, and shopkeeper.

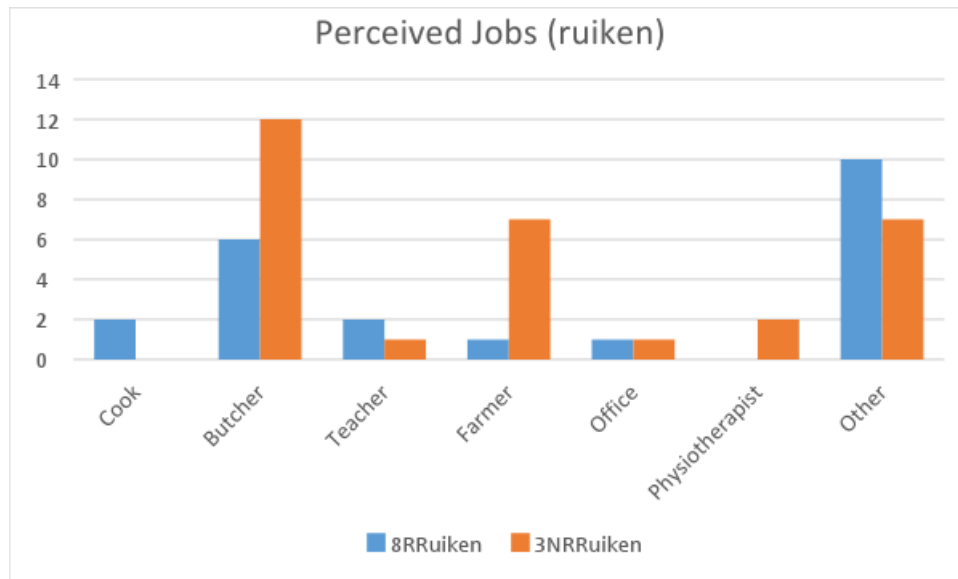


Figure 106: Survey respondents' perceptions of the professions of rural and non-rural dialect speakers of the sentence "Kun je rauw vlees ruiken?" (RD: N=28; NRD: N=36).

Whilst the difference in perceptions of the RD and NRD speakers may have been less clear based on the mixed responses for perceived location, age, and occupation, the attitude ratings mostly follow the already established pattern whereby the Low Saxon-speaking group tend to rate the more dialectal variety higher on all attributes. Conversely, the other groups have tended to rate this variety lower on Intellect and Education, and mostly higher on Friendliness and Trustworthiness. Regarding this sentence, *Kun je rauw vlees ruiken?*, the difference between the two dialect speakers was what may have been a hard-to-notice variation in the vowel in *ruiken*. However, the speakers tended to follow the same pattern as that seen in the sentences above, indicating that they had noticed and reacted to the differing vowels.



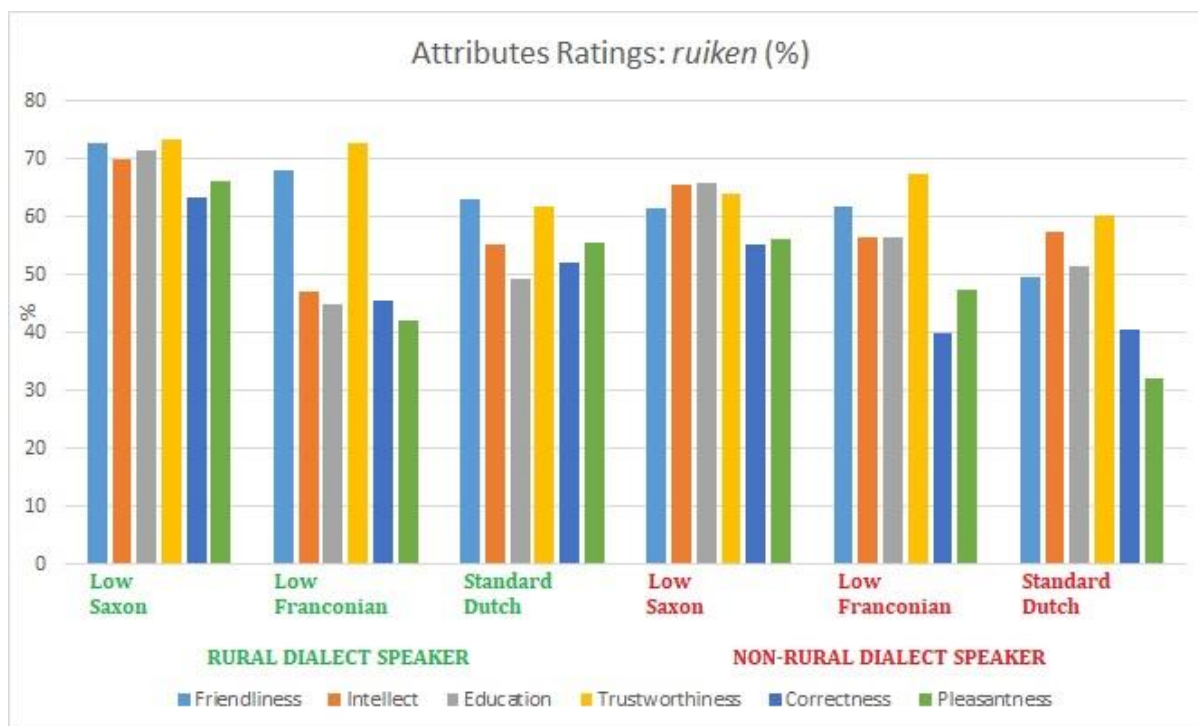


Figure 107: Attributes ratings (*Kun je rauw vlees ruiken?*) (RD: N=28; NRD: N=36).

Considering the attributes of Friendliness and Trustworthiness, all three groups of respondents rated the RD speaker higher than the NRD speaker. The Low Franconian and Standard Dutch groups gave higher ratings to the NRD speaker on the attributes of Intellect and Education, however, which, as stated above, follows the trend already seen in the other sentences. The ratings for Correctness and Pleasantness were reflected slightly differently, however. The Low Saxon-speaking group continued to rate the RD speaker more highly on these attributes, as they did for the others. The Low Franconian and Standard Dutch-speaking groups, although still giving low scores, actually rated the RD speaker higher on Correctness than they did the NRD speaker. For Pleasantness, the Standard Dutch group's collective score was higher for the RD speaker, while the Low Franconian group's score was higher for the NRD speaker. These results do indicate an awareness of the differing vowels, but with more mixed results it suggests that the distinction between the dialectal vowels of [y] and [u] is not as marked as the distinction between either of these monophthongs and the Standard Dutch diphthong would be. The scores for Correctness in particular are unusually low when compared to the ratings for the other sentences, from both the Low Franconian and Standard Dutch groups. Perhaps it is the use of a monophthong in general that has contributed to the low scores from the Low Franconian and Standard Dutch groups, whereas the distinction between which monophthong is used (either the newer [y] or the older [u]) is noticed more by

the Low Saxon groups. Here, it appears that the Low Saxon speaking groups are making a three way distinction between the vowels, where the Low Franconian and Standard Dutch speaking groups are only making a two-way distinction; for them, the vowel is either dialectal or standard, but the Low Saxon groups differentiate between the two monophthongs, as well as, presumably, the Standard Dutch diphthong.

Looking at the perceived interests of both the RD and the NRD speaker, we again see that the results for this sentence do not appear to pattern with the previous sentences. The NRD speaker is more often perceived to enjoy folk music, a pastime which has been established as one thought to be enjoyed by more traditional dialect speakers, although the percentage of times this was chosen for either speaker was comparatively smaller than that observed in other sentences. Additionally, the RD speaker was thought to enjoy pop music more than the NRD speaker, which had more often been deemed to be an interest of the more traditional dialect speakers. The RD speaker is also perceived to travel more and have a wider variety of tastes in food, whereas there is perhaps more of an even split in perceived leisure activities (with the RD speaker seen to have slightly more interests than the NRD speaker). The results overall appear to be the opposite of what we see with the other sentences, but, as has already been established, the data gathered for this sentence are much more variable, and there is the possibility that those who are not speakers of a Low Saxon dialect themselves are unaware of the subtle differences between vowels. This in turn leads to a much more mixed spread in the results, where it is less obvious what is ascribed to more rural or less rural perceptions.

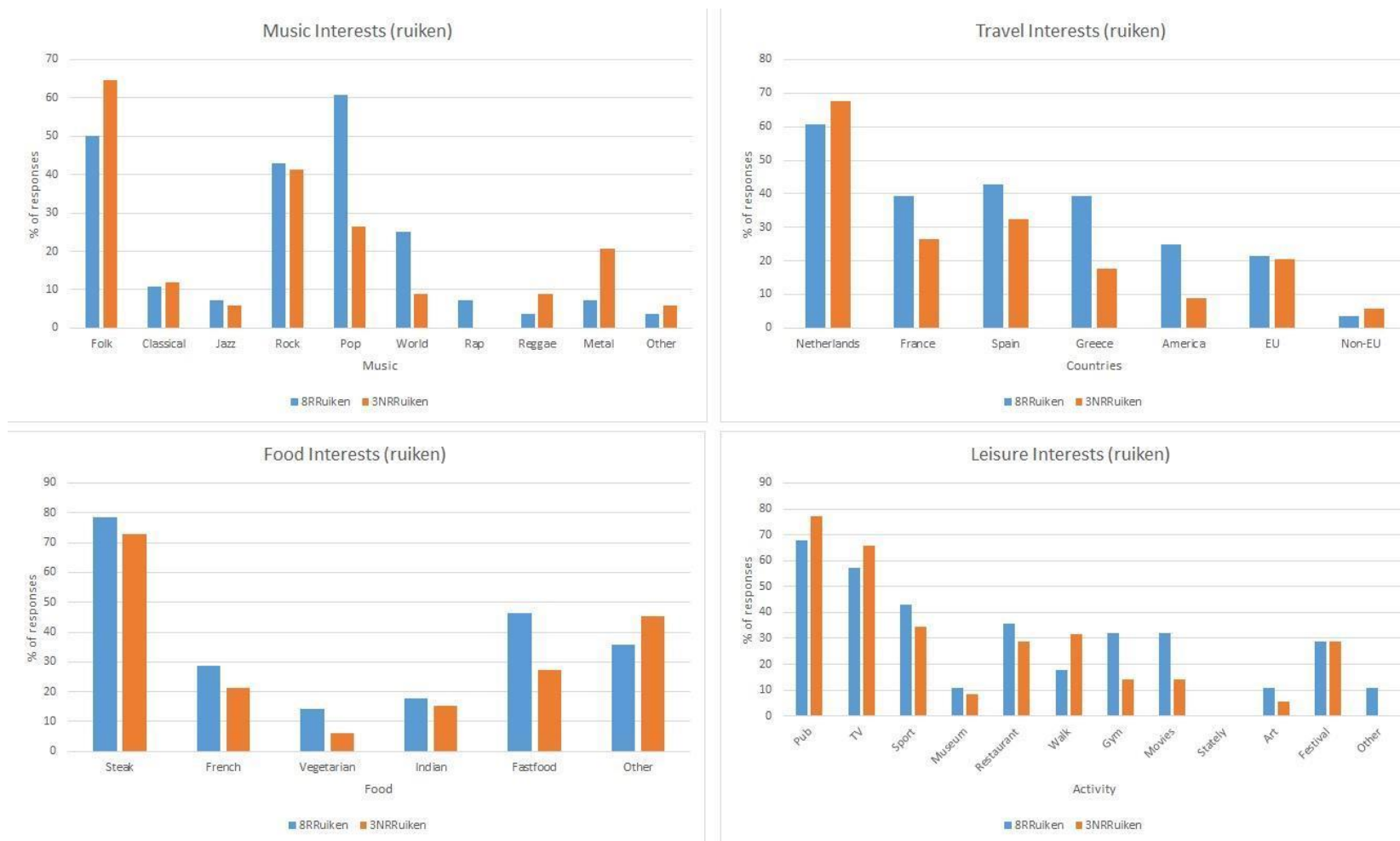


Figure 108: Survey respondents' perceptions of the interests of dialect and regional standard speakers of the sentence "Kun je rauw vlees ruiken?" (RD: N=28; NRD: N=36).

#### 6.6.2.5. *We gaan het huis in de breedte bouwen (PRAAT and HUIS vowels)*

Respondents were again presented with the three different groups reading the sentence *We gaan het huis in de breedte bouwen*. This sentence aimed to test the listeners' reactions to the use of the back vowel or the Standard Dutch vowel in *gaan* (as well as the construction of the verb as *gaat* in traditional Achterhoeks), and the use of the monophthong or diphthong in *huis*. These words correspond to the PRAAT and HUIS lexical sets respectively, therefore this is another sentence which is looking at two features. The most common perceived demographic information for each speaker is as follows:

- Dialect speaker (Rural): Rural location, aged 40-59
- Dialect speaker (Non-Rural): Non-Rural location, aged 40-59
- Regional Standard speaker: Non-Rural location, aged 20-39

First, we consider the results for the perceived location of each speaker. As seen previously, the perceived degree of rurality decreases with the degree of how close the variety is to the standard. The RS speaker was perceived to be most likely from a town (47.83%) or city (43.48%), while the NRD speaker was, as with the previous sentences, also widely believed to be from a town (67.86%). The RD speaker was mostly perceived to be from a rural area (62.86%), but this was also split, with some perceptions of him being from a town (34.29%).

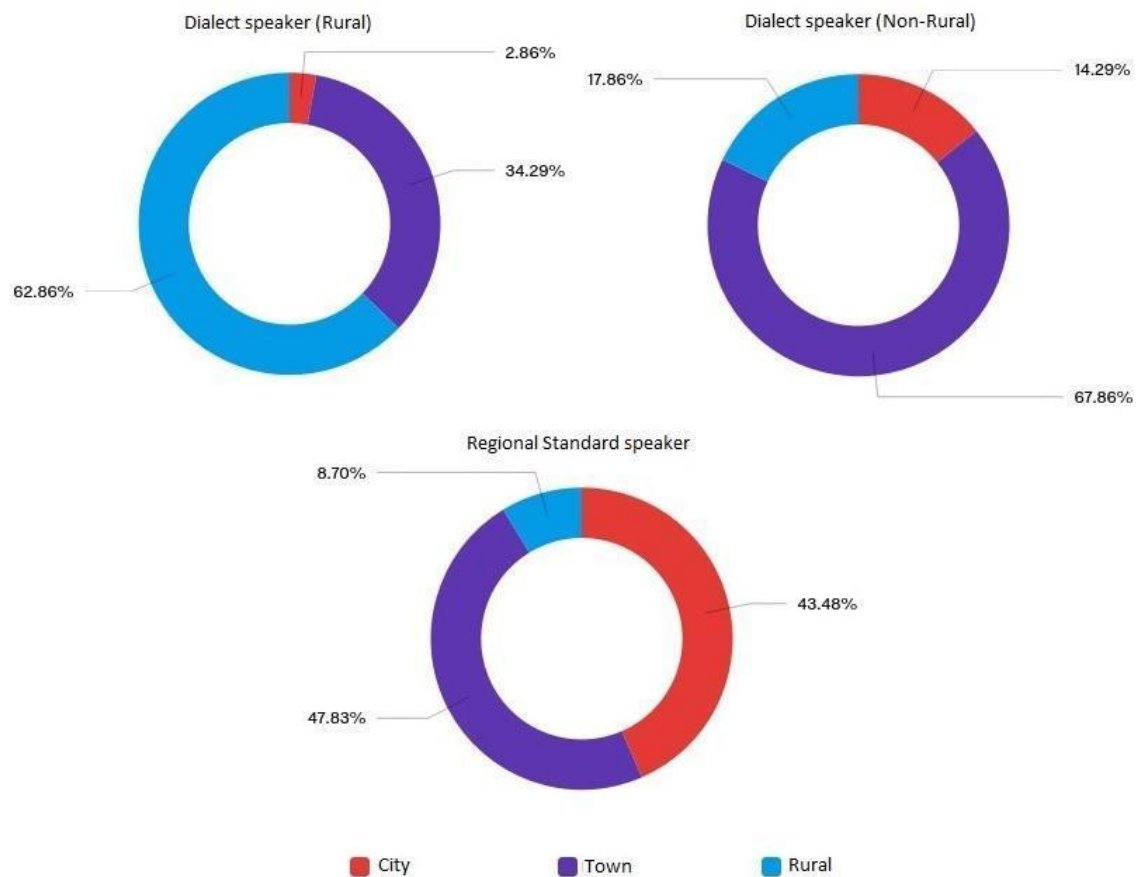


Figure 109: Graphs comparing perceived location of dialect and regional standard speakers for sentence "We gaan het huis in de breedte bouwen" (RD: N=35; NRD: N=28; RS: N=23).

Regarding perceptions of age, out of the three speakers, the RD speaker had the highest percentage of listeners believing him to be aged 60+, but most still perceived him to be within the 40-59 age range (his actual age was 63). This is something of a departure from what we have observed in other sentences, but if we look at the spread of age perceptions across the three speakers, there is still an age-related pattern. The NRD speaker, who was aged 53, had more listeners perceiving him to be within the 20-39 age range (39.29%) than the RD speaker (11.43%), and the RS speaker (aged 35) had even more listeners with this perception (60.87%). It suggests that the RD speaker is still perhaps considered to be the most dialectal, but these vowels do not mark the dialect as much as the centring diphthong in dialectal pronunciations of *paard* or the monophthong in dialectal pronunciations of *stijf* and *pijn* does. Speakers that use the dialectal variants in this sentence are therefore not necessarily perceived as being in the oldest age group. We could, however, speculate that the absence of the old [u] vowel in *huis* may have contributed to the overall results. This is because perceptions regarding the monophthongal pronunciation of the HUIS vowel are varied, which the data for the previous sentence implied. The dialect speakers are, nevertheless, perceived

to still be older than the RS speaker, again suggesting that the use of standard variants correlates with the perception of a younger age.

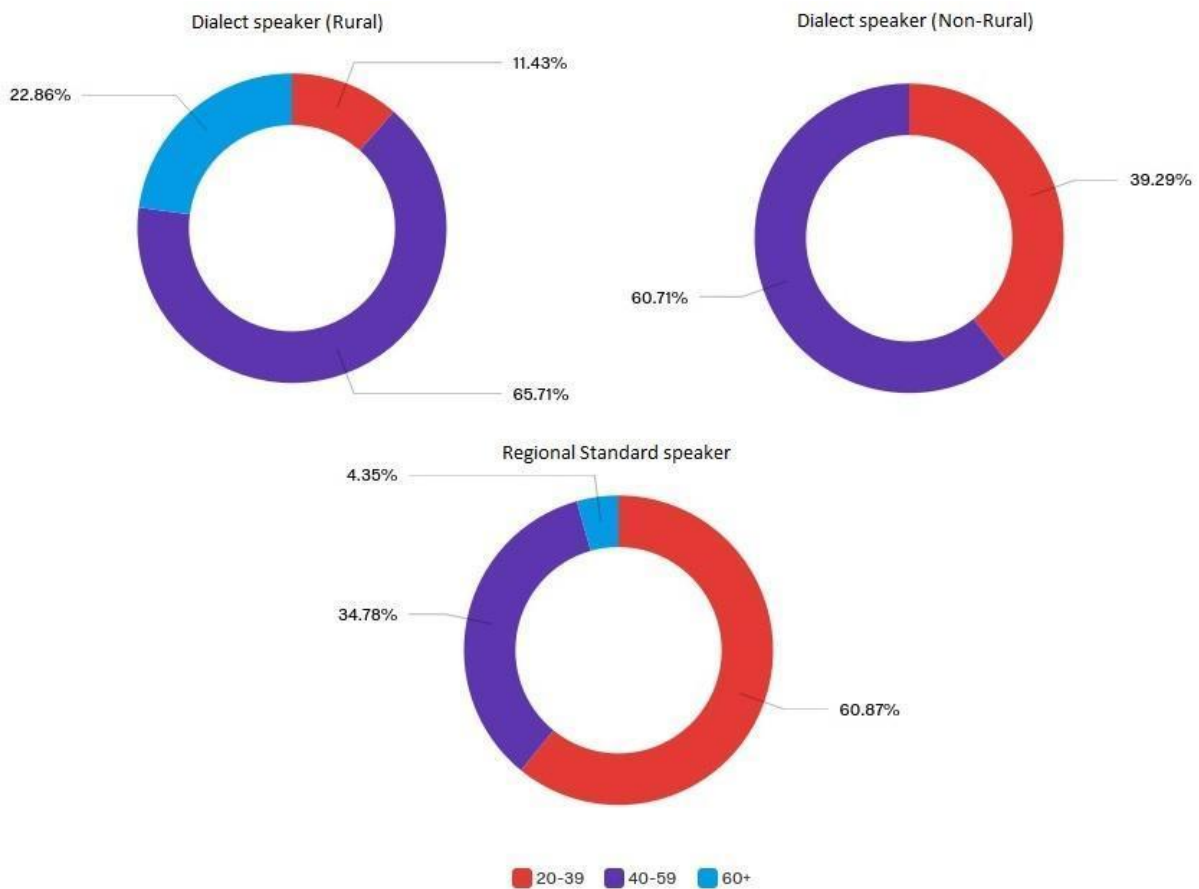


Figure 110: Graphs comparing perceived age of dialect and regional standard speakers for sentence "We gaan het huis in de breedte bouwen" (RD: N=35; NRD: N=28; RS: N=23).

Figure 111 considers the perceptions of speaker occupation. The RD speaker was most often perceived to work in construction, or to be a farmer. The survey respondents usually ascribed the occupation of farmer to the most rural speakers, and so it is evident here that they consider this speaker to be amongst the same group. The NRD speaker, however, was most popularly thought to be a contractor or construction worker, but none of the survey respondents perceived him to be a farmer. This suggests an awareness of the two of these speakers perhaps not belonging to the same group as that constructed in the listeners' minds. The RS speaker was similarly often thought to be a contractor, just like the NRD speaker. However, the possible occupations of lawyer or accountant were also suggested once each, and included within the category of "Other". What could also be considered is that the listeners may be associating the speakers with construction work due to the topic of the sentence being read.

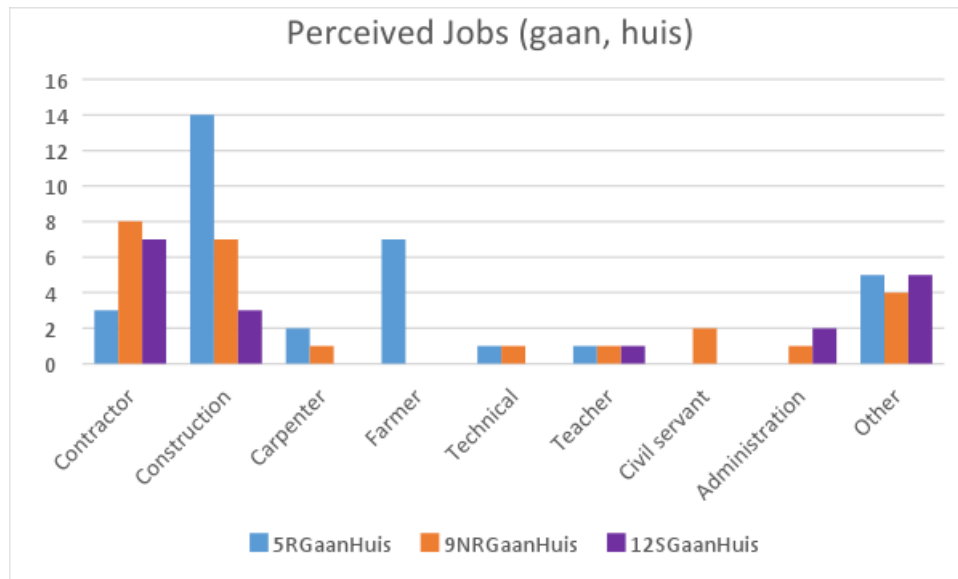


Figure 111: Survey respondents' perceptions of the professions of dialect and regional standard speakers of the sentence "Wij gaan het huis in de breedte bouwen" (RD: N=35; NRD: N=28; RS: N=23).

For the perceptions attached to the speakers of this sentence, the Low Saxon-speaking group gave mid-high ratings for all three speakers. This group rated the RD speaker highest on Correctness (84.12), but they also rated the NRD speaker lower on this attribute than they did the RS speaker (62.00 to 78.31), which somewhat goes against the pattern we have previously observed. All three groups of speakers rated the RS speaker highly on the attribute of Correctness. Interestingly, the Low Saxon group's Correctness score for the RS speaker was slightly higher than those given by the Low Franconian (70.67) and Standard Dutch (72.33) groups, but was still not as high as the Low Saxon group's rating for the RD speaker on this attribute. Conversely, the Low Franconian and Standard Dutch groups rated the language of both of the dialect speakers considerably lower for Correctness.

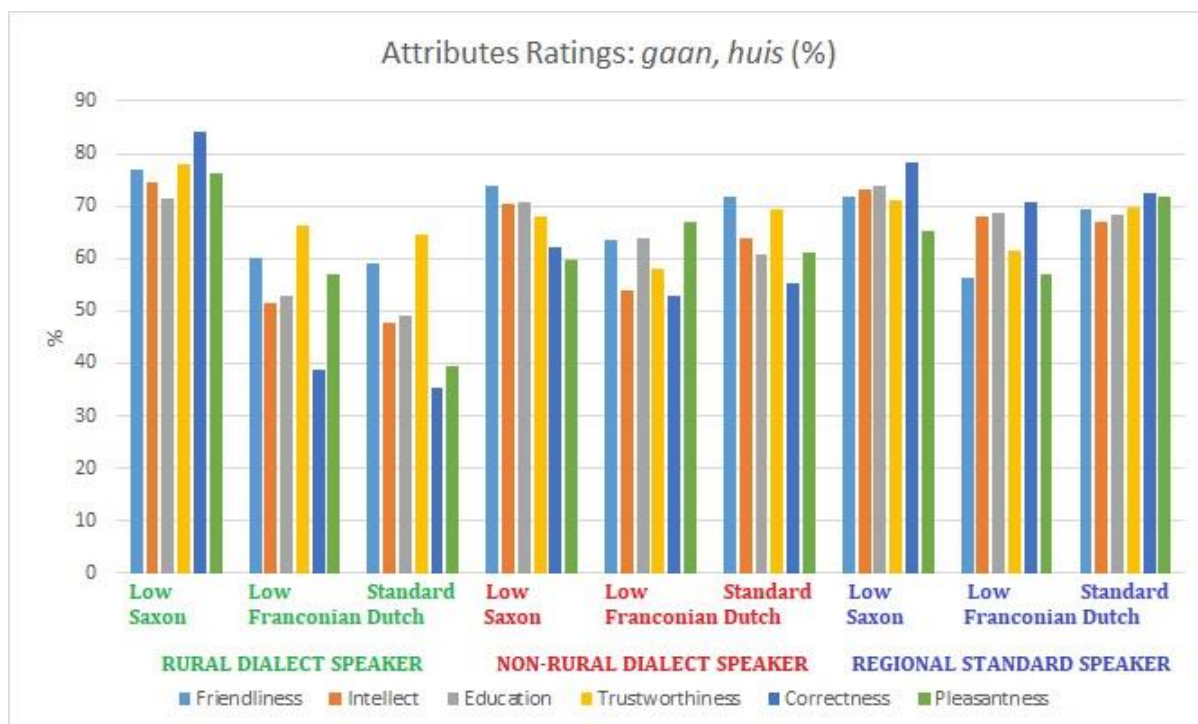


Figure 112: Attributes ratings (*We gaan het huis in de breedte bouwen*) (RD: N=35; NRD: N=28; RS: N=23).

In keeping with previously observed trends, the Low Franconian and Standard Dutch groups' ratings for Intellect, Education, and Correctness decreased with the speaker's perceived use of traditional dialect features. However, the ratings for Friendliness, Trustworthiness, and Pleasantness proved to show some mixed results. Overall, the Low Saxon group tended to give their lowest scores to the NRD speaker, with the RD speaker receiving the highest scores for most attributes, and the RS speaker falling somewhere in between. The Standard Dutch group gave a particularly low rating (39.43) to the RD speaker for Pleasantness, but higher ones for the other speakers. This group also rated the RD speaker lower on Friendliness and Trustworthiness, with the NRD speaker and the RS speaker receiving similarly higher scores for these attributes from this group. The Low Franconian group found the RD speaker to sound the most trustworthy. Somewhat differently from the other groups, however, the Low Franconian-speaking group found the speech of the NRD speaker to be the most pleasant.

We could hypothesise that the aforementioned ratings are a reaction to a dialectal variety that the Low Franconian group perhaps do not associate with either the Achterhoek (or the eastern Netherlands), or with the standard variety. The Low Franconian group are giving a more favourable rating here than the other groups are, who may be more likely to rate the variety closest to their own as the most favourable (for the Low Saxon group, this would be the RD speaker, and for the Standard Dutch group, this would be the RS speaker). This is perhaps



similar to the suggestion in Section 6.6.1 that the Low Franconian group has not necessarily been exposed to a dialect via the sample sentences which they would most identify with, and the NRD speaker represents to them something that is neither traditional Achterhoeks nor the standard variety of the language. The Low Saxon group appear to prefer either traditional dialect or RS speech, but, for the other groups, ratings mostly tended to increase with the degree of standardness.

Looking now at the perceived interests of the speaker, we see some patterns emerging that appear to correlate with those observed for the other sentences. Considering tastes in music genres first, the number of musical interests tends to increase with the overall standardness of the dialect, except in the categories of Folk music and those listed under “Other”. Enjoyment of folk music has been established as appearing to be perceived to be an interest of dialect speakers, and the music listed under the heading of “Other” for this question included suggestions of specific dialect music (such as Normaal or Boh Foi Toch), or religious music differing from traditional dialect music. The RS speaker was perceived to travel the most out of the three speakers, and for this speaker, the suggestions listed under “Other EU” mostly picked Italy as their European destination of choice, whereas the dialect speakers were thought to travel to neighbouring Germany instead. The NRD speakers were perceived to travel more than the RD speakers. The RS speaker was also perceived to have wider tastes in food and leisure activities in general than both of the dialect speakers.

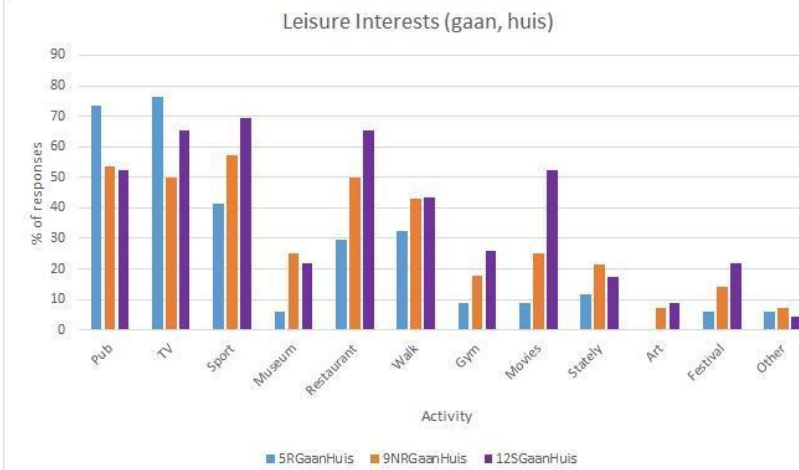
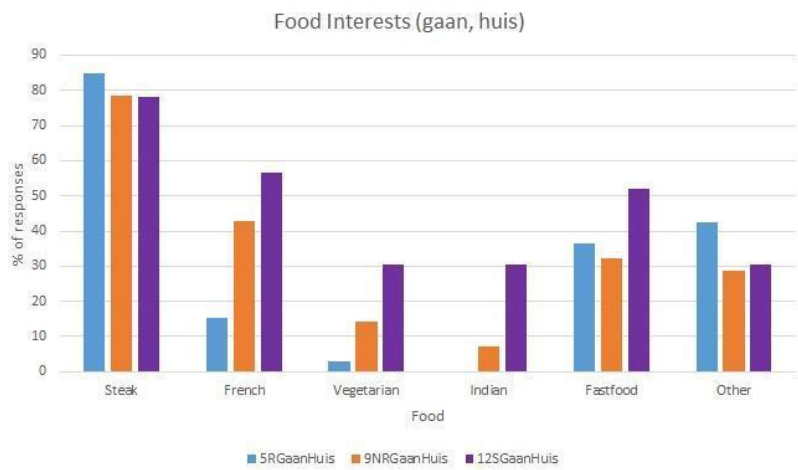
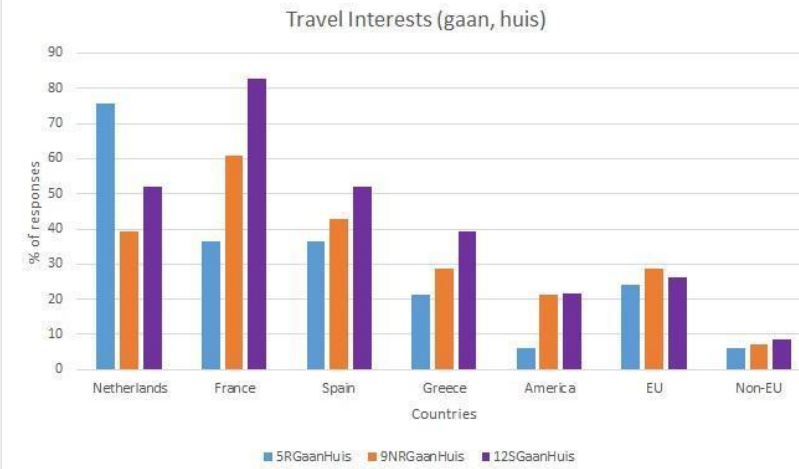
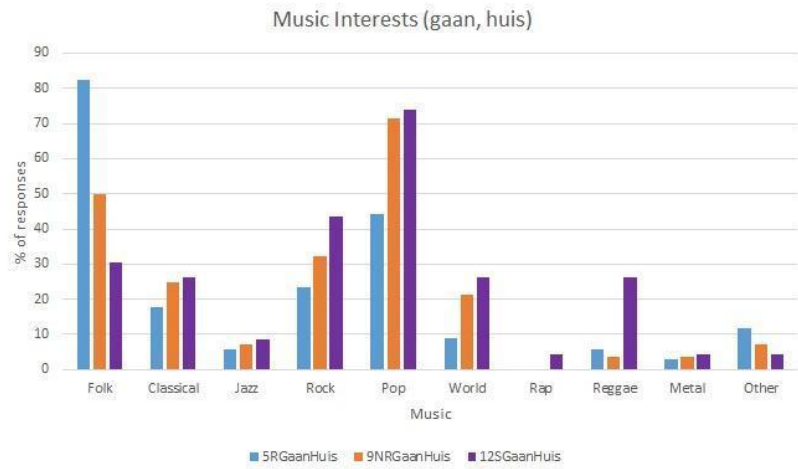


Figure 113: Survey respondents' perceptions of the interests of dialect and regional standard speakers of the sentence "We gaan het huis in de breedte bouwen" (RD: N=35; NRD: N=28; RS: N=23).

The results overall for each section of questioning were shown to be less in line with the other sentence which examined the HUIS vowel in *Kun je rauw vlees ruiken?*, and more aligned with the responses to the other sentences presented to the survey respondents. It is likely that the stronger reactions and clearer results from the listeners to *We gaan het huis in de breedte bouwen* is due to the vowel in *gaat* rather than that in *huis*, as the previous results for the HUIS vowel (in the sentence *Kun je rauw vlees ruiken?*) did not show listeners to be particularly conclusive about their opinions, or at least to identify the back variant as being more traditional (although we cannot discount the fact that respondents may have been reacting more strongly to the vowel which occurred earlier in the sentence). What this means, is that at least for the Standard Dutch and Low Franconian groups, they did not appear to have strong opinions associated with the use of either vowel, and appeared to simply define both vowels as dialectal. However, the inclusion of two vowels in this sentence would likely only have strengthened their perceptions as to the characteristics of these speakers, if the perceptions engendered by one vowel didn't contradict those of the other.

### **6.6.3. General Remarks**

There is clearly a link between dialect use and the perception of engagement in at least some activities. The results showed that, in general, the listeners did react to the dialectal vowels, and that dialect forms do tend to be perceived to be widespread across older inhabitants of rural areas. Additionally, dialect speakers were more likely than others to be judged as listening to folk music, going on holiday within the Netherlands and Germany, and spending their free time going for walks, going to the pub, or watching television.

As previously suggested by Preston (2002), the different groups of respondents appear to have different perceptual judgements, such as respondents preferring the speech that is closest to their own. Although this was less clear between the RD and NRD speakers regarding the pronunciation of the HUIS vowel, the survey respondents appeared to identify and react to the vowels being investigated, ascribing social judgments to each one. We can thus determine a link between perception and production. The results are suggestive of a continuum where, based on the trends of responses from each listener group, the RD speech is the most traditional, the RS speech is representative of a variety closest to the national standard, and the NRD speech is viewed as an intermediate variety (at least to listeners who are speakers of the same, or similar dialects). There are, in turn, certain attitudinal judgments ascribed by the groups of listeners to each of these varieties. Rural and non-rural variation

does not appear to be noticed by the Low Franconian and Standard Dutch speaking groups, but, perhaps predictably, it is by the Low Saxon-speaking group. Attitude judgments about the RD and NRD speaker did not usually differ between the Low Franconian and Standard Dutch speaking groups. This was the case whether each speaker was presented in isolation alongside the RS speaker, or, as in the case of *Wij gaat het huis in de breedte bouwen* and *Hij was stijf van de pijn*, both RD and NRD speech was presented, along with an RS speaker as comparison.

Following from the work by Ladegaard (2001), as discussed in Section 6.6.1, other Low Saxon speakers were more likely to positively rate what they viewed to be as being closest to traditional dialect, than were Low Franconian and Standard Dutch speakers. The Low Saxon group consistently gave higher attitudinal ratings to the speaker in each pair or group that represented what was believed to be the more traditional dialect speaker (based on degree of rurality or contrast with the regional standard), as determined from the results of the first study. In general, the Low Franconian and Standard Dutch-speaking participants tended to give opposite ratings to the Low Saxon group.

Regarding the specific vowels used, the dialectal pronunciations of both *paard* and (the third person singular of) *staat* use a fronted vowel (corresponding to the PAARD and STAAT lexical sets), with the vowel in *paard* – or *peerd*, as it is written in dialect – diphthongising before /r/. The listeners rated the dialectal representation of *paard*, with the vowel [iə], as carrying more perceptual connotations usually associated with dialect speakers than they did for *staat*. These connotations include the speakers being perceived as older and residing in rural areas. In the cases of both *paard* and *staat*, however, the dialect speaker was more likely to be perceived as having these characteristics (of being older and rural) than was the RS speaker of the same word. Perhaps it is, as has been suggested, a case of *peerd* being viewed as a different lexical item, rather than simply a change in pronunciation. Additionally, according to *A Frequency Dictionary of Dutch* (Tiberius & Schoonheim, 2014), *paard* is listed as the fifth most frequently used word relating to animals (with a frequency score of 4.77<sup>47</sup>). It could therefore be possible that the dialect form is in fact used more frequently (than the standard form in both rural and non-rural areas) in rural dialects due to the association with the agricultural industry, leading to it being more salient and recognisable within the dialect and less likely to change. We can also consider the fact that the sample

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<sup>47</sup> This frequency score indicates a normalised percentage of analysed documents which the word occurs in.

dialect speaker for the sentence *Hij heeft al sinds 1940 een paard* resided in a rural area, whilst the speaker of *In de keuken staat een oventje* was non-rural. This was noteworthy for the ratings given by the Low Saxon group, but the scores given by the other groups were similar to all of their general judgments of dialect speech, suggesting that the Low Franconian and Standard Dutch groups do not necessarily make a distinction between rural and non-rural Achterhoeks dialect.

The KIIK vowel in the sentence *Hij was stijf van de pijn* elicited similar attitude and demographic judgments on either side of the continuum. Despite the NRD speaker having pronounced one of these words with a realisation closer to the standard, this was not enough for the Low Franconian and Standard Dutch groups to perceive him in the same way as they did the RS speaker regarding attitude judgments; demographic information (as perceived by all three groups of listeners) did differentiate him from the rural speaker, however. Overall, the use of the dialectal, monophthongal [i] vowel elicited judgments which were consistent with those given to other dialect speakers, and which were particularly strong amongst the Low Saxon-speaking group. The RD speaker was also most commonly perceived to be a farmer, second only to the rural speaker of *Hij heeft al sinds 1940 een paard*, suggesting a strong correlation between the use of monophthongal pronunciation of the KIIK vowel and the perception of a rural lifestyle.

Altogether, the results for *ruiken* are not as conclusive as the results observed in the other sentences. There are a number of reasons for this. Firstly, this sentence was comparing two dialect speakers, as opposed to one (or more) dialect speaker and an RS speaker. Where a dialect speaker was compared against the RS speaker, the differences in perceptions were much greater. Additionally, as was briefly mentioned in Section 6.6.2.4, the use of either monophthong [y] or [u] may be enough to mark a speaker as being from a less urban location than one who used the Standard Dutch variant, and the type of monophthong is less important. This is already evidenced by the Low Franconian and Standard Dutch groups' similar perceptions of both rural and non-rural speakers. Secondly, the differences in the HUIS vowel are perhaps not as recognisable as other vowels we have seen, which resulted in less conclusive results. This was particularly evident when considering the speakers' ages: both speakers were believed to belong to one of the younger age groups, whereas most dialect speakers (of the other sentences) were thought by the listeners to be aged 60+; and their perceived location, where it was actually the non-rural speaker who was more often thought

to be from a rural area. Although the attitude ratings followed the previous patterns (where the speech of RS speaker is viewed more favourably by the Standard Dutch and Low Franconian groups) more closely, we are presented overall with a picture that does not necessarily differentiate the two speakers. The respondents may have reacted to the different monophthongs which affected their attitude ratings (this was certainly the case for the Low Saxon group), but location, age, and occupational-based perceptions do not appear to be attached to either of these vowels. Perhaps if the vowels had also been compared to those of a RS speaker we would be able to more accurately compare, for example, the degree of rurality. However, this sentence has given us other noteworthy information; that of the fact that the Low Saxon-speaking groups are making a differentiation which the other groups are not.

This is where we can consider the results for the sentence which included the word *huis*. This word is pronounced with a diphthong in Standard Dutch, and the front monophthong in Achterhoeks. The sentences containing *ruiken* tested only the awareness of dialectal vowels and perceptions attached to these, whereas the sentence containing *huis* was designed to examine the perceptions attached to three different speakers from the Achterhoek area: an RD speaker, an NRD speaker, and an RS speaker. This time, the listeners were also exposed to the use of the diphthong, and their responses tended to mirror those of the other standard/dialectal vowel exposures. The NRD speaker of this sentence pronounced *gaan* in a standard-like way, but his realisation of the vowel in *huis* (the newer dialect variant [y]) did not vary from that of the rural speaker. This appeared to be sufficient for the Low Saxon listeners to judge his speech as being of an intermediate type, with their ratings generally situated somewhere in between those typically seen for the RD and RS speakers. Certainly, they viewed the language of the rural speaker to be the most correct and pleasant to listen to. However, there was little change in ratings for the other groups of listeners, who ascribed to the RS speaker the same perceptions as those observed in other sentences, but appeared to judge the RD and NRD speakers similarly. Yet overall, the more traditional the dialect representation was, the more the perception of age and rurality increased.

The results follow those of other studies which suggest that standard (or in this case, regional standard) speakers tend to receive lower scores on attributes such as Friendliness and Trustworthiness, but higher on those such as Intellect, Education and Correctness. Conversely, the opposite is true of dialect speakers.

The higher the rating for Intellect and Education, the more likely the speaker would also receive a high rating for Correctness, as well as (to a lesser extent), Pleasantness. Here, we also must consider the role of the Low Saxon-speaking participants, who generally rated the dialect varieties higher, or at least the same as, the regional standard variety, on each of the attributes.

Overall, it appears that there are complex social judgments involved which are ascribed to dialect and RS speakers. There are a few conclusions that can be drawn about perceptions of this dialect, which are not dissimilar to those of other perceptual studies. These include:

- traditional dialect speakers are perceived to be more rural, with regional standard speakers rarely viewed as being from a rural area
- traditional dialect speakers are perceived to be older, and regional standard speakers are always perceived to be in a younger age group than the dialect speaker
- there is a significant effect ( $p = <.001$ ) between the listeners' dialectal backgrounds and the origin of the speaker on the attributes ratings
- Low Saxon groups are more likely to rate the dialect speakers more positively on all attributes than the Low Franconian and Standard Dutch groups
- the Low Franconian and Standard Dutch groups are more likely to rate the RS speakers more positively on Intellect, Education, Correctness and Pleasantness, but lower on Friendliness and Trustworthiness, than they are the dialect speakers
- the regional standard speaker is, overall, perceived to have more interests than the dialect speakers

As discussed throughout Section 6, the self-reported dialect speakers are, in general, perceived to be older and more rural than the regional standard speaker, and concerning the two groups of dialect speakers, the rural speakers were judged to be more rural than the non-rural speakers. The awareness of degree of rurality is highest amongst the Low Saxon speakers; their higher ratings for these rural groups suggests first and foremost that these groups are perceived to be more dialectal, and secondly, that traditional dialect is preferred. The other two groups of Low Franconian and Standard Dutch speakers also usually identified the dialect speaker as being older and more rural, but their attitude ratings were less positive. This shows a consensus with respect to the demographic information attached to dialectal variants, but the attitudes towards these differ: Standard Dutch speakers and those from other dialect groups exhibit more negative attitudes towards varieties that they themselves do not

speak, and consequently rate the varieties that are more familiar to them more highly. The observation that more negative attitudes are associated with less familiar varieties is corroborated by Taeldeman & Niebaum (2013), and Hinskens (1992), who found that forms which deviated from the standard variety were met with more negativity (this is discussed further in Section 2.2). We might add that the degree of familiarity with a variety also appears to push attitudinal ratings up. Similarly to the findings of Ladegaard (2001), the Low Saxon speakers are showing more positivity towards their own dialect group, and it appears that the more traditional the dialect is, the more positively it will be perceived.

We can then observe a link between the perception of the dialect and the forms speakers choose to use, consciously or subconsciously, on a regular basis. As mentioned in Section 2.2, dialect speakers reported being comfortable with speaking their dialect amongst themselves, but not in other situations, or with speakers of Standard Dutch or other dialects. The attitudes favouring more standard varieties may be a product of a desire to associate oneself with prestige, but within the Achterhoek and other Low Saxon-speaking areas there is a degree of covert prestige existing alongside the usage of dialect forms.

### **6.7. Analysis of Style: Picture Task vs. Sentence Reading Task**

The 2015 speakers were asked to complete a picture task in addition to translating Van Prooije's sentences into their dialect. This task was included in order to ascertain whether informants' pronunciation would alter depending on speaking style. As participants were asked to provide a conscious representation of what they perceived to be their own dialect, purely casual conversation was not taken into account. However, the picture task does represent a somewhat more casual style than does the sentence reading task.

Here, we can consider how the dialectal variants fit into a speaker's overall repertoire. As described by Gumperz (1964), a speaker's repertoire contains their ways of formulating messages, and they choose from these ways which is the most appropriate to convey their meaning. Gumperz (1964) explains:

“The social etiquette of language choice is learned along with grammatical rules and once internalized it becomes a part of our linguistic equipment. Conversely, stylistic choice becomes a problem when we are away from our accustomed social surroundings. Expressions which are customary in



our own group might quite easily offend our interlocutor and jeopardize our mutual relationship by mislabeling messages” (p.138).

Assuming, then, that both dialectal and Standard variants exist within a speaker’s repertoire, the speaker must then choose when it is appropriate to speak in dialect, and when it is appropriate to speak in the standard. Section 2.2 contained some examples of some speakers explaining how they made these choices. While the methodology was not set up to specifically test the extent of a speaker’s repertoire, a possibility of the picture task was to see if dialectal variants continued to be used in a less restrictive task, and ultimately we would see if there was some blurring of styles within the speakers’ repertoires.

Overall, it was found that the type of task participants were asked to complete only had a slight bearing on the results. Participants produced the same vowel for the same words or vowel sets in both the picture and reading tasks. This is a useful result, as it tells us there is consistency with respect to what each participant considered to be their traditional dialect. The one exception was, as often noted throughout this research, the speaker from Bredevoort, who more often produced Standard Dutch pronunciations during the picture task than the sentence reading task. It should be accepted that his results tend to be something of an anomaly when compared to the others; as noted, although he lived in a more rural area at the time of recording, he had grown up in the town of Uft, so already there was expected to be a difference in his speech compared to that of other speakers classified as being from rural locations. In addition, he noted that his version of dialect incorporated some Standard Dutch features, so it is reasonable to suggest that more of a performance element was incorporated in the speech of the Bredevoort speaker during the sentence reading task. We could hypothesise that his speech during the picture task was more representative of his own speech style, incorporating influence from Standard Dutch, whilst the results of the sentence reading task showed that he is still aware of traditional dialect features, even if he himself does not use them in his own idiolect.

On occasion, participants would self-correct during the sentence reading task. It was noted by a number of participants that this happened because the sentences were presented to them in Standard Dutch, and Achterhoeks has its own orthography. Therefore, the sentence reading task was in essence also a translation task. There were some instances where participants read the word in Standard Dutch, in both the 1979 and 2015 recordings, but then proceeded to self-correct to what they apparently perceived as dialect instead. In these cases, the Standard

Dutch pronunciations were not included in the final results, but the self-corrected pronunciations were. Instances in which the speakers used a Standard Dutch variant and did not self-correct were included on the assumption that they viewed the more standardised pronunciation as dialect. In some cases, such as with *nagel*, a pronunciation closer to Standard Dutch was used and not self-corrected. This was consistent across both speech styles, which indicates that the participant believed that variant to be their dialectal pronunciation.

## 7. General Discussion

### 7.1. Vowel Change over Time

Concerning levelling processes, the results of what is happening with these vowels appear to be in line with trends observed in other areas of the Netherlands. The pattern in general shows retention of [ɔ:] in the PRAAT lexical set, and the use of monophthongs for both KIJK and HUIS vowels; Swanenberg and Van Hout (2013) note that this is also the case for these vowels in Brabants dialects, despite levelling having occurred there with respect to other phonological features. While these features are marked dialect features, they are perhaps less salient due to being distributed around a larger geographical area, and therefore could be more resistant to levelling (Swanenberg and Van Hout, 2013; Tældeman, 2006).

Nevertheless, a comparison of normalised vowel formant frequencies shows that some differences have occurred in the dialect between 1979 and 2015. While [i] and [ɔ:] have largely remained in the KIJK and PRAAT sets respectively (despite increased use of the Standard Dutch diphthong in the KIJK lexical set), the other vowels show some rather noteworthy results in the form of slight change, particularly the beginning of the loss of the fronted Achterhoeks variant corresponding to the KAAS lexical set, and variation between the monophthongs [y] and [u] (and occasional use of the diphthongal [œy]) in HUIS.

Significant change, however, was observed in the HUIS vowel in terms of the use of the front or back monophthong, as well as the KAAS and PAARD vowels. For the HUIS vowel, this was where [u] was more likely to occur after /r/ in the speech of rural speakers, and where [y] occurred in other positions, as well as after /r/ in the speech of non-rural speakers. For PAARD, we saw an increase in the number of speakers using the Standard Dutch monophthong [a:] in the word *gaarne*, although the diphthong was still commonly used in the word *paard*. For KAAS, we also see more speakers in 2015 using a standard-like pronunciation of the vowel, whereas in 1979 speakers were split on the degree of frontness of the vowel, rather than producing something closer to the standard.

The differences in the realisation of the KAAS vowel in Achterhoeks may be attributed to the “de-Westphalianisation” following the process of Westphalian breaking (see Section 2.3.2). If we consider the example of *kaas*, the Old Saxon *kesi* became *kiesi* following the breaking process, and then eventually *kees* (or *käse* in German). I have suggested that words such as *peerd* (*paard*), of the PAARD lexical set which also uses a front vowel, did not undergo de-

Westphalianisation, due to a different ancestor vowel. Some of these may have been borrowings, but tend to be reflected in the German spelling *er*.

In relation to the words in the PRAAT lexical set (which use the back vowel [ɔ:] in Achterhoeks), we need to examine their pronunciation in the Old Saxon dialects – these words descended from yet another ancestor vowel (â as suggested by Donaldson, 1983), with a suggested phonetic value of [ɔ:], and consequently did not undergo the Westphalian breaking and de-Westphalianisation processes that affected those front vowels in KAAS (see Section 2.3.2). Other words, such as *kaart*, are loanwords, and so the historical vowels of the region tend not to be used for these words, with the exception of some hypercorrections (eg. *keert*). Together, this history of the vowels helps to explain why there are differences in the Achterhoeks pronunciation, and a number of different lexical sets, where all of these vowels are realised as [a:] in Standard Dutch.

Rather than a clear case of dialect loss, we see that many dialect features are maintained, yet there appears to be a loss of stability. This can be seen in the way some of the monophthongs have been diphthongised in certain words by certain speakers, and there is a greater divide in this respect between rural and non-rural speakers in 2015 than in 1979. Yet it does not occur often enough for us to be able to classify speakers' dialectal realisations as having clearly changed. We often see the same patterns with the same speakers, and it tends to be the dialect speakers from the non-rural areas who are, occasionally or more frequently, using a variant that differs considerably from those recorded in 1979. The speaker from Bredevoort (M33Bredevoort), as mentioned in Section 6.1, perhaps produced the most varied results. He shows the contact between the two closely related phonological systems of Standard Dutch and Achterhoeks quite clearly, and as such could be considered to be bidialectal, but his results also show some evidence of dialect loss. It is possible that his idiolect includes more Standard Dutch pronunciations than does other participants' speech, although he used more dialectal variants across all vowels during the reading task. This perhaps indicates something of a performance aspect during the sentence reading, and a greater awareness of needing to translate from Standard Dutch to Achterhoeks, even though the speaker reported that he was speaking his version of dialect throughout the tasks; he did report that the way he speaks includes some pronunciations which could be interpreted as sounding closer to Standard Dutch. These were more evident in the picture task which was more spontaneous.

Interestingly, this was the only case in which there appeared to be a difference in speech style between the two tasks.

This speaker, from Bredevoort, seems to show evidence of what happens in early stages of language loss. To examine this further, we can consider the language shift process discussed by both Dorian (1973; 1978), who looked at the East Sutherland dialect of Scottish Gaelic, and Dressler and Wodak-Leodolter (1977) who studied a dying variety of Breton. At the time of Dorian's study, the East Sutherland dialect was spoken by fewer than 150 people, and all of them were bilinguals, also speaking English alongside this dialect (Dorian, 1978, p.592). She classifies some speakers as being "semi-speakers" – younger speakers who can speak the dialect but do not do so often; while they may be considered to be fluent in the dialect there are often departures from the traditional version of the dialectal forms within their speech (Dorian, 1973; 1978). Dressler and Wodak-Leodolter (1977) considered the language situation in Brittany, where Breton was becoming increasingly restricted to being spoken at home only, with the national language, French, being dominant in other situations. Fewer situations calling for the use of Breton thus leads to the necessity of a differentiation of speech styles being diminished, and the consequence is that the two styles begin to merge with each other (Dressler & Wodak-Leodolter, 1977, p.37). Referring back to the case of our Bredevoort speaker, he appears to be exhibiting signs that would place both him as a "semi-speaker" according to Dorian, and his language use following that as described by Dressler and Wodak-Leodolter regarding Breton. Both studies refer to this type of language death resulting in a type of pidginisation. In the case of the Achterhoek, the situation is a little different because the two varieties (Achterhoeks and Standard Dutch) exist on a continuum, which is not the case for Gaelic and Breton. However, we can still draw parallels: in a way, this is similar to what is being exhibited by the Bredevoort speaker here, but the process for him is really only at the beginning. Additionally, he is the only one of the speakers who shifts between tasks.

It is also clear from the results that the Achterhoeks realisation of the KIJK vowel has displayed retention tendencies, with only a few instances of pronunciation of the Standard Dutch diphthong. The diphthong was observed only in non-rural speakers, with the exception of M33Bredevoort, who nevertheless had a non-rural upbringing. However, the other vowels have shown more movement. The F1/F2 measurements for the Achterhoeks realisation of the KAAS vowel showed some retraction (and this is discussed in more detail below), although

these are perhaps not enough for us to claim that there is a clear indication of change, particularly amongst the rural speakers. It does appear, though, that change is occurring vertically, i.e. towards the Standard Dutch realisations. This, however, is not necessarily the case for [u] and [y], the Achterhoeks realisations of the HUIS vowel. Although there was limited use of the Standard Dutch diphthong in 2015, which was not observed in 1979, the main change was between the usage of the monophthongs: [y] is more widespread across all speakers, and [u] is observed only following /r/, and almost always in the speech of rural speakers. This is a change, but it is not indicative of convergence towards Standard Dutch, as Standard Dutch does not use the vowel [y] in the same position. This split was, as discussed, evident across rural and non-rural speakers, but it appears that rurality, or absence of it, may also have had an effect on the other vowels in question too. This is shown through the fact that where the Standard Dutch vowel was used in place of the dialectal equivalent, it was usually observed in non-rural, rather than rural, speakers. An exception, as also noted above, was M33Bredevoort, although as mentioned in the Results chapter, it is possible that his pronunciation could be explained by his having grown up in the more non-rural location of Ulft.

Returning to the KAAS vowel, we observed in the results that the vowel in words such as *nagel* and *kaas* appear to be lowering and retracting, which is interestingly contrasted with a similar finding by Trudgill and Foxcroft (1978) in Norwich. They investigated the East Anglian merger of /uu/ and /ʌu/, and found that many speakers adopt the strategy of transfer, where words from one lexical set are transferred to another. However, in the area of Norwich, they also found evidence for the strategy of approximation, where the two vowels become phonetically closer together, resulting in some intermediate vowels which most closely resembled the /əu/ of Received Pronunciation. In the Achterhoek, words such as *nagel* and *kaas* appear to be following the approximation process between /e:/ and /a:/, where there is some form of intermediate vowel being used which approaches the Standard Dutch pronunciation without becoming the same vowel. However, it has been brought closer phonetically, and may eventually merge. The vowel in words such as *prijzen* is, however, more likely to be undergoing the strategy of transfer, where we note a complete lexical shift happening in the speech of some speakers.

We also need to consider the fact that the 1979 corpus was comprised solely of older male speakers. Those speakers are most likely to exhibit classic dialect use (Heeringa & Hinskens,

2015), and, in terms of attitudes, are those most likely therefore to be judged as less prestigious (Giles et al., 1992). However, the 2015 corpus included the speech of a range of speakers – male, female, older, and younger. It is for this reason that the normalisation process was used. However, the results could still be analysed separately. In general, it was not found that age or gender had much of an impact on the pronunciation (although older speakers were more likely to use [u] after /r/ than younger speakers were). Rather, the interesting variable was location, the important factor being whether the speaker resided in an area classified as rural or non-rural. As mentioned above, this was particularly evident when analysing speakers' usage of [u] or [y] following rhotics (refer back to Figure 61 on page 158 for information on the location and gender effects).

## **7.2. Revisiting Auer's Cone Model**

Auer's Cone Model was introduced in Section 3.1.1. As described in the earlier section, the model represents a situation of diaglossia, where the cone's base (the largest part) encompasses the dialects of a language, and the tip (the smallest part) is representative of the standard language, with regiolects and regional standards taking up the space in between the base and the tip of the cone. The model, therefore, aims to visualise the diaglossic nature of a language. In the current research, it would appear from the results that what has been consciously represented as the base dialect by participants has "risen" slightly between 1979 and 2015. This is due to the loss of stability amongst the Achterhoeks realisations of the KAAS vowel in particular, and slight movement observed in the front and back realisations of the HUIS vowel, where in 1979 the back variant was very occasionally used in positions other than following /r/. The changes observed in both of these vowels have been shown to be statistically significant through an independent samples t-test. However, the dialectal pronunciation of the KIJK vowel has mostly retained its traditional pronunciation, albeit with a few changes observed. Many dialectal features are still kept by the speakers, yet the changes are enough to suggest that perhaps the base has risen slightly.

The cone model appears to present the state of diaglossia in the Netherlands quite accurately, and the Achterhoek region in particular, although the existence of homogeneous varieties along the continuum is debatable (see below). Moving from a diglossic situation (where two language varieties are used in different conditions) to a diaglossic situation (where intermediate varieties exist between the traditional dialect and the standard language) (Rutten,

2016), we see instances of older and newer dialect forms in the speech of the 2015 participants. This is particularly evident in the difference between the monophthongs [u] and [y], as observed in words such as *ruiken* and *kruipen*. Where [u] represented the older, traditional vowel, it was more widely observed in the speech of the 1979 participants, including in phonological conditions we do not see it occupy today, such as in the word *huis*. This indicates the first change. Additionally, there is a split between rural and non-rural speakers regarding which variant is in use (see Section 7.3 for a further explanation). The phasing out of [u] that was noticeable in 1979 already represented a shift away from the base dialect, and this continued further in 2015, by which point we can suggest that the move to [y] has, in the presence of two competing pronunciations, giving one a traditional status while the other is located higher within the cone. This is one piece of evidence that is suggestive of the change in the basilectal variety over time. The base of the cone is perhaps not so much raised here, however, as the use of [y] rather than [u] in these contexts does not bring the dialect any closer to Standard Dutch.

There can be no doubt that although Achterhoeks speakers are aware of, and using, their dialect, that there are subtle changes in perception and production that are evident in the period since 1979. The results of the perception study indicated that non-rural and rural speakers of the same sentence were perceived differently. However, each of these speakers considered their speech, at least in the context of the study, to represent the Achterhoeks dialect. Again, this indicates something of a diaglossic situation, whereby the dialectal varieties are still considered to be dialect, but instead are located on something of a continuum based on how traditional the forms appear to be to speakers. The likelihood of the dialect in 1979 being described as the traditional dialect is perhaps higher than it is for the speakers of 2015, and the same could be true for the rural speakers over the non-rural speakers. However, the gradual phonetic change seen in KAAS, and the almost complete abandonment of the diphthong [iə] in *gaarne* (of the PAARD lexical set) is suggestive of some raising of the base. With particular emphasis on the phonetic representations of KAAS (and, to a lesser extent, also PRAAT and KIJK), we could perhaps conclude the base of the cone to have risen slightly, leaving less linguistic distance between dialect and standard, and perhaps some self-reported dialect speech encroaching more on regiolect territory, particularly amongst some non-rural speakers. Additionally, the variations observed in the HUIS vowel point to some change, but not raising. This is a fundamental difference from the Gaelic and Breton cases.



However, it is important to note that the speakers from 1979 may also not be representative of the base (except for analytic purposes), and we would probably find that going back another 35 years would result in different findings still. The other point to consider is that the findings here are in regard to the *ability* to perform in traditional dialect at least some of the time with considerable success. It does not take into account the amount of dialect which speakers use in their everyday lives, and whether or not this is their vernacular.

We could suggest, then, that what the results look like at face value point to some raising and changing within the cone, but there is more to consider on a deeper, less superficial level. The space between the Standard and Dialect points on the cone represents a continuum, and the intermediate varieties should not be seen as separate varieties, but rather as the result of levelling of the base dialect (Nerbonne et al., 2013). This could be a convergence towards the Standard, or, alternatively, a case of horizontal levelling. Of course, we must relate this information to the speakers' conscious representations of what they believed the dialect to be; regarding the vowels studied, these representations would fall at different points in the continuum. One interpretation of the model works on the basis that there are homogeneous levels; a dialect has a certain amount of homogeneity, and the assumption is that if there exists an intermediate variety, then that is also homogeneous. If these discrete levels exist, then there is some linguistic coherence between the speakers at each level. In order to establish this, we would need to look at the systematic variation between and within speakers. Regarding the Achterhoeks speakers, as described above there is the assumption that the base dialect has risen slightly (at least phonologically) due to the inclusion of more standardised (eg. [ɛi] rather than [i] in KIJK) or changed (eg. [y] rather than [u] in HUIS) vowels, which may be the result of different processes. Perhaps it is the speech observed predominantly among the non-rural speakers which represents a more intermediate variety (as tentatively suggested above, as well as in Section 6.6.2), as these are the speakers who tended to use the standardised variants more often (excluding the Bredevoort speaker), but the only systematic variation between speakers that we can concretely find exists in a continuum from [œy] to [u] in words such as *kruipen* or *ruiken*. This is where [œy] represents the Standard, or the top of the cone, and [u] represents the basilectal variety, with [y], the preferred variant of the non-rural speakers, as something of an intermediate variant which shares frontness with [œy]. More on the reasoning behind this is included in Section 7.3. However, as the results of the perception survey showed, this is a continuum which appears to be noticed by Low Saxon speakers only. Additionally, as noted earlier in this section, the use of [y] does not bring the

dialect closer to the standard, and so this observation may be adequate to express Low Saxon speakers' understanding of the situation, but not of the language as a whole.

With only this variation between [u] and [y] in the HUIS vowel, and no other discernible patterns, it is doubtful that we can concretely classify the non-rural speakers as speaking their own intermediate variety, especially as they reported that they were consciously speaking dialect throughout the process of being recorded during the picture task and sentence reading task. However, perhaps this fact does not make much difference overall. This finding of systematic variation contained only within the HUIS vowel consequently appears to argue against the existence of homogeneous levels, and so subsequently confirms that either variant can exist within one variety, or suggests that the existing continuum does not necessarily have to be made up of discrete levels. It is evident from the results that, in general, the non-rural speakers tend to use a slightly more standardised version of dialect through their use of the strong verb forms and more use of vowels closer to the standard; this is not true for all of them, but it is what is suggestive both in the study of the vowel change over time and in the perception survey. If these speakers, however, self-report that they are dialect speakers, then we may assume they are speaking what they perceive to be the base form of the dialect.

The way speakers respond to being asked to speak in their dialect should be further deconstructed at this point. The survey results showed that there is a matter of personal and local pride associated with speaking in dialect, as seen in the high ratings for Correctness and Pleasantness from other Low Saxon dialect speakers. Responding that they do not speak in dialect, then, could constitute a loss of face. On the other hand, however, there were speakers who reported that they did not speak Achterhoeks (such as the Standard speaker from the pilot study), or the speaker who instinctively switched from Achterhoeks because he “should speak Dutch in front of a lady” (see Section 2.2). Despite this, the number of people who reported that they could speak the dialect at least sometimes, and the survey results favouring Achterhoeks as holding covert prestige, suggests a dialect pride more like the pride in the use of minority languages. A parallel is observed in Sweden, in the recent upswing in people's consciousness of the Elfdalian dialect (Karlander, 2016).

To return to the cone model, taken together, the results do suggest a rise in the basilectal variety from 1979 if the existence of discrete and homogeneous levels cannot be confirmed, which, in this case, they cannot be from the evidence presented. We can instead suggest that, to group the speakers, non-rural speech sits at a slightly higher position in the cone than rural

speech does, and so it is further along the continuum towards the Standard. We may also say this due to the fact that it tended to be the non-rural speakers who would use Standard Dutch variants in particular contexts. It should be stressed that this speculation accounts for the phonology of the Achterhoeks dialect only, and we may arrive at a different conclusion for other dialects, including the confirmation of the existence of homogeneous varieties within these dialect continua.

### 7.3. What Happened to [u]?

The results of the HUIS vowel as analysed in Section 6.2 suggested that the realisations of the older vowel [u] observed in Ruurlo, Vragender, Winterswijk, and Zwolle has been confined to tokens only after /r/ among the modern rural speakers, and has mostly been fronted to a [y] pronunciation in the majority of Achterhoeks speakers, both rural and non-rural, in other positions. This hypothesis is supported by the work of Kloeke (1927), whose map showed that the back vowel [u] was, at one time, used as the norm in the eastern Netherlands, including within the area of the Achterhoek, before the change to [y] following the Holland Expansion.

This again highlights the importance of the current research, as we can see a clear change not just between the two time periods, but also from Kloeke's (1927) descriptions. Concerning the HUIS vowel, one of Kloeke's observations was that [u] was found more often in the word *muís*, than in *huis*, where it was becoming [y]. While an instance of [œy] following /m/ was not included in the sentences analysed, we do find that in the Achterhoek region [u] was the older usual pronunciation for *huis*, and although there were remnants of this older pronunciation in the speech of the 1979 participants (both in this study and as found by Gerritsen and Jansen, 1979), it had unmistakably fronted by 2015. The role of the place and manner of articulation of /r/ was also considered in these instances, although as both the vowel and the consonant can be variable in that area, there was no presumption that the /r/ caused the retraction (Van Hout, personal communication, 2016). Instead, we can look at the history of this vowel in the eastern Netherlands (as explored in Section 2.3.2), and from this determine that the rural speakers are in fact maintaining a vowel of the older, traditional dialect, whilst the non-rural speakers' vowel has indeed shifted over time to a more fronted variant. In Overijssel, the province located directly north of the Achterhoek in Gelderland, differences in pronunciation of the vowel were historically linked to differences in religion.

As explained in Section 2.3.1, the vowel [u] was the older form (Kloeke, 1927), and by the beginning of the 17<sup>th</sup> century it continued to be used by Roman Catholics in the region, but Protestants had begun to front the vowel to [y] (Van Reenen, 2005; 2006). Today, we can only see a remnant of this in the speech of the rural speakers. The change to [y] is more widespread across a wider variety of phonetic conditions, yet the rural speakers have retained a feature of the older dialect under certain conditions, these being when the vowel follows rhotic consonants. We can refer back to Hinskens' (1992) study of the Limburgs dialect here, in which he also noted that some of the dialect features were subject to a change under certain conditions only. In Hinskens' study, these features included *r*-deletion<sup>48</sup>, *n*-deletion<sup>49</sup>, and the Limburgish derivational suffix *-də*<sup>50</sup>; in Achterhoeks we notice that it is the [u] vowel, rather than the [y] vowel, occurring after /r/.

We also saw that male speakers, both rural and non-rural, were more likely to use the back variant, which follows on from the idea held by the Dutch researcher Antonius Weijnen that male speakers are more likely to speak something closer to the traditional dialect than women are (Van Prooije, personal communication, 2016). Therefore, the fact that male speakers have been shown to use the traditional variant more often would be an unsurprising result. This is given the propensity of women to use standard variants more often than men, except that it should be noted that [y] is not a standardised variant according to the conventions of Standard Dutch. In Standard Dutch the HUIS vowel is pronounced as the diphthongised [œy], which was rarely realised by the speakers in this study. However, in the few instances where it did occur, it was observed in the speech of non-rural speakers, and not rural speakers. We can therefore hypothesise that the degree of standardisation can be classed, from most standard to least standard hierarchically, where we notice that the most traditional dialectal variant is the least standard, as:

[œy] – [y] – [u]

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<sup>48</sup> Where /r/ precedes an alveolar obstruent, it is often deleted. This is more likely to happen where /r/ occurs after a front vowel than a back vowel, and it also occurs less often when divided by a syllable boundary, eg. *worden* (Hinskens, 1992, pp.227-229).

<sup>49</sup> In some monosyllabic words which end in a short vowel, followed by /n/. It is more likely to occur before a pause than in other conditions (Hinskens, 1992, p.231).

<sup>50</sup> The use of the dialect variant was based on grammatical nature of the word it is attached to; it was “used significantly less often in nominalizations of original adjectives than in adjectivalizations of the past participle of weak verbs and deadjectival nouns” (Hinskens, 1992, p.259).

It is important to revisit and consider how this conclusion has been drawn. Firstly, it has been established (in Section 2.3) that [u] is the older variant, and began a change to [y] sometime around the 17<sup>th</sup> century (Kloeke, 1927; Van Reenen, 2005, 2006). Secondly, this hypothesis is corroborated by Kloeke (1927) and Bloomfield (1933), who suggested that [y] was perceived as the prestige (Netherlandic) form. The fact that *muīs* retained [u] for longer than *huīs* is also of interest; it is attributed to frequency of use, as the word *huīs* would have (one assumes) been observed in official speech more than *muīs*, and spread into areas where the old form was still being used in *muīs* (Bloomfield, 1933; Hamans, 2008). The change from [u] to [y] in the HUIS vowel is evident in the majority of cases nowadays except for where [u] is sometimes preserved after /r/. This is seen to occur primarily in the speech of rural speakers, with male speakers using it more. The vowel is diphthongised in Standard Dutch, but female speakers, in general, are not using this standardised version. Regarding the use of the two monophthongs, I would suggest that this is a case of phoneme substitution, rather than fronting similar to a GOOSE-fronting situation, as it appears to follow a pattern similar to that observed in the Hollandse Expansie Theory, where there was a wholesale shift to the newer vowel. Additionally, this variation does not affect the use of the back vowel in words such as *koe* or *moe* of the KOE lexical set, or the front vowel in words such as *buurt* or *duur* of the VUUR lexical set, in which the Standard Dutch pronunciation is also (usually) used in Achterhoeks; it is relevant only to the HUIS vowel (where the Standard Dutch pronunciation is the diphthong /œy/).

This hierarchical theory also relates to the idea of systematic variation between speakers when considering the Cone Model (see Section 7.2), although it should be noted that when referring to this the use of [y] does not bring the base any closer to the standard, because [y] is not a standardised realisation of the HUIS vowel in Standard Dutch. It is, however, important when considering Achterhoeks speakers' perceptions of the dialect. Evidence for this is found in the survey conducted as part of this research, where the Low Saxon group made a three-way distinction between the vowels, and rated the speaker of the older traditional variant [u] more highly than the speaker who used [y]. This correlated with their perceptions of the other vowels, where they also rated the dialect speaker more favourably than the non-dialect speaker. However, the Low Franconian and Standard Dutch groups did not make a distinction between the monophthongs, suggesting that evidently these realisations have no effect on the raising of the base (yet the hierarchy, as such, appears to exist in Achterhoeks).

We can also briefly consider word frequency. The non-rhotic words *uit*, *huis* and *buiten* are listed, respectively, as the 30<sup>th</sup>, 213<sup>th</sup> and 266<sup>th</sup> most frequent words in the Dutch language, according to *A Frequency Dictionary of Dutch* (Tiberius & Schoonheim, 2014). The frequencies of each word per 100 documents are 97.19 for *uit*, 39.91 for *huis*, and 31.65 for *buiten*. The word *thuis* (“at home”) is also listed as the 319<sup>th</sup> most frequent word (with a frequency of 26.67), putting those associated with the word *huis* at a high frequency of usage overall. These words were included in a “Core” list, which meant that they had a high frequency of use across all of the genres of Fiction, Newspaper, Spoken and Web. The r/\_ words *kruipen* and *ruiken* had frequencies of only 5.69 and 2.78 respectively, and featured only in the Fiction list. The fact that the words *uit*, *huis* and *buiten* all have much higher frequencies of use than the r/\_ included in the sentence and picture lists could suggest that they (the non-r/\_ words) were potentially the first to converge on the newer monophthong – or the newer monophthong more easily diffused across the country in these high frequency words (cf. Kloeke, 1927, on how *muis* retained [u] for longer than *huis*). The effects of word frequency are summarised by Dinkin (2008), who, with reference to the Exemplar Theory<sup>51</sup>, explains that words which have a higher frequency of use are likely to undergo sound changes more quickly than lower-frequency words:

“This is because, each time a user of the language hears an innovative token of a word that is undergoing a change, then the average phonetic value of all the exemplars of that word heard so far will shift a little bit in the direction of the change. And so words that are heard more frequently will have had their phonetic averages shifted by that little bit in the direction of the change more frequently, and so they’ll undergo the sound change more rapidly” (p.97).<sup>52</sup>

This lexical frequency effect is seen here, whereby the r/\_ tokens (eg. *kruipen*, *ruiken*) are not as frequently used as the non-r/\_ tokens (eg. *huis*, *buiten*). This is, of course, in contrast to the earlier discussion of *paard*, and its dialectal equivalent, *peerd*, which could be attributed to a lexical, rather than phonological, distinction between the two variances. However, even here, frequency might have played some part.

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<sup>51</sup> Exemplar Theory “holds that the units of a speaker’s phonological knowledge are memorised tokens of individual lexical items” (Dinkin, 2008, p.97).

<sup>52</sup> This view, however, contrasts with Wieling, Nerbonne and Baayen (2011), who found that higher frequency words actually had a higher distance from Standard Dutch in dialectal varieties.

Gerritsen and Jansen (1980) hypothesised that highly frequent words were more likely to develop towards the “Amsterdam variants” (p.34); this hypothesis was supported to extent, they say, by “dubious facts” (p.50). A study by Wieling, Nerbonne and Baayen (2011), however, has shown the opposite effect, where the most frequently used words tend to actually be more resistant to change, and have a higher distance from Standard Dutch.

The first study (the picture task and sentence reading task) conducted showed a split between the types of vowel used, yet the survey results indicate that this cannot necessarily be considered a marker of where the speaker originated from. Both pronunciations of the monophthong are indeed markers of dialect, but the survey respondents were mixed in their views of speaker characteristics. As discussed in Sections 6.1 and 6.6.2, although the respondents found both instances of the monophthong to be more likely to be found in the speech of those residing in a small town or rural area rather than a city, there was less consensus about the probable age of the speakers, and what they do for a living. The rural speaker was mostly perceived as younger than the non-rural speaker (despite the fact that the rural speaker was actually aged 48, and the non-rural speaker was actually aged 26), and the respondents did not match the back vowel with rurality. Therefore, if the above hypothesis – that [u] is more likely to be found in rural areas, and [y] in non-rural ones – is proven to be correct, it would be considered an indicator of dialect, rather than a salient marker, as the survey participants did not make a distinction between the rural and non-rural speakers (in fact, it was the non-rural speaker, rather than the rural speaker, who elicited results more consistent with the perceptions of other dialect speakers). This, of course, contrasts with the results seen for words like *paard* (*peerd*), *stijf* (*stief*) and *pijn* (*pien*), which can be considered to be much more outwardly representative of dialect to both Achterhoeks and non-Achterhoeks speakers.

The overall suggestion, however, is that although the difference in these vowels does not appear to elicit strong opinions concerning the speaker’s age or location, the attitude judgments for the older vowel are more consistent with those for the other dialectal variants. We observed with the other vowels that the dialect speaker generally scored higher with Low Saxon-speaking groups for Education and Intellect than did the regional standard speaker, but the opposite was true when considering the judgments of Low Franconian and Standard Dutch-speaking groups. Regarding the vowel in *ruiken*, the rural speaker scored higher on these attributes amongst the Low Saxon speaking group and lower amongst the Low

Franconian and Standard Dutch groups, and, conversely, the non-rural speaker received the opposite results. For the attributes of Friendliness and Trustworthiness, the non-rural speaker received lower ratings than the rural speaker, from all surveyed groups. These results are consistent with the aforementioned attitudinal pattern. Therefore, the Low Saxon listeners are making judgments, either consciously or subconsciously, that cement [u] in their minds as being more like the other dialectal vowels than [y], and therefore more indicative of traditional dialect. This is despite the fact that when asked their opinions about the speakers' ages and locations, the answers varied. This shows an awareness, then, of the variants differing, but perhaps on a less conscious or obvious level, which corresponds to the usual pattern already observed.

As explored throughout Section 6.6, the perceptions of age, gender, attributes and interests does not differ between the two dialect speakers for the Low Franconian and Standard Dutch speaking groups, but they do for the Low Saxon speaking groups. The Low Saxon speakers' scores were consistent with previous results in that they preferred the rural dialect speaker over the other speaker. The difference between them and the Low Franconian and Standard Dutch-speaking groups, however, is that they were perhaps more able to compare the vowels to sounds that they themselves had heard, whereas the other groups did not have the regional standard speaker as a model of the diphthong of Standard Dutch. Here, the Low Franconian and Standard Dutch groups are presented with two similar dialectal vowels from a dialect they themselves do not speak, so they do not have a standard of correctness against which to rate the speakers. This means that they do not have the same familiarity with what is being presented to them as the Low Saxon groups do, and there is no benchmark standard as with the other vowels. While somewhat speculative, it would appear that these groups do not necessarily recognise [u] as being the more traditional variant, whereas the Low Saxon group, having had more exposure to the subtle dialect differences, and social information conveyed by vowel choice, appear to be more aware of it.

#### **7.4. Further Research Ideas Arising from this Study**

Firstly, I would suggest that the work completed regarding the HUIS vowel after /r/ within the Achterhoek region can be further explored in a dedicated study of its own. As the current research results showed, [y] was the usual pronunciation for all speakers, except when the vowel occurred after /r/, where it was noted that speakers from more rural localities used [u]



instead. However, this clear pattern was not as strongly noticed by participants in the perception study, indicating that while the use of the monophthong is indeed a dialect marker, the type of monophthong is not necessarily perceived as such. In future, we could then determine if this difference, which is not necessarily as noticeable as that between the diphthong [œy] and either dialectal monophthong, is indeed due to a rural / non-rural split as suggested in the study, or if a geographical isogloss exists along the River Oude IJssel.

Future research could focus on the behaviour of the HUIS vowel in a number of different positions (see Section 7.3), although from the data gathered I hypothesise that whether the speaker is from a rural or non-rural area will have an effect on his/her pronunciation of this vowel (but this is only evident after /r/ in this dataset). This further suggests that rural speakers are more likely to preserve older forms, although it would appear that [y] is continuing its expansion and dominance over [u]. This is evident in the infrequent appearance in 1979 of the back variant in positions other than following /r/, to its complete absence in these positions in 2015.

I have therefore suggested that the differences are linked to whether speakers reside in a rural or non-rural area, but we could also consider that a [ru] / [ry] isogloss exists, beginning around Silvolde and Terborg, or somewhere along the Oude IJssel. Further research is needed in order to ascertain which of these predictions (whether the split is due to rurality, or a geographical isogloss) will ultimately prove true. There is a phonetic reason attached to why there exists variation within this vowel, as the evidence from the Van Prooije data, combined with that collected in 2015, shows that /r/ has an effect. This is not to say that there are not geographical factors involved as well, however, as there does appear to be a correlation between pronunciation and type of locality, as stated above. Kloeke's map of the *huus/hoes* isogloss in Figure 114 (reproduced from Heeroma in Niebaum, 2008, p.56), where *hoes* represents the older [u] pronunciation, shows [u] as having receded to the very east of the Achterhoek region, and extending into Germany where the pronunciation is widespread. It is now a relic pronunciation occurring only after /r/, according to this study. The possibility of a north-east / south-west isogloss exists based on the appearance of the map below, yet some localities which recorded a back pronunciation after /r/ had, according to the map, already fronted to [y]. The fronted [y] had not yet reached the eastern Achterhoek by this stage, as indicated in the map, but by the time of Van Prooije's recordings in 1979, the results

overwhelmingly showed that it had in fact changed by then. Only a few speakers recorded a pronunciation of [u] in conditions other than following /r/.

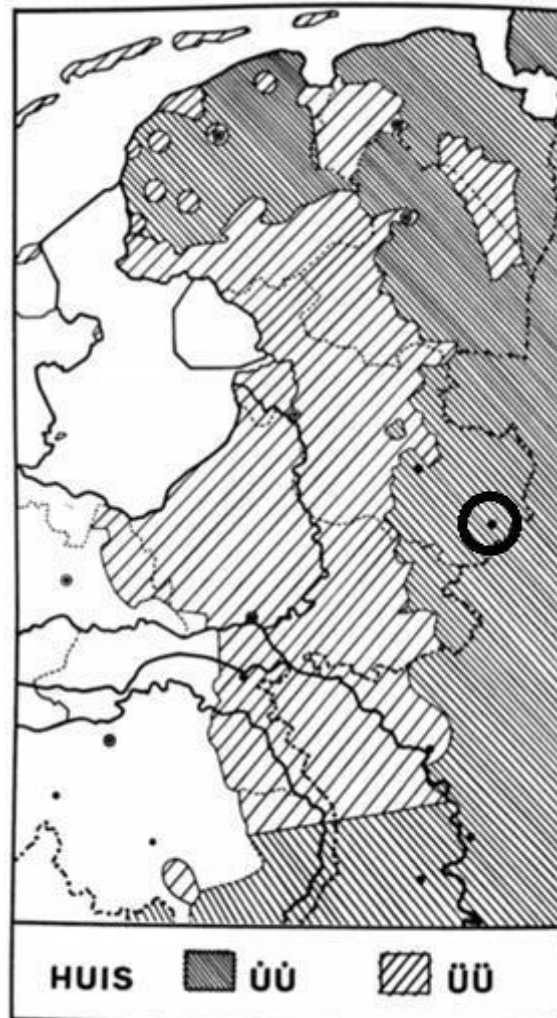


Figure 114: Vowel pronunciation in "huus" / "hoes", according to research by Kloeke (1927). Reproduced from Niebaum (2008, p.56) from original maps published by Kloeke (1927) and Heeroma (1971). I have marked the Achterhoek area with a circle.

Although, as I have noted, the possibility of a geographical isogloss (with a demarcation along the Oude IJssel; see Figure 115) pertaining to the use of either [u] or [y] after /r/ cannot be ruled out, and should be explored, the correlation between rural and non-rural pronunciations is an interesting concept which deserves to be investigated further in future studies. The Achterhoek has long been considered to be a farming area, and occupations such as “farmer” and “construction worker” were common occupational perceptions during the Perception Task<sup>53</sup>. However, this could also be explained as being a traditional or folk

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<sup>53</sup> These perceptions also tie in with the reality of the area in 1979, as the subjects of Van Prooije’s research were dialect speaking construction workers.

linguistic view nowadays; there do of course exist within the Achterhoek areas which would not be classed as rural, such as Terborg, Ulft and Doetinchem, which have a different sociolinguistic profile due to increased urbanisation and mobility. These areas are therefore less likely to preserve relic pronunciations, especially moribund ones (as [u] can be classified). These sociolinguistic factors show that the current linguistic situation appears to be due to a rural vs. non-rural split rather than a geographical isogloss. Trends observed in dialect contact and levelling situations point to innovative areas (see Williams & Kerswill, 1999), and these more urbanised areas are perhaps leading the change while the rural areas preserve older variants in certain phonetic environments. The current research has indicated that /r/ provides the phonetic condition required for preservation, though there may be others, too.

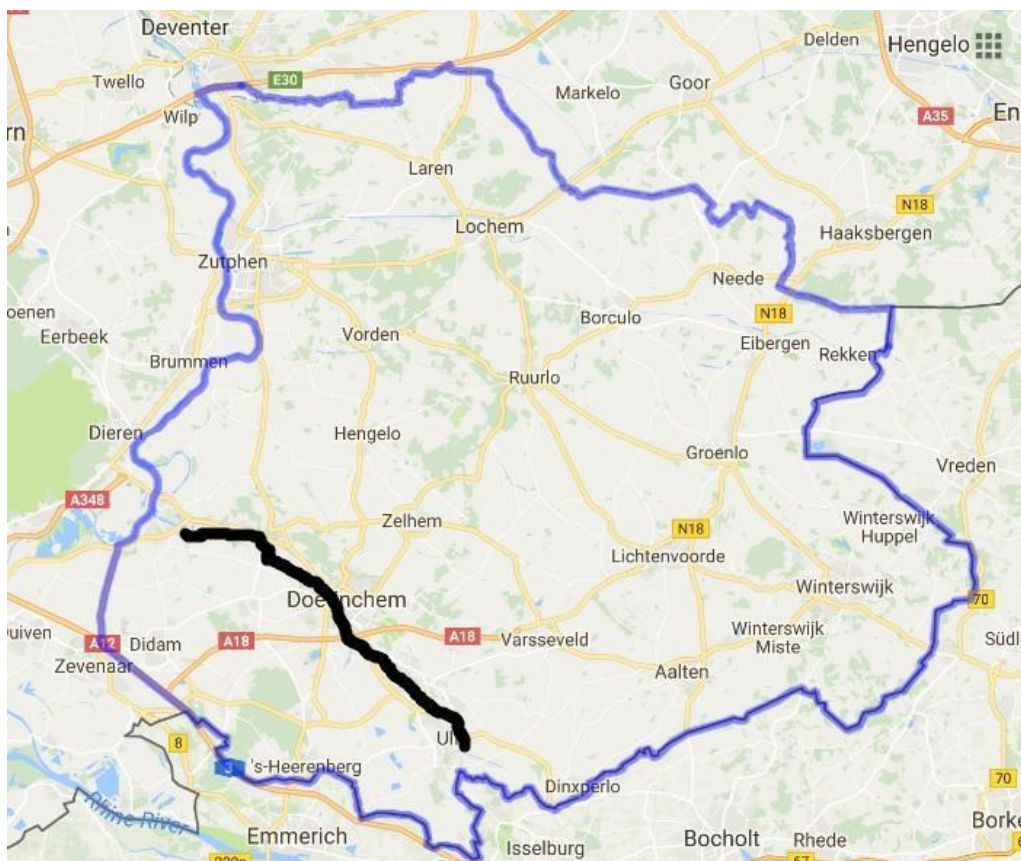


Figure 115: Map of the Achterhoek region, showing the location of the River Oude-IJssel (in black). Map data: Google (n.d.).

We can refer to the idea of how urban centres are known to contrast sharply with rural areas, including in the Netherlands where /r/ pronunciation differs in urban and rural parts of the country; it is from these urban centres where diffusion commonly begins (Taeldeman, 2008; Kerswill, 2003; Gooskens et al., 2013). Although none of the localities included in this

research would be classified as urban centres, it is worth noting that the non-rural (yet also non-urban) locations may fall into something of a transition area. This is where [y] represents something closer to a regional standard, as suggested earlier, and the non-rural speakers have converged on that, the previously “new” pronunciation, which had diffused from the Randstad area during the 20<sup>th</sup> century (Bloomfield, 1933). But they have not converged on the diphthong currently recognised as the standard pronunciation. Conversely, the rural speakers have not diverged, as their vowel is older, but rather they have maintained the use of the traditional vowel under a specific phonetic condition, as also previously noted. Thus, we should be looking to the non-rural varieties as a bridge between the urban and the rural, and examining what the non-rural varieties can tell us about dialect change, and their position as a kind of mid-point on a dialect – standard continuum. Further exploration of the speech of these areas would allow a determination of whether there are significant indicators differentiating between them and neighbouring rural areas, or whether there exists an isogloss, or group of isoglosses, demarcating pronunciations of the HUIS following /r/ or in other phonetic environments. If we refer back to the Hollandse Expansie Theory, the vowel in the word *muis* was still being pronounced as the back variant for much longer than the vowel in *huis*, and it is necessary to explore the extent of these distinctions today, and establish what phonetic properties, if any, are at work in keeping the vowel retracted in certain words while others have fronted. As stated earlier, this difference has been attributed to the frequency of use of each word, but it is possible that phonetic reasons are also in play.

This would of course also involve more speech samples from within the Achterhoek area, covering a fairly equal swathe of rural and non-rural localities. A wider sample of words from the set containing the HUIS vowel in more phonological environments would need to be presented to participants, and the F1 and F2 formant values compared in order to determine variation between rural and non-rural speakers, as well as geographical location. We could also consider the frequency of occurrences in each of the words to be analysed.

## **7.5. Conclusion**

This research focused on speakers’ pronunciations of the vowels of the Achterhoeks dialect. It explored how self-described dialect speakers themselves viewed the traditional dialect of their area, how other Dutch speakers perceived the typical characteristics of the dialect, and

investigated how some of the more noticeable (to Dutch speakers) Low Saxon vowels have changed over the past few decades.

It is evident that the dialect and the standard variety are viewed as two different language entities by Achterhoeks speakers; that is, the dialect is not just an “accented” version of the standard. It has its own orthography, albeit non-standardised, and the results have shown that there is little variation in pronunciations amongst speakers. However, non-rural speakers have been shown to incorporate a greater number of near-standard pronunciations into their speech than rural speakers. This appears to follow the usage pattern in Limburg, where there are generally different domains reserved for each variety (Hinskens, 1992). In the Achterhoek, there is variation concerning [u] and [y] following rhotics that does not represent convergence towards the standard variety. In general, the speech of rural speakers is perceived to exhibit a higher degree of “tradition” than the non-rural speakers.

### **7.5.1. Answering the Research Questions**

The research questions were addressed throughout the study. In relation to Research Question 1 (*What does it mean to speak in dialect in relation to the vowels used?*), it was evident that there appeared to be something of a consensus among participants as to what it means to speak in dialect. This is evidenced through the rather uniform results for the KIJK vowel (with some diphthongisation occurring in 2015), as well as considerable consistency with respect to the distribution of the KAAS and PRAAT vowels (although both showed some phonetic change from 1979 to 2015). There did appear to be a difference, however, between rural and non-rural speakers, which could be observed through the split in the use of either [u] or [y] in the HUIS vowel following rhotics, which showed that HUIS displays differing realisations depending on, it appears, the rurality of the speakers’ locations. Differing realisations are also evidenced, to a lesser extent, through the perception study, in which non-rural speakers were more often perceived to be younger and from a more suburban location than the rural speakers. In turn, this leads us to an answer to Research Question 3 (*What is the sociolinguistic profile of the typical Achterhoeks speaker according to other Dutch speakers?*), which was addressed through the survey. In general, the speakers who were from more rural areas, or whose vowels could be judged to be more similar to those used in the 1979 sample, were seen to be older, rural, in professions such as farming or carpentry, and to not have as many interests as a regional standard speaker (who tended to be thought of as

younger, non-rural or urban, more often perceived to have a typical middle-class profession, and to have a wider variety of interests).

Research Question 2 (*What differences exist between 1979 and 2015 in phonetic values that may be suggestive of convergence to Standard Dutch?*) was perhaps the most important part of this thesis. It followed on from Research Question 1, in that we needed to ascertain that participants were actually speaking in their dialect in order to be able to answer this question accurately. As discussed throughout various sections of this thesis, there appeared to be a retention of the Low Saxon [i] in the KIJK vowel, although some diphthongisation (where there is a lexical correspondence to [ɛi] in Standard Dutch) had begun to occur in 2015. Overall, in respect of this particular vowel, there is little change besides a few usages of the diphthong which were observed mostly among non-rural speakers. Other vowels (see Sections 6.1-6.4, and 7.1) did show more indications of a change, but this was not always towards the Standard, such as the variation within the pronunciations of the HUIS vowel.

Overall, residents of the Achterhoek region appear to be able to at least temporarily adopt traditional dialect, whether or not this is representative of their usual speech style. This refers to whether a speaker's use of dialect is functioning as a part of a bidialectal situation where a speaker's repertoire includes both Standard and dialectal varieties used for different purposes. The elicited speech, overall, formed a segment of a much wider repertoire for these speakers. That repertoire is presumably changing, and the kind of language used in particular types of context is presumably also changing. Although the methodology was not set up to test speakers' overall repertoire, it is important to consider the fact that, for many of them, dialectal variants form only a part of their repertoire, and that there are still situations in which they (whether consciously or not) choose to use standard over dialectal variants. As time goes on, the distinctions between dialectal and non-dialectal variants may become less as the dialect begins to converge on the standard.

There is generally a consensus about which variants are considered to be dialectal or not, yet the results from 2015 do show an increase in the inclusion of Standard Dutch variants within the dialect. Nevertheless, speakers of Achterhoeks, or other Low Saxon dialects, are able to recognise and classify traditional pronunciations from non-traditional ones, particularly with regard to the HUIS vowel, where other Dutch speakers make only a monophthong/diphthong distinction. Views of Achterhoeks speakers working in professions such as agriculture and construction persist amongst not just speakers of Standard Dutch and Low Franconian dialect

varieties, but also amongst Low Saxon speakers themselves, suggesting that this is a stereotype which may persist. However, this finding needs to be considered alongside the possible effect of the content of the stimuli presented to the survey respondents, as there was also an indication that perceptions of at least the professions of speakers may have been influenced by the topic of the sentence. For example, in the sentence “*Hij heeft al sinds 1940 een paard*” (‘He has had a horse since 1940’), the speaker was commonly thought to be a farmer; similarly, where the sentence was “*In de keuken staat een oventje*” (‘In the kitchen is an oven’), the speaker was often thought to be a chef.

### **7.5.2. Contribution to Wider Sociolinguistic Research, and Parallels with Other Studies**

Overall, this research contributed to the field of sociolinguistics by exploring vowel change and perceptions associated with dialectal speech. It represents an innovative contribution due its focus on a dialect which is under-represented in the literature, but which can draw parallels to a wider situation in Europe. As this research investigated the use of dialect in the Achterhoek in 1979 and 2015, and how variation between speakers has been manifested, it has added to the literature on Dutch dialectology. In addition, the results tend to support ideas in wider sociolinguistic research. Firstly, we can relate the situation in Achterhoeks to Auer’s Cone Model, and, as discussed earlier, determine how it fits in the context of this model. Secondly, the concepts of dialect levelling and convergence have been expanding in sociolinguistic research, particularly in the United Kingdom and Europe; the current research suggests the idea that convergence on the standard variety may be linked to the level of rurality of locations. This is not surprising, and has previously been found in other sociolinguistic research, including in the United Kingdom. Thus, this research adds support to the work of researchers who have previously drawn this conclusion, such as Kerswill (2002b), who also mentions rural County Durham’s adoption of a new feature (monophthongisation of the traditional [ɪə] to [e:]) before the larger urban centre of Newcastle may potentially be viewed as an example of “counter-hierarchical diffusion” (p.198). At least in the case of diffusion, it is more likely for towns and cities to adopt a new feature than rural areas situated between these towns and cities (Kerswill, 2002b). To refer to a situation in Norway, it was found that a rural speaker’s geographical distance from the nearest town or city has an impact on how much of the urban variety he/she has picked up (Trudgill, 1974; Kerswill, 1994). The current research also shows that variation within

dialects is slowly being reduced, but we must stress that it confirms a gradual process, affecting vowels differently. In addition, Watt's (2002) work on the levelling of, particularly, the FACE vowel in Tyneside draws a parallel with what is happening with the HUIS vowel in the Achterhoek, insofar as the existence of a traditional variant as well as a regional variant is concerned.

Some functional dialect loss has been observed within the results of the current study, but an awareness of and ability to use dialect continue amongst Achterhoeks-speaking residents. Functional dialect loss is defined as a gradual process where there is a decline in the number of situations in which dialect is used. Eventually, it is assumed, that as the dialect is spoken in fewer situations over time, it will give way to a standardised or intermediate variety. For example, we can refer back to the participant (M50U1ft) who noted that although he speaks Achterhoeks with his friends, he will speak Dutch to his children; his observation highlights a change in generational dynamics, as he also noted that as a child he himself was speaking in dialect. This finding relates more broadly to the overall situations which have been observed in Europe. For example, Auer (2017) states that the old traditional dialects are, for the most part, no longer spoken in Europe, but regional dialects are plentiful. For example, in Germany, the regional dialects tend to be influenced by old regional standard varieties which existed as spoken languages until around the nineteenth century (downgraded to dialects, once the nation states decided that they were going to come up with national standard forms), such as in the case of Upper Saxony where the traditional dialects are said to be extinct (Auer, 2017). The dialects which are considered to be native to these areas are therefore levelled varieties of the regional standard which, following the loss of the old traditional varieties, have been re-evaluated as traditional dialects (Auer, 2017). It is plausible, and indeed likely, that this is also the case in Achterhoeks. With reference to the cone model, the base or traditional dialect is therefore constructed differently in speakers' minds; the base may no longer represent the original traditional dialect according to speakers. Instead, the base is what the speakers consider to be the dialect of the area. What this means is that the older, traditional dialect has disappeared (Auer, 2017), and has been replaced by a levelled variety. This variety is now what speakers consider to be basilectal in place of what was spoken previously.

We can also draw comparisons with the earlier mentioned studies by Dorian (1973, 1978), and Dressler and Wodak-Leodolter (1977) concerning the emergence of something of an



intermediate variety, as observed in M33Bredevoort's speech. Given the findings here, future research may focus on vowel realisation in spontaneous speech, in contrast to the current study's examination of speakers' ability to replicate their knowledge of dialect features. Indeed, if we were to conduct sociolinguistic interviews, perhaps a greater number of standard variants would be observed.

### **7.5.3. Summary**

To conclude, the overall picture supports the view that there is convergence on the standard variety within the Achterhoek, but that this is a gradual change which is affecting vowels differently. Despite this, folk perceptions of the dialect by other Dutch speakers are persisting. We can also consider how the dialect landscape between 1979 and 2015 has changed. Dialect in the modern era is different, and somewhat commodified through festivals celebrating dialect, and groups dedicated to the preservation of dialect, something that was not prevalent in 1979. The outlook for the future is that it is probable that the dialect will continue to change gradually, as has been observed throughout this study, and if it continues on its present course, it is likely that Achterhoeks will go the way of many other traditional dialects of Europe in which we see the formation of a somewhat intermediate variety which displaces the older dialect.

## Appendices

### Appendix 1: Sentence List

- *Met veel geweld kwam hij **aanrijden*** (With great force he came riding)
- *De jongens waren tegen de populierenstam aan het **slaan*** (The boys were beating against the poplar tree)
- *Ik zal deze bezem meenemen **gaarne*** (I will gladly take this broom)
- *De koe had **grote** horens* (The cow had big horns)
- *De buren zetten bij de **trouwerij** een boog om de deur* (The neighbours put a bow on the door at the wedding)
- *In de keuken **staat** een oventje* (In the kitchen is an oven)
- *De kogel **raakte** de kraai die op **draad** zat* (The bullet hit the crow that sat on the wire)
- *Ik heb dat ding **daar** nodig* (I need that thing there)
- *We eten **kaas*** (We are eating cheese)
- *Hij had een **blaar** aan zijn voet* (He had a blister on his foot)
- *Hij liep tegen **paaltje** aan* (He ran into the pole)
- *Moeder deed de **gordijnen** dicht* (Mother closed the curtains)
- *'s morgens vroeg **opstaan** kost moeite* (It takes effort getting up early in the mornings)
- *Hij is een **huis** aan het zoeken* (He is searching for a house)
- *De dominee loerde naar **buiten*** (The vicar peered outside)
- *Het jongetje wilde onder de auto **kruipen*** (The little boy wanted to crawl under the car)
- *Kun je rauw vlees **ruiken**?* (Can you smell raw meat?)
- *We **gaan** het **huis** in de breedte bouwen* (We are going to build the house in width rather than length)
- *De vrouw **maakte** de koe los* (The woman untied the cow)
- *Ik moet **spijkers** hebben van die grootte* (I must have nails that size)
- *Het was al licht toen het vuur **uitging*** (It was already light when the fire went out)
- *De **kuikens** zijn in de schuur* (The chickens are in the barn)

Appendix 2: Picture Task



## Appendix 3: Survey Questions

### Q1 Over Jou

Wat is uw geslacht?

man

vrouw

Q2 Wat is uw leeftijd?

---

Q3 Waar woont u in Nederland?

---

Q4 Waar bent u geboren?

---

Q5 Spreekt u een dialect? Zo ja, welke dialect?

---

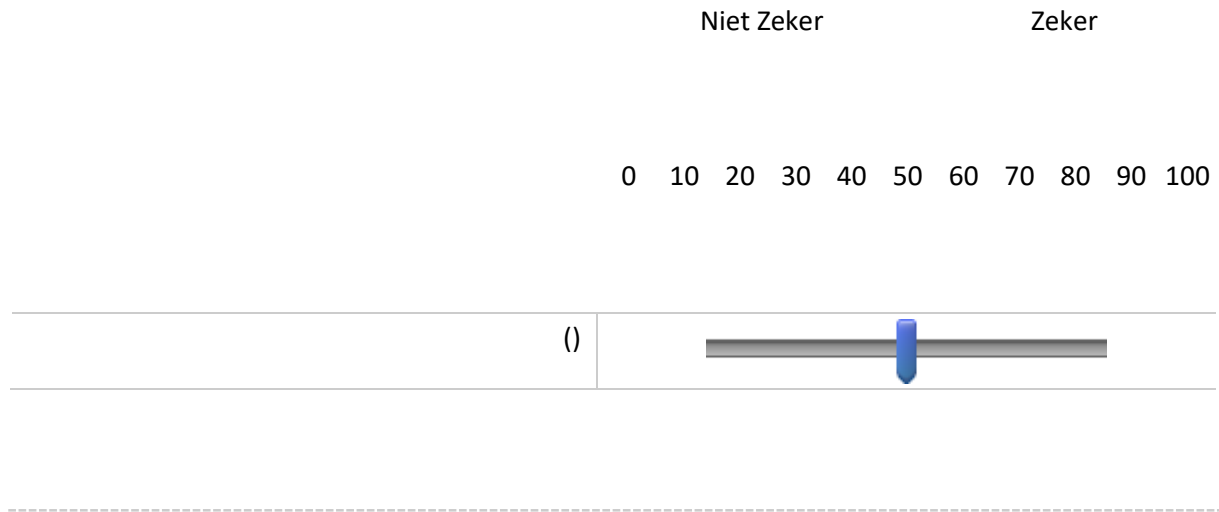
## SPREKER

Klik hier om te luisteren: [▶](#)

Waar woont deze spreker?



Hoe zeker bent u van uw keuze?



Wat is de leeftijd van de spreker?

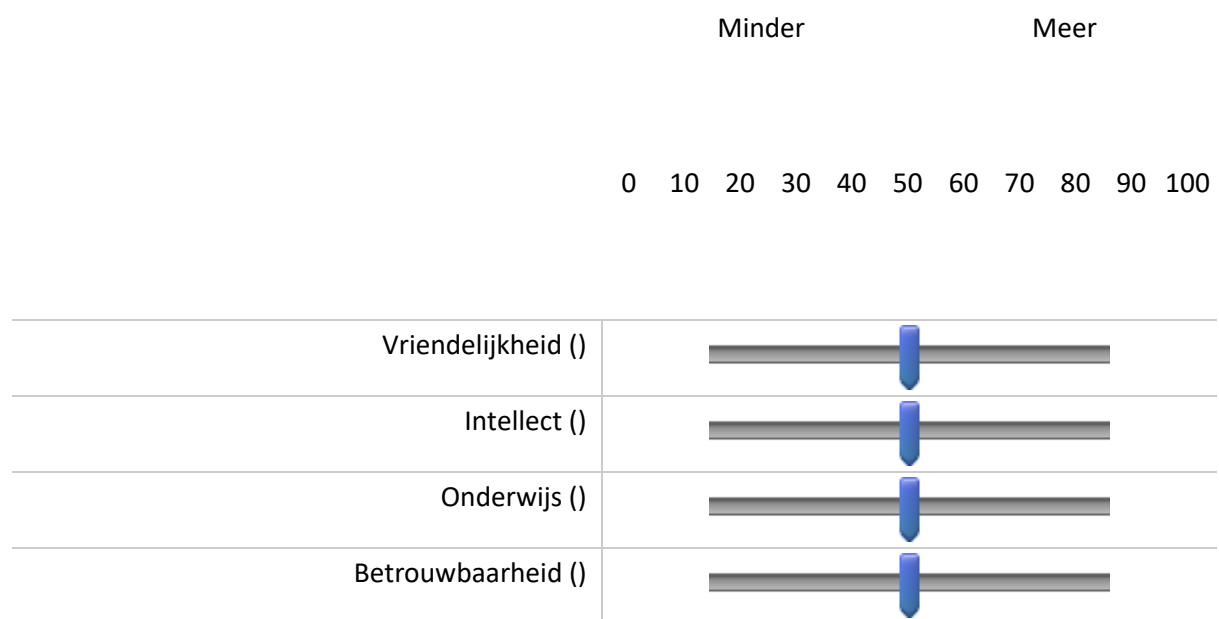
- 20-39
- 40-59
- 60+

Hoe zeker bent u van uw keuze?

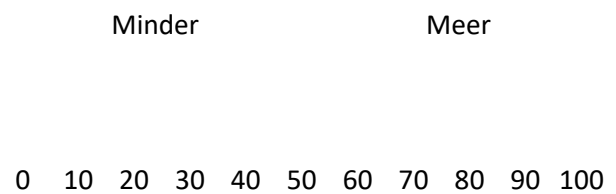


Wat is het werk van de spreker?

Hoe beoordeelt u de **spreker**:



Hoe beoordeelt u de **taal**:



Correctheid ()	
Aangenaamheid ()	

---

Welke muziek denkt u dat de spreker leuk vindt?

Klik op alles wat van toepassing is

- Rapmuziek (1)
- Rockmuziek (2)
- Metaalmuziek (3)
- Klassieke muziek (4)
- Popmuziek (5)
- Jazzmuziek (6)
- Reggae (7)
- Wereldmuziek (8)
- Nederlandse folk-muziek (9)
- Ander: (10) \_\_\_\_\_



Waar denkt u dat de spreker op vakantie gaat?

Klik op alles wat van toepassing is

- Frankrijk
  - Griekenland
  - Noord-Amerika
  - Spanje
  - Nederland
  - Andere EU: \_\_\_\_\_
  - Andere niet EU: \_\_\_\_\_
-

Wat denkt u dat de spreker eet?

Klik op alles wat van toepassing is

Fastfood

Biefstuk

Vegetarisch

Indiaas eten

Frans eten

Ander: \_\_\_\_\_



Welke vrijetijdsbesteding denkt u dat de spreker leuk vindt?

Klik op alles wat van toepassing is

- Musea
- Statige huizen
- Televisie kijken
- Kunstgaleries
- Sportschool
- Bioscoop
- Sport
- Kroeg / Pub
- Restaurant
- Gaan voor wandelingen
- Muziekfestival
- Ander: \_\_\_\_\_

## Appendix 4: Survey Data Tables

### 1. Overall Attributes Ratings

Attribute	Rural Dialect Speaker			Non-Rural Dialect Speaker			Regional Standard Speaker		
	LS	LF	SD	LS	LF	SD	LS	LF	SD
Friendliness	76.49	66.03	65.24	69.96	62.76	61.76	72.51	59.61	69.12
Intellect	72.64	51.08	54.01	69.02	55.55	57.69	74.10	66.81	62.79
Education	69.56	50.60	47.91	68.86	54.76	52.73	73.52	67.23	63.31
Trustworthiness	78.27	74.23	68.23	69.90	65.73	64.54	73.28	68.23	70.46
Correctness	78.73	47.70	47.27	64.65	44.86	47.74	74.34	75.15	68.87
Pleasantness	77.98	54.31	51.12	63.90	57.82	45.72	65.53	57.45	65.77

### 2. Attributes Ratings: *paard*

Attribute	Rural Dialect Speaker			Regional Standard Speaker		
	LS	LF	SD	LS	LF	SD
Friendliness	78.45	70.29	70.55	74.78	58.33	70.13
Intellect	72.21	49.71	55.89	75.94	67.83	63.38
Education	64.19	49.57	45.60	74.50	64.17	63.86
Trustworthiness	81.11	77.57	77.25	74.50	73.67	73.29
Correctness	85.75	50.63	57.56	74.50	72.17	71.00
Pleasantness	87.33	58.25	57.67	69.44	56.20	65.29

### 3. Attributes Ratings: *staat*

Attribute	Non-Rural Dialect Speaker			Regional Standard Speaker		
	LS	LF	SD	LS	LF	SD
Friendliness	73.47	67.67	62.50	74.31	66.28	73.63
Intellect	70.07	58.00	51.50	74.94	61.67	53.78
Education	69.73	48.33	48.67	72.78	64.83	56.89
Trustworthiness	73.50	67.00	67.00	75.87	68.67	66.89
Correctness	76.36	45.67	43.60	76.67	76.00	70.75
Pleasantness	74.00	69.50	41.50	69.00	53.86	60.45

### 4. Attributes Ratings: *stijf, pijn*

Attribute	Rural Dialect Speaker			Non-Rural Dialect Speaker			Regional Standard Speaker		
	LS	LF	SD	LS	LF	SD	LS	LF	SD
Friendliness	78.00	65.83	68.22	70.82	58.00	63.14	69.31	57.50	63.33
Intellect	73.69	55.86	57.38	70.12	54.00	57.71	72.44	69.75	67.00
Education	71.33	55.00	47.50	69.00	50.40	50.00	72.94	71.25	64.33
Trustworthiness	80.50	78.83	69.33	74.14	70.50	61.43	71.50	69.25	72.00
Correctness	81.79	56.00	44.14	65.06	41.20	51.50	67.88	81.75	61.40
Pleasantness	82.24	60.00	51.75	65.71	47.50	48.17	58.29	62.75	65.67

**5. Attributes ratings: *ruiken***

Attribute	Rural Dialect Speaker			Non-Rural Dialect Speaker		
	LS	LF	SD	LS	LF	SD
Friendliness	72.73	68.00	63.17	61.63	61.71	49.56
Intellect	70.08	47.00	55.20	65.59	56.43	57.56
Education	71.40	45.00	49.33	65.81	56.57	51.56
Trustworthiness	73.36	72.67	61.83	63.94	67.43	60.38
Correctness	63.27	45.50	52.00	55.19	39.83	40.44
Pleasantness	66.21	42.00	55.60	56.07	47.29	32.00

**6. Attributes Ratings: *gaan, huis***

Attribute	Rural Dialect Speaker			Non-Rural Dialect Speaker			Regional Standard Speaker		
	LS	LF	SD	LS	LF	SD	LS	LF	SD
Friendliness	76.76	60.00	59.00	73.93	63.67	71.83	71.62	56.33	69.33
Intellect	74.56	51.50	47.56	70.31	53.75	64.00	73.08	68.00	67.00
Education	71.33	52.83	49.22	70.88	63.75	60.67	73.85	68.67	68.17
Trustworthiness	78.12	66.17	64.50	68.00	58.00	69.33	71.25	61.33	69.67
Correctness	84.12	38.67	35.38	62.00	52.75	55.40	78.31	70.67	72.33
Pleasantness	76.12	57.00	39.43	59.81	67.00	61.20	65.38	57.00	71.67

## Appendix 5: Participant Raw Data

This appendix lists the normalised F1 and F2 values for all speakers. The 1979 list is ordered alphabetically by speaker location; for example, all tokens for “Aalten” refer to the speaker from Aalten. The vowel (PRAAT, KAAS, KAART, PAARD, KIJK or HUIS) is shown in the next column, followed by the elicited word. The 2015 list is ordered first by speaker gender, and then by age, with F31Zelhem appearing first in the list, and M73Ruurlo appearing last. Formant values include the normalised F1/F2 values for points 2 and 8 as described earlier.

### 1979

Speaker	Vowel	Context	F*1	F*2	F*1 gl	F*2 gl
Aalten	PRAAT	allemaal	1.033	-2.041	1.632	-1.569
Aalten	PRAAT	blaar	0.574	-0.443	0.71	-0.949
Aalten	HUIS	buiten	-0.159	-0.113	-0.317	0.074
Aalten	PRAAT	draad	1.291	-1.267	1.777	-1.533
Aalten	PRAAT	ga	1.062	-1.804	1.217	-1.219
Aalten	KAAS	gaat	-0.17	0.363	-0.676	0.54
Aalten	PRAAT	gaat	1.548	-1.52	0.925	-1.468
Aalten	KIJK	gordijnen	-0.912	0.986	-0.696	1.161
Aalten	KAART	graven	1.637	-0.704	1.939	-1.121
Aalten	HUIS	huis	-0.575	0.906	-0.503	1.147
Aalten	HUIS	huis	-0.731	0.567	-1.383	0.555
Aalten	HUIS	huizen	-0.495	0.765	-0.967	0.539
Aalten	KIJK	ijzer	-0.906	1.29	-1.225	1.215
Aalten	KAART	kaart	1.422	-0.354	1.67	-0.727
Aalten	KAAS	kaas	0.052	0.772	-0.504	0.706
Aalten	KIJK	kijken	-0.866	1.122	-0.875	1.052
Aalten	HUIS	kruipen	-1.029	-1.626	-0.861	-1.594
Aalten	HUIS	kuikens	-1.521	0.433	-0.706	0.548
Aalten	KAAS	maakte	1.758	-0.257	1.044	-0.03
Aalten	PRAAT	naar	0.568	-0.676	0.362	-0.488
Aalten	KAAS	nagel	-0.198	0.453	0.445	0.22
Aalten	PRAAT	opstaan	1.56	-1.268	-0.266	-1.384
Aalten	PRAAT	paaltje	-0.105	-0.588	0.804	-0.592
Aalten	PAARD	paard	-0.049	0.513	1.038	-0.862
Aalten	KIJK	pijn	-0.905	1.027	-0.805	1.21
Aalten	KIJK	prijzen	-1.503	0.953	-0.723	1.128
Aalten	KAAS	raakte	1.234	-0.381	2.179	-0.457
Aalten	KIJK	rijden	-0.772	1.259	-0.593	1.501
Aalten	HUIS	ruiken	-0.458	-0.976	-1.123	-1.148
Aalten	PRAAT	slaan	0.717	-1.179	0.512	-1.68
Aalten	KIJK	spijkers	-2.205	0.951	-0.635	1.138

Aalten	KIJK	spijkers	-0.599	1.177	-0.518	0.79
Aalten	KAAS	staat	-0.418	0.434	-0.127	0.565
Aalten	KIJK	stijf	-0.852	0.838	-0.69	0.887
Aalten	KIJK	trouwerij	-0.45	0.801	0.222	0.177
Aalten	HUIS	uitging	-0.757	1.068	-0.698	0.973
Aalten	KAART	vaak	0.47	-0.652	0.124	-0.131
Almen	PRAAT	allemaal	1.466	-1.232	0.464	-1.516
Almen	PRAAT	blaar	-0.025	-1.456	0.533	-1.305
Almen	HUIS	buiten	-0.228	0.696	-0.839	0.668
Almen	PRAAT	daar	0.181	-1.466	-0.136	-1.377
Almen	PRAAT	draad	1.24	-0.845	1.383	-1.165
Almen	PRAAT	ga	1.482	-1.236	0.976	-0.904
Almen	PRAAT	gaan	-0.062	-1.511	0.183	-1.743
Almen	PAARD	gaarne	-0.66	0.907	0.298	0.323
Almen	KAAS	gaat	-0.703	1.097	-0.377	1.055
Almen	PRAAT	gaat	0.744	-1.309	0.73	-1.146
Almen	KIJK	gordijnen	-0.925	0.942	-1.028	1.043
Almen	KAART	graven	1.149	-0.061	2.329	-0.946
Almen	HUIS	huis	-0.837	0.33	-1.301	0.488
Almen	HUIS	huis	-0.613	0.471	-1.06	0.311
Almen	HUIS	huizen	-0.904	0.333	-1.077	0.302
Almen	KIJK	ijzer	-1.285	1.215	-1.127	1.103
Almen	KAART	kaart	1.183	0.061	1.313	-0.126
Almen	KAAS	kaas	-0.49	1.273	-0.239	1.054
Almen	KIJK	kijken	-0.69	1.029	-0.97	1.042
Almen	HUIS	kruipen	-0.507	-1.464	-0.592	-1.483
Almen	HUIS	kuikens	-1.828	0.382	-0.888	0.437
Almen	KAAS	maakte	1.963	-0.76	1.423	-0.697
Almen	PRAAT	naar	0.869	-0.02	0.924	-0.512
Almen	KAAS	nagel	0.614	0.448	0.751	0.405
Almen	PRAAT	opstaan	1.005	-0.868	1.931	-1.129
Almen	PRAAT	paaltje	0.887	-0.896	0.889	-1.131
Almen	PAARD	paard	-0.877	0.926	0.104	0.129
Almen	KIJK	pijn	-1.021	1.063	-0.462	1.21
Almen	KIJK	prijzen	-0.51	0.796	-0.641	1.227
Almen	KAAS	raakte	1.591	-0.575	1.511	-0.304
Almen	KIJK	rijden	-0.602	0.912	-0.642	1.296
Almen	HUIS	ruiken	-0.163	-1.421	-0.454	-1.62
Almen	PRAAT	slaan	1.54	-1.296	0.814	-1.478
Almen	KIJK	spijkers	-0.589	0.841	-0.573	1.019
Almen	KIJK	spijkers	-0.258	0.567	-0.271	0.933
Almen	KIJK	staat	-0.571	0.903	-0.813	0.848
Almen	KIJK	stijf	-0.96	1.221	-1.153	1.338
Almen	KIJK	trouwerij	-1.094	1.01	-1.194	0.977
Almen	HUIS	uitging	-0.998	0.727	-1.65	0.655
Almen	KAART	vaak	1.284	-0.904	1.133	-0.11



Barchem	PRAAT	allemaal	0.58	-1.568	0.625	-1.741
Barchem	PRAAT	blaar	0.084	-1.381	0.634	-1.567
Barchem	HUIS	buiten	-0.965	-0.046	-0.468	0.359
Barchem	PRAAT	daar	0.968	-0.622	1.041	-1.129
Barchem	PRAAT	draad	1.011	-0.97	1.497	-1.125
Barchem	PRAAT	ga	1.371	-1.599	1.119	-1.439
Barchem	PRAAT	gaan	0.838	-1.145	0.161	-0.671
Barchem	PAARD	gaarne	-0.525	1.374	0.474	0.742
Barchem	KAAS	gaat	-0.483	1.312	-0.845	0.661
Barchem	KIJK	gordijnen	-0.654	0.781	-0.815	1.049
Barchem	KAART	graven	1.64	-0.572	2.145	-0.881
Barchem	HUIS	huis	-0.738	0.432	-1.636	0.25
Barchem	HUIS	huis	-0.854	0.487	-0.761	0.51
Barchem	HUIS	huizen	-1.032	0.17	-1.028	0.547
Barchem	KIJK	ijzer	-0.615	1.48	-0.983	1.315
Barchem	KAART	kaart	1.474	0.23	2.207	-0.256
Barchem	KAAS	kaas	-0.832	1.409	-0.277	0.881
Barchem	KIJK	kijken	-0.698	1.234	-0.714	1.42
Barchem	HUIS	kruipen	0.206	-1.095	0.185	-1.321
Barchem	HUIS	kuikens	-0.947	-0.067	-0.9	-0.174
Barchem	KAAS	nagel	0.076	0.583	0.628	0.65
Barchem	PRAAT	opstaan	1.37	-1.27	-0.055	-1.522
Barchem	PRAAT	paaltje	1.302	-0.79	0.953	-0.66
Barchem	PAARD	paard	-0.366	0.817	1.159	0.24
Barchem	KIJK	pijn	-0.908	1.068	-0.601	0.495
Barchem	KIJK	prijzen	-0.749	0.622	-1	0.896
Barchem	KAAS	raakte	1.489	-0.368	0.936	-0.604
Barchem	KIJK	rijden	-0.386	1.262	-0.41	1.745
Barchem	HUIS	ruiken	-0.052	-1.261	-0.016	-1.485
Barchem	PRAAT	slaan	1.133	-1.554	0.878	-1.704
Barchem	KIJK	spijkers	-0.912	0.594	-2.255	0.757
Barchem	KIJK	staat	-0.619	0.687	-0.679	0.7
Barchem	KIJK	stijf	-1.153	0.788	-1.471	0.238
Barchem	KIJK	trouwerij	-0.769	0.987	-0.525	1.006
Barchem	HUIS	uitging	-0.514	0.361	-0.868	0.441
Barchem	KAART	vaak	1.795	-0.871	1.101	-0.122
Barlo	PRAAT	allemaal	1.397	-1.183	0.162	-0.839
Barlo	PRAAT	blaar	0.409	-1.517	1.385	-0.967
Barlo	HUIS	buiten	-0.637	-0.507	-0.583	-0.068
Barlo	PRAAT	draad	0.379	-1.186	0.485	-1.486
Barlo	PRAAT	ga	0.426	-1.539	0.906	-1.415
Barlo	PAARD	gaarne	-0.203	0.956	0.457	0.84
Barlo	KAAS	gaat	-0.769	0.894	-0.544	0.706
Barlo	PRAAT	gaat	-0.037	-1.356	0.133	-0.954
Barlo	KIJK	gordijnen	-0.939	1.317	-0.915	1.158
Barlo	KAART	graven	0.911	-0.646	2.74	-1.087

Barlo	HUIS	huis	-0.336	0.503	-0.907	1.08
Barlo	HUIS	huis	-0.723	0.251	-0.687	0.345
Barlo	HUIS	huizen	-0.885	0.938	-0.857	1.072
Barlo	KIJK	ijzer	-0.693	1.358	-1.035	1.146
Barlo	KAART	kaart	1.427	-0.276	2.883	-0.347
Barlo	KAAS	kaas	-0.687	1.413	-0.543	0.967
Barlo	KAAS	kijken	-1.068	1.487	-1.214	1.704
Barlo	HUIS	kruipen	-0.675	-1.185	-0.847	-1.328
Barlo	HUIS	kuiken	-0.791	-0.032	-0.719	-0.256
Barlo	KAAS	maakte	1.102	-0.5	1.973	-0.564
Barlo	KAAS	nagel	-0.093	0.914	-0.157	0.28
Barlo	KAAS	nagel	-0.105	0.456	0.607	0.297
Barlo	PRAAT	opstaan	0.351	-1.339	0.616	-1.724
Barlo	PRAAT	paaltje	0.692	-0.671	0.629	-0.72
Barlo	PAARD	paard	-0.569	1.112	1.468	-0.544
Barlo	KIJK	pijn	-1.156	1.49	-0.938	0.849
Barlo	KIJK	prijzen	-0.823	0.597	-0.583	0.686
Barlo	KAAS	raakte	1.204	-0.567	2.135	-0.293
Barlo	KIJK	rijden	0.153	0.694	-0.938	1.507
Barlo	HUIS	ruiken	-0.742	-1.277	-0.818	-1.472
Barlo	PRAAT	slaan	0.393	-1.025	0.409	-1.569
Barlo	KAAS	staat	-0.483	0.418	-0.313	0.057
Barlo	KIJK	stijf	-0.585	1.307	-0.835	0.708
Barlo	KIJK	trouwerij	-0.238	0.981	-0.673	1.246
Barlo	HUIS	uitging	-1.039	-0.139	-1.158	-0.191
Barlo	KAART	vaak	1.45	-0.705	2.256	-0.262
Beltrum	PRAAT	allemaal	0.775	-0.964	0.771	-1.236
Beltrum	PRAAT	blaar	0.207	-1.439	1.195	-0.601
Beltrum	PRAAT	draad	0.221	-0.991	0.337	-1.289
Beltrum	PRAAT	ga	0.51	-0.388	0.13	-0.125
Beltrum	KAART	kaart	1.229	-0.179	-0.969	0.354
Beltrum	KAAS	nagel	-0.214	1.347	-1.262	0.531
Beltrum	PAARD	paard	-1.305	1.714	1.06	0.835
Beltrum	KAAS	raakte	0.58	-0.064	0.337	-0.107
Beltrum	KAAS	staat	-1.946	1.22	-1.656	1.382
Borculo	PRAAT	blaar	0.495	-1.395	1.735	-1.319
Borculo	HUIS	buiten	-1.945	0.121	-0.715	0.323
Borculo	PRAAT	daar	0.723	-0.788	1.1	-0.855
Borculo	PRAAT	draad	1.522	-1.414	1.574	-1.29
Borculo	PRAAT	gaat	1.224	-1.489	0.64	-0.9
Borculo	PRAAT	gaat	1.115	-1.402	1.43	-1.407
Borculo	KIJK	gordijnen	-0.934	0.982	-0.872	1.172
Borculo	HUIS	huis	-0.332	0.383	-0.993	0.47
Borculo	HUIS	huis	-0.727	0.263	-1.284	0.392
Borculo	HUIS	huizen	-0.886	0.354	-0.696	0.171
Borculo	KIJK	ijzer	-0.814	1.142	-0.938	1.077

Borculo	KAAS	kaas	-0.552	1.043	-0.35	0.987
Borculo	KIJK	kijken	-0.62	0.916	-0.647	0.994
Borculo	HUIS	kruipe	0.382	-1.757	0.02	-1.972
Borculo	HUIS	kuikens	-0.731	0.076	-0.74	-0.06
Borculo	KAAS	maakte	1.158	-0.271	1.259	-0.071
Borculo	PRAAT	opstaan	1.274	-1.321	0.892	-1.305
Borculo	PRAAT	paaltje	0.909	-0.962	0.816	-0.904
Borculo	KIJK	pijn	-0.918	1.113	-0.186	0.87
Borculo	KIJK	prijzen	-0.572	0.672	-0.584	0.891
Borculo	KAAS	raakte	1.521	-0.318	2.03	-0.236
Borculo	HUIS	ruiken	0.071	-1.632	0.577	-1.732
Borculo	KIJK	spijkers	-0.675	0.823	-0.943	1.155
Borculo	KIJK	spijkers	-0.83	0.84	-0.778	0.82
Borculo	KAAS	staat	-0.431	0.837	-0.139	0.919
Borculo	KIJK	stijf	-0.974	1.006	-0.855	1.059
Borculo	KIJK	trouwerij	-0.608	1.111	-0.651	1.001
Borculo	HUIS	uitging	-1.003	0.43	-0.829	0.883
Borculo	KAART	vaak	1.622	-0.434	1.661	-0.063
Bredevoort	PRAAT	allemaal	0.382	-1.913	1.891	-1.494
Bredevoort	PRAAT	blaar	0.536	-1.236	1.573	-1.192
Bredevoort	HUIS	buiten	-0.913	0.695	-0.893	0.849
Bredevoort	PRAAT	daar	0.14	-1.091	-1.161	-1.189
Bredevoort	PRAAT	draad	1.247	-1.25	2.091	-1.459
Bredevoort	PRAAT	ga	0.436	-1.926	1.408	-1.452
Bredevoort	PAARD	gaarne	0.014	0.926	0.661	0.327
Bredevoort	PRAAT	gaat	0.848	-1.359	0.982	-1.364
Bredevoort	KIJK	gordijnen	-0.901	1.065	-0.865	1.194
Bredevoort	KAART	graven	1.103	-0.745	2.547	-1.001
Bredevoort	HUIS	huis	-0.747	0.544	-0.961	0.632
Bredevoort	HUIS	huis	-0.732	0.392	-1.076	0.626
Bredevoort	HUIS	huizen	-0.757	0.54	-0.866	0.671
Bredevoort	KIJK	ijzer	-0.641	0.985	-0.106	0.887
Bredevoort	KAART	kaart	1.663	0.052	2.299	-0.259
Bredevoort	KAAS	kaas	-0.471	0.933	-0.404	1.219
Bredevoort	KIJK	kijken	0.465	0.812	0.475	1.047
Bredevoort	HUIS	kruipe	-0.129	-1.579	-0.199	-1.349
Bredevoort	HUIS	kuikens	-0.924	0.377	-1.326	0.056
Bredevoort	KAAS	maakte	0.4	0.297	0.227	0.492
Bredevoort	KAAS	nagel	-0.361	0.803	0.938	0.504
Bredevoort	PRAAT	opstaan	0.658	-1.123	1.665	-1.213
Bredevoort	PRAAT	paaltje	0.126	-0.378	0.102	-0.852
Bredevoort	PAARD	paard	-0.554	0.998	1.067	0.177
Bredevoort	KIJK	pijn	-1.298	1.117	-0.534	1.197
Bredevoort	KIJK	prijzen	-0.854	0.591	-0.945	0.86
Bredevoort	KAAS	raakte	1.325	-0.644	1.794	-0.453
Bredevoort	KIJK	rijden	-1.581	0.742	-0.775	0.86

Bredevoort	HUIS	ruiken	-0.194	-1.555	-0.072	-1.574
Bredevoort	PRAAT	slaan	0.423	-1.313	0.582	-1.53
Bredevoort	KIJK	spijkers	-0.866	0.858	-1.149	1.012
Bredevoort	KIJK	spijkers	-0.831	0.606	-1.03	0.824
Bredevoort	KAAS	staat	-0.343	0.542	-0.192	0.749
Bredevoort	KIJK	stijf	-0.962	0.913	-0.57	1.032
Bredevoort	KIJK	trouwerij	-0.586	0.664	-0.493	0.816
Bredevoort	HUIS	uitging	-0.808	0.5	-0.99	0.512
Breedenbroek	PRAAT	allemaal	0.997	-1.26	1.008	-1.317
Breedenbroek	PRAAT	blaar	0.249	-1.286	1.412	-1.117
Breedenbroek	HUIS	buiten	-0.739	-0.016	-0.605	0.223
Breedenbroek	PRAAT	daar	0.387	-1.158	0.344	-0.955
Breedenbroek	PRAAT	daar	-0.66	-0.812	0.406	-1.061
Breedenbroek	PRAAT	draad	0.41	-1.138	1.126	-1.226
Breedenbroek	PRAAT	ga	0.337	-1.254	1.456	-0.877
Breedenbroek	PRAAT	gaan	0.361	-1.051	1.284	-0.984
Breedenbroek	KAAS	gaat	-0.55	1.371	-0.28	0.972
Breedenbroek	KIJK	gordijnen	-1.233	1.278	-1.016	1.294
Breedenbroek	KAART	graven	1.495	-0.904	2.107	-0.881
Breedenbroek	HUIS	huis	-1.402	0.447	-0.927	0.528
Breedenbroek	HUIS	huis	-1.242	0.478	-0.946	0.555
Breedenbroek	HUIS	huizen	-0.871	0.224	-1.519	0.36
Breedenbroek	KIJK	ijzer	-0.88	0.992	-0.526	0.716
Breedenbroek	KAART	kaart	1.943	-0.929	2.251	-0.702
Breedenbroek	KAAS	kaas	0.359	0.89	0.255	0.467
Breedenbroek	KIJK	kijken	-0.773	1.435	-0.687	1.263
Breedenbroek	HUIS	kruipen	-0.682	-1.805	-0.682	-1.874
Breedenbroek	HUIS	kuikens	-0.882	-0.275	-0.672	-0.382
Breedenbroek	KAAS	maakte	-1.122	1.084	-1.417	1.165
Breedenbroek	PRAAT	naar	1.163	-0.814	1.933	-0.999
Breedenbroek	KAAS	nagel	0.572	0.768	0.104	0.883
Breedenbroek	KAAS	nagel	0.94	0.654	0.734	0.713
Breedenbroek	KAAS	nagel	1.121	0.569	0.713	0.858
Breedenbroek	PRAAT	opstaan	0.946	-1.246	1.216	-1.301
Breedenbroek	PRAAT	paaltje	-0.026	-0.394	0.926	-0.438
Breedenbroek	PAARD	paard	-0.669	1.259	0.478	0.65
Breedenbroek	KIJK	pijn	-0.971	1.175	-1.233	1.223
Breedenbroek	KIJK	prijzen	-1.054	1.017	-1.108	0.762
Breedenbroek	KAAS	raakte	-1	1.064	-0.975	1.135
Breedenbroek	HUIS	ruiken	-1.019	-0.51	-0.379	-0.434
Breedenbroek	PRAAT	slaan	0.96	-1.399	0.946	-1.578
Breedenbroek	KAAS	staat	-0.435	1.034	-0.384	1.016
Breedenbroek	KIJK	stijf	-1.06	1.203	-0.858	1.067
Breedenbroek	HUIS	uitging	-0.648	0.544	-0.691	0.774
Breedenbroek	KAART	vaak	0.804	-0.835	1.078	-0.897
DeHeurne	PRAAT	allemaal	1.127	-1.487	0.76	-1.188

DeHeurne	PRAAT	blaar	-0.191	-1.109	1.743	-0.735
DeHeurne	HUIS	buiten	-0.795	-0.085	-1.366	0.045
DeHeurne	PRAAT	daar	0.079	-0.734	-0.01	-0.914
DeHeurne	PRAAT	daar	-0.175	-1.244	1.058	-0.583
DeHeurne	PRAAT	draad	0.65	-1.133	1.045	-1.117
DeHeurne	PRAAT	ga	0.117	-1.177	0.993	-1
DeHeurne	PAARD	gaarne	-0.878	1.337	1.301	0.21
DeHeurne	KAART	graven	1.81	-0.391	1.444	-0.832
DeHeurne	HUIS	huis	-0.816	0.12	-0.787	0.608
DeHeurne	HUIS	huizen	-1.162	0.328	-0.914	0.711
DeHeurne	KIJK	ijzer	-0.482	1.307	-1.292	1.424
DeHeurne	KAART	kaart	2.044	0.056	2.117	0.037
DeHeurne	KAAS	kaas	0.246	1.178	0.208	0.877
DeHeurne	KIJK	kijken	-1.166	1.262	-1.319	1.36
DeHeurne	HUIS	kruipen	-0.803	-1.338	-1.484	-2.042
DeHeurne	KAAS	maakte	-0.558	1.079	-1.114	1.431
DeHeurne	PRAAT	naar	-0.261	-0.785	0.728	-0.933
DeHeurne	KAAS	nagel	0.205	0.844	-0.162	0.642
DeHeurne	KAAS	nagel	0.566	1.019	0.834	0.466
DeHeurne	PRAAT	paaltje	0.256	-0.754	-0.4	-0.426
DeHeurne	KAAS	raakte	1.725	-0.585	1.737	-0.393
DeHeurne	KIJK	rijden	-0.331	1.418	-0.833	1.301
DeHeurne	HUIS	ruiken	-0.755	-0.321	-1.42	-0.212
DeHeurne	PRAAT	slaan	0.303	-1.794	0.246	-1.3
DeHeurne	KIJK	spijkers	-1.041	0.584	-1.033	1.045
DeHeurne	KAAS	staat	-0.496	0.939	-0.3	0.763
DeHeurne	KIJK	trouwerij	-0.585	1.143	-0.416	1.076
Dinxperlo	PRAAT	allemaal	-0.914	-1.516	1.02	-1.659
Dinxperlo	PRAAT	blaar	0.572	-1.347	0.949	-1.205
Dinxperlo	HUIS	buiten	-0.442	0.408	-0.917	0.677
Dinxperlo	PRAAT	daar	0.049	-0.698	-0.186	-0.63
Dinxperlo	PRAAT	draad	0.847	-1.186	1.692	-1.638
Dinxperlo	PRAAT	ga	0.804	-1.614	0.836	-1.591
Dinxperlo	PAARD	gaarne	-0.56	1.282	0.904	0.202
Dinxperlo	KAAS	gaat	-0.738	0.855	-0.332	0.574
Dinxperlo	KIJK	gordijnen	-1.202	1.393	-1.342	1.248
Dinxperlo	KAART	graven	1.276	-0.762	1.506	-0.947
Dinxperlo	HUIS	huis	-1.614	0.58	-1.035	0.547
Dinxperlo	HUIS	huizen	-0.925	0.598	-0.501	0.457
Dinxperlo	KIJK	ijzer	-1.226	1.3	-1.089	0.86
Dinxperlo	KAART	kaart	1.894	-0.468	2.037	-0.682
Dinxperlo	KAAS	kaas	0.046	0.993	0.346	0.67
Dinxperlo	KIJK	kijken	-1.373	0.839	-1.237	1.122
Dinxperlo	HUIS	kruipen	-0.698	-1.301	-0.413	-1.523
Dinxperlo	KAAS	maakte	0.376	-1.242	0.791	-0.714
Dinxperlo	PRAAT	naar	0.199	-0.815	0.327	-0.92

Dinxperlo	KAAS	nagel	0.307	0.9	0.54	0.764
Dinxperlo	KAAS	nagel	0.544	0.612	0.88	0.537
Dinxperlo	PRAAT	opstaan	0.053	-1.114	1.403	-1.483
Dinxperlo	PRAAT	paaltje	0.373	-0.406	0.326	-0.806
Dinxperlo	PAARD	paard	-0.736	1.328	0.976	0.65
Dinxperlo	KIJK	pijn	-1.295	1.123	-0.467	0.706
Dinxperlo	KIJK	prijzen	-0.384	0.941	-0.17	0.902
Dinxperlo	KAAS	raakte	1.527	-0.497	1.676	-0.6
Dinxperlo	KIJK	rijden	-1.063	0.916	-1.302	1.166
Dinxperlo	HUIS	ruiken	-0.211	-0.526	-1.506	-0.565
Dinxperlo	PRAAT	slaan	1.395	-1.173	1.613	-0.884
Dinxperlo	KIJK	spijkers	-1.358	0.665	-1.243	0.888
Dinxperlo	KAAS	staat	-0.634	1.174	0.01	0.927
Dinxperlo	KIJK	stijf	-1.017	0.967	-0.539	0.878
Dinxperlo	KIJK	trouwerij	-0.944	1.031	-0.591	0.959
Dinxperlo	KAART	vaak	1.094	-1.122	1.014	-1.007
Doesburg	PRAAT	allemaal	1.166	-2.533	2.671	-2.279
Doesburg	PRAAT	blaar	0.178	-2.079	1.189	-1.298
Doesburg	HUIS	buiten	-0.779	0.335	-0.947	0.477
Doesburg	PRAAT	daar	0.297	-1.229	0.764	-0.821
Doesburg	PRAAT	draad	0.81	-0.652	1.21	-1.608
Doesburg	KAAS	gaat	-0.189	1.306	0.205	0.244
Doesburg	KIJK	gordijnen	-0.363	1.1	-2.392	1.379
Doesburg	KAART	graven	0.948	-0.604	1.565	-0.853
Doesburg	HUIS	huis	-0.249	0.609	-1.362	0.403
Doesburg	HUIS	huis	-1.568	0.493	-1.711	0.867
Doesburg	HUIS	huizen	-0.626	1.072	-0.737	0.636
Doesburg	KIJK	ijzer	-0.826	1.505	-0.644	0.837
Doesburg	KAART	kaart	0.832	0.252	1.553	0.039
Doesburg	KAAS	kaas	0.152	0.669	0.28	0.45
Doesburg	KIJK	kijken	-0.647	0.942	-0.888	1.524
Doesburg	HUIS	kruipen	-0.641	-0.119	-0.003	-0.313
Doesburg	KAAS	nagel	0.351	0.43	0.608	0.174
Doesburg	PRAAT	opstaan	1.55	-1.484	-0.405	-1.465
Doesburg	PRAAT	paaltje	0.857	-0.741	1.118	-1.035
Doesburg	PAARD	paard	-0.651	0.99	0.842	-0.134
Doesburg	KIJK	pijn	0.163	0.437	-0.694	0.651
Doesburg	KIJK	prijzen	-1.174	0.474	-1.649	0.809
Doesburg	KIJK	rijden	0.537	0.271	-0.388	0.991
Doesburg	HUIS	ruiken	-0.114	-0.382	-0.178	-0.539
Doesburg	PRAAT	slaan	0.863	-1.428	1.054	-1.777
Doesburg	KIJK	spijkers	-0.728	0.601	-0.847	1.233
Doesburg	KAAS	staat	-0.388	0.717	-0.231	0.599
Doesburg	KIJK	stijf	-1.349	0.661	-1.369	0.539
Doesburg	KIJK	trouwerij	0.762	-0.332	0.041	0.165
Doesburg	KAART	vaak	1.328	-0.827	0.845	-0.35

Doetinchem	PRAAT	allemaal	1.534	-1.403	0.668	-1.618
Doetinchem	PRAAT	blaar	-0.422	-1.137	0.82	-0.995
Doetinchem	HUIS	buiten	-0.896	-0.204	-1.087	0.106
Doetinchem	PRAAT	daar	0.039	-0.597	0.08	-0.857
Doetinchem	PRAAT	daar	0.257	-1.306	1.153	-1.185
Doetinchem	PRAAT	draad	0.997	-1.478	0.623	-1.634
Doetinchem	PRAAT	ga	0.421	-1.451	0.345	-1.394
Doetinchem	PRAAT	gaan	0.161	-1.171	-0.367	-1.298
Doetinchem	PAARD	gaarne	-0.844	0.989	1.315	0.171
Doetinchem	KAAS	gaat	-0.424	0.862	-0.376	0.605
Doetinchem	KIJK	gordijnen	-0.774	1.171	-0.747	1.392
Doetinchem	KAART	graven	2	-0.627	2.005	-1.014
Doetinchem	HUIS	huis	-0.972	0.621	-1.256	0.679
Doetinchem	HUIS	huizen	-0.957	0.578	-0.914	0.535
Doetinchem	KIJK	ijzer	-0.16	0.821	-0.933	1.196
Doetinchem	KAART	kaart	2.179	-0.052	2.22	-0.05
Doetinchem	KAAS	kaas	-0.038	1.031	0.056	0.943
Doetinchem	KIJK	kijken	-0.976	0.917	-0.933	1.039
Doetinchem	HUIS	kruipe	-0.697	-0.833	-0.565	-1.09
Doetinchem	HUIS	kuikens	-0.944	0.344	-0.829	0.342
Doetinchem	KAAS	maakte	1.151	-0.798	2.251	-0.758
Doetinchem	PRAAT	naar	0.98	-0.978	0.152	-0.912
Doetinchem	KAAS	nagel	0.091	1.102	-0.026	0.858
Doetinchem	PRAAT	opstaan	0.674	-1.741	1.083	-1.482
Doetinchem	PRAAT	paaltje	0.868	-0.605	0.251	-0.669
Doetinchem	PAARD	paard	-0.593	1.442	1.178	0.558
Doetinchem	KIJK	pijn	-1.45	1.157	-0.398	0.852
Doetinchem	KIJK	prijzen	-0.665	0.919	-0.681	0.838
Doetinchem	KAAS	raakte	1.428	-0.471	1.956	-0.636
Doetinchem	KIJK	rijden	-0.563	0.984	-0.871	1.2
Doetinchem	HUIS	ruiken	-0.641	0.328	-0.979	0.067
Doetinchem	PRAAT	slaan	1.13	-1.765	-0.334	-1.712
Doetinchem	KIJK	spijkers	-0.953	0.957	-0.864	1.017
Doetinchem	KIJK	spijkers	-0.876	0.999	-0.83	0.979
Doetinchem	KAAS	staat	-0.59	1.019	-0.512	1.004
Doetinchem	KIJK	stijf	-0.968	0.835	-0.944	1.117
Doetinchem	KIJK	trouwerij	-0.719	0.89	-0.795	1.179
Doetinchem	HUIS	uitging	-0.755	0.276	-0.947	0.327
Doetinchem	KAART	vaak	1.378	-0.958	1.621	-0.366
Epse	PRAAT	allemaal	1.859	-1.345	1.248	-1.411
Epse	PRAAT	blaar	1.307	-1.056	0.539	-0.722
Epse	HUIS	buiten	-0.591	-0.182	-0.843	0.256
Epse	PRAAT	daar	0.083	-0.997	0.542	-0.486
Epse	PRAAT	daar	0.553	-0.983	0.493	-0.516
Epse	PRAAT	draad	0.003	-0.802	1.381	-0.667
Epse	PRAAT	ga	0.918	-1.244	0.45	-1.19

Epse	PRAAT	gaan	1.543	-1.701	0.168	-1.237
Epse	PAARD	gaarne	-0.378	1.34	0.538	0.347
Epse	PRAAT	gaat	1.097	-1.126	0.921	-1.049
Epse	PRAAT	gaat	1.271	-1.409	0.967	-1.126
Epse	KIJK	gordijnen	-1.024	1.022	-1.239	1.535
Epse	KAART	graven	0.795	0.233	1.568	-0.521
Epse	HUIS	huis	-0.913	0.731	-0.966	0.807
Epse	HUIS	huis	-1.003	0.883	-1.081	0.837
Epse	HUIS	huizen	-0.955	0.292	-1.225	0.356
Epse	KIJK	ijzer	-1.359	1.773	-1.788	1.592
Epse	KAART	kaart	1.36	0.297	1.607	0.125
Epse	KAAS	kaas	-0.484	0.947	-0.58	0.87
Epse	HUIS	kruipen	-0.985	-1.452	-1.09	-1.661
Epse	HUIS	kuikens	-0.871	0.203	-1.073	0.141
Epse	KAAS	maakte	1.779	-0.712	2.231	-0.305
Epse	PRAAT	naar	0.969	-1.025	0.497	-0.289
Epse	KAAS	nagel	0.948	1.049	0.944	0.817
Epse	PRAAT	opstaan	0.464	-1.251	0.44	-1.583
Epse	PRAAT	paaltje	0.457	-0.468	0.75	-0.738
Epse	PAARD	paard	-0.566	1.208	0.107	0.593
Epse	KIJK	pijn	-1.146	1.522	-0.838	1.109
Epse	KIJK	prijzen	-1.267	1.005	-0.848	1.223
Epse	KAAS	raakte	0.747	-0.475	1.583	-0.604
Epse	KIJK	rijden	-0.188	0.716	-0.155	1.204
Epse	HUIS	ruiken	-0.501	-1.027	-0.431	-1.232
Epse	PRAAT	slaan	0.114	-1.111	-0.86	-1.274
Epse	KIJK	spijkers	-0.786	0.802	-0.941	0.986
Epse	KIJK	spijkers	-0.439	0.695	-0.896	0.933
Epse	KAAS	staat	-0.603	1.124	-0.532	0.939
Epse	KIJK	stijf	-0.731	1.219	-0.676	1.19
Epse	KIJK	trouwerij	-0.858	0.98	-1.004	1.432
Epse	HUIS	uitging	-1.245	0.312	-1.52	0.35
Epse	KAART	vaak	1.206	-0.707	1.031	-0.316
Etten	PRAAT	allemaal	0.438	-1.574	0.391	-1.448
Etten	HUIS	buiten	-0.47	-0.287	-0.571	-0.082
Etten	PRAAT	daar	0.02	-0.595	0.523	-1.052
Etten	PRAAT	gaan	0.622	-1.413	0.363	-1.49
Etten	PRAAT	gaat	0.718	-1.183	1.353	-1.416
Etten	KAAS	gaat	-0.134	0.968	-0.158	0.321
Etten	KAART	graven	1.256	-0.427	1.744	-0.56
Etten	HUIS	huis	-0.638	-0.017	-0.664	0.478
Etten	HUIS	huizen	-0.79	0.061	-0.536	0.187
Etten	KIJK	ijzer	-0.676	2.545	-0.626	1.196
Etten	KAART	kaart	1.628	-0.262	3.999	0.009
Etten	KIJK	kijken	-0.766	1.264	-0.872	0.915
Etten	HUIS	kruipen	-0.437	-1.328	-0.214	-1.583



Etten	HUIS	kuikens	-0.814	0.143	-1.204	-0.057
Etten	KAAS	nagel	0.337	0.407	0.696	0.193
Etten	PRAAT	paaltje	0.752	-0.933	0.749	-0.851
Etten	PAARD	paard	-0.414	1.196	0.495	0.131
Etten	KIJK	pijn	-0.687	1.212	-0.606	1.871
Etten	KIJK	prijzen	-0.521	0.881	-0.821	1.029
Etten	KIJK	rijden	-0.543	0.44	-0.372	0.78
Etten	HUIS	ruiken	-0.296	-0.836	-1.046	-0.608
Etten	PRAAT	slaan	0.94	-1.162	0.693	-0.974
Etten	KIJK	spijkers	-0.79	1.111	-1.558	1.073
Etten	KIJK	stijf	-0.784	1.029	-0.977	1.363
Etten	HUIS	uitging	-0.82	0.321	-0.873	0.374
Etten	KAART	vaak	1.556	-0.847	1.407	-0.515
Gaanderen	PRAAT	allemaal	1.247	-1.865	0.933	-1.397
Gaanderen	PRAAT	blaar	0.19	-1.797	0.307	-1.916
Gaanderen	HUIS	buiten	-0.919	0.466	-1.012	0.589
Gaanderen	PRAAT	ga	0.785	-1.375	1.375	-0.719
Gaanderen	PRAAT	gaan	-0.351	-1.503	1.489	-1.221
Gaanderen	PRAAT	gaat	1.717	-0.045	1.235	-0.232
Gaanderen	KIJK	gordijnen	-0.981	0.951	-0.468	1.127
Gaanderen	KAART	graven	1.778	-0.412	1.622	-0.566
Gaanderen	HUIS	huis	-0.329	0.889	-0.735	0.863
Gaanderen	HUIS	huizen	-0.819	0.605	-1.727	0.948
Gaanderen	KIJK	ijzer	-0.675	0.724	-0.837	0.854
Gaanderen	KAART	kaart	1.333	0.218	1.702	-0.609
Gaanderen	KAAS	kaas	0.035	1.036	0.098	0.746
Gaanderen	KIJK	kijken	-1.246	1.094	-1.803	1.416
Gaanderen	HUIS	kruipen	-0.84	-0.975	-0.743	-1.125
Gaanderen	HUIS	kuikens	-0.64	0.165	-0.469	0.03
Gaanderen	KAAS	maakte	-0.013	0.347	0.099	0.798
Gaanderen	KAAS	nagel	0.276	0.514	0.263	0.679
Gaanderen	PRAAT	opstaan	0.572	-0.906	0.909	-1.339
Gaanderen	PRAAT	paaltje	0.396	-0.926	1.315	-1.094
Gaanderen	PAARD	paard	-0.469	1.245	-0.182	0.491
Gaanderen	KIJK	pijn	-0.907	0.868	-0.758	0.872
Gaanderen	KIJK	prijzen	-1.172	0.55	-1.04	0.705
Gaanderen	KIJK	rijden	1.089	-0.086	0.332	0.794
Gaanderen	HUIS	ruiken	-0.739	-0.695	-0.678	-0.557
Gaanderen	PRAAT	slaan	1.417	-1.932	0.243	-2.446
Gaanderen	KIJK	spijkers	-0.896	0.482	-0.674	0.713
Gaanderen	KIJK	spijkers	-0.861	0.659	-0.94	0.963
Gaanderen	KAAS	staat	1.197	-0.32	1.139	-0.363
Gaanderen	KIJK	stijf	-1.111	0.905	-1.103	1.552
Gaanderen	HUIS	uitging	-0.923	0.714	-0.884	1.156
Gaanderen	KAART	vaak	1.325	-0.745	1.527	-0.561
Gelselaar	PRAAT	allemaal	1.214	-0.827	0.877	-1.147

Gelselaar	PRAAT	blaar	0.118	-1.349	1.119	-1.205
Gelselaar	HUIS	buiten	-0.616	1.215	-0.565	1.136
Gelselaar	PRAAT	daar	0.947	-1.431	0.312	-0.761
Gelselaar	PRAAT	draad	1.088	-1.047	1.28	-1.271
Gelselaar	PRAAT	ga	0.667	-1.636	1.31	-1.021
Gelselaar	PRAAT	gaan	0.858	-0.967	0.022	-0.281
Gelselaar	PAARD	gaarne	-0.146	0.924	0.789	-0.941
Gelselaar	PRAAT	gaat	1.362	-1.299	1.162	-0.979
Gelselaar	KAAS	gaat	-0.496	1.235	-0.336	0.874
Gelselaar	KIJK	gordijnen	-0.995	1.06	-0.874	1.036
Gelselaar	KAART	graven	0.72	0.077	0.65	0.347
Gelselaar	HUIS	huis	-0.777	0.966	-0.826	0.831
Gelselaar	HUIS	huizen	-1.148	0.146	-1.113	0.287
Gelselaar	KIJK	ijzer	-1.059	0.748	-0.85	0.348
Gelselaar	KAART	kaart	1.088	-0.191	1.857	-0.142
Gelselaar	KIJK	kaas	-0.9	1.293	-0.205	0.892
Gelselaar	KIJK	kijken	-1.231	1.255	-1.021	1.303
Gelselaar	HUIS	kruipen	-1.017	-1.657	-0.516	-1.822
Gelselaar	HUIS	kuiken	-0.669	0.677	-0.711	0.835
Gelselaar	KAAS	maakte	0.862	-0.954	1.233	-0.395
Gelselaar	KAAS	nagel	1.058	0.515	0.883	0.67
Gelselaar	PRAAT	opstaan	-0.222	-1.464	-0.403	-1.548
Gelselaar	PRAAT	paaltje	0.851	-0.977	0.722	-0.784
Gelselaar	PAARD	paard	-0.413	1.064	2.275	-0.549
Gelselaar	KIJK	pijn	-0.967	1.195	-0.875	1.269
Gelselaar	KIJK	prijzen	-1.115	0.777	-0.919	0.504
Gelselaar	KAAS	raakte	1.62	-0.39	2.487	-0.106
Gelselaar	KIJK	rijden	-0.534	0.956	-0.508	1.336
Gelselaar	HUIS	ruiken	-0.238	-1.752	-0.617	-1.807
Gelselaar	KIJK	spijkers	-0.832	0.604	-0.976	0.812
Gelselaar	KIJK	spijkers	-1.084	0.703	-1.196	0.913
Gelselaar	KIJK	stijf	-1.13	1.162	-0.969	0.676
Gelselaar	KIJK	trouwerij	-0.942	0.763	-0.781	0.708
Gelselaar	HUIS	uitging	-0.656	-0.153	-0.705	-0.259
Gelselaar	KAART	vaak	1.19	-0.833	1.531	-0.165
Gendringen	PRAAT	allemaal	-0.37	-1.717	-0.223	-1.758
Gendringen	PRAAT	blaar	0.726	-1.599	0.535	-1.063
Gendringen	PRAAT	daar	-0.099	-1.003	0.841	-1.029
Gendringen	PRAAT	draad	0.442	-1.183	1.24	-0.759
Gendringen	PRAAT	ga	0.394	-1.765	0.968	-1.566
Gendringen	PRAAT	gaan	1.528	-1.443	1.65	-1.311
Gendringen	KAAS	gaat	-0.593	1.207	-0.303	0.772
Gendringen	KIJK	gordijnen	-0.713	1.058	-0.837	0.965
Gendringen	KAART	graven	1.247	-0.513	1.683	-1.082
Gendringen	HUIS	huis	-1.014	0.378	-0.773	0.418
Gendringen	HUIS	huizen	-0.87	0.351	-0.858	0.255

Gendringen	KIJK	ijzer	-0.938	1.407	-1.142	0.98
Gendringen	KAART	kaart	1.726	-0.329	1.98	-0.406
Gendringen	KAAS	kaas	-0.004	0.806	0.053	0.642
Gendringen	KIJK	kijken	-1.319	1.059	-1.333	1.048
Gendringen	HUIS	kuikens	-0.567	-0.202	-0.643	0.26
Gendringen	KAAS	maakte	1.676	-0.99	1.839	-0.811
Gendringen	KAAS	nagel	-0.04	0.563	0.062	0.416
Gendringen	PRAAT	opstaan	0.029	-1.104	0.759	-1.274
Gendringen	PRAAT	paaltje	0.285	-0.876	0.75	-1.059
Gendringen	PAARD	paard	-0.702	1.188	0.369	0.788
Gendringen	KIJK	pijn	-1.201	1.098	-1.208	1.349
Gendringen	KIJK	prijzen	-1.012	0.93	-0.719	1.025
Gendringen	KAAS	raakte	1.118	-0.327	1.667	-0.474
Gendringen	KIJK	rijden	-0.089	0.515	-0.873	0.755
Gendringen	PRAAT	slaan	1.071	-1.398	0.506	-1.603
Gendringen	KIJK	spijkers	-0.763	0.967	-0.783	0.965
Gendringen	KIJK	spijkers	-0.806	0.811	-0.852	0.999
Gendringen	KAAS	staat	-0.64	0.927	-0.509	0.606
Gendringen	KIJK	stijf	-1.03	1.194	-1.412	1.188
Gendringen	KIJK	trouwerij	0.02	0.332	-0.085	0.684
Gendringen	HUIS	uitging	-1.421	0.444	-1.314	0.645
Gendringen	KAART	vaak	1.429	-0.717	1.46	-0.64
Gorssel	PRAAT	allemaal	1.073	-2.138	0.613	-1.625
Gorssel	PRAAT	blaar	0.186	-1.737	0.501	-1.061
Gorssel	HUIS	buiten	-0.728	0.349	-0.911	0.937
Gorssel	PRAAT	daar	0.223	-1.302	0.53	-0.795
Gorssel	PRAAT	draad	0.475	-1.037	0.802	-1.208
Gorssel	PRAAT	ga	0.723	-1.679	0.812	-0.779
Gorssel	PAARD	gaarne	-0.488	0.747	0.363	0.56
Gorssel	PRAAT	gaat	1.17	-1.181	0.984	-0.501
Gorssel	KIJK	gordijnen	-0.824	0.941	-0.625	1.101
Gorssel	KAART	graven	1.062	-0.445	1.692	-0.937
Gorssel	HUIS	huis	-0.558	0.795	-1.039	0.994
Gorssel	HUIS	huis	-0.889	0.615	-0.986	0.801
Gorssel	HUIS	huizen	-0.845	0.444	-0.99	0.56
Gorssel	KIJK	ijzer	-0.377	0.747	-0.602	1.101
Gorssel	KAART	kaart	1.335	-0.045	1.252	-0.325
Gorssel	KAAS	kaas	-0.71	1.138	-0.717	1.099
Gorssel	KIJK	kijken	-0.886	1.038	-1.164	1.24
Gorssel	HUIS	kruipe	-1.787	-1.217	-0.211	-1.539
Gorssel	HUIS	kuikens	-0.836	-0.127	-0.834	-0.168
Gorssel	KAAS	maakte	2.087	-0.727	2.866	-0.627
Gorssel	KAAS	nagel	0.481	0.548	0.198	0.238
Gorssel	PRAAT	opstaan	0.446	-0.764	0.929	-1.206
Gorssel	PRAAT	paaltje	0.754	-0.894	0.596	-0.846
Gorssel	PAARD	paard	-0.641	0.927	-0.034	0.503

Gorssel	KIJK	pijn	-0.594	1.056	-0.53	1.529
Gorssel	KIJK	prijzen	-0.648	0.773	-0.958	0.917
Gorssel	KAAS	raakte	1.234	-0.451	2.018	-0.614
Gorssel	HUIS	ruiken	-0.159	-1.298	0.095	-1.745
Gorssel	PRAAT	slaan	1.386	-1.178	0.86	-1.364
Gorssel	KIJK	spijkers	-1.062	0.854	-0.958	1.134
Gorssel	KIJK	spijkers	-0.825	1.077	-0.957	1.226
Gorssel	KAAS	staat	-0.652	0.952	-0.396	0.67
Gorssel	KIJK	stijf	-1.166	1.117	-1.108	1.238
Gorssel	KIJK	trouwerij	-0.565	0.887	-0.893	0.937
Gorssel	HUIS	uitging	-0.765	0.136	-1.084	0.562
Gorssel	KAART	vaak	2.221	-0.485	1.033	-0.439
Hengelo	PRAAT	allemaal	0.868	-1.317	0.832	-1.559
Hengelo	PRAAT	blaar	-0.148	-1.344	0.806	-1.052
Hengelo	PRAAT	daar	0.222	-1.075	-0.185	-0.963
Hengelo	PRAAT	daar	0.627	-1.128	1.052	-0.969
Hengelo	PRAAT	draad	0.923	-0.74	0.894	-1.193
Hengelo	PRAAT	ga	1.427	-1.7	0.675	-1.18
Hengelo	PRAAT	gaan	0.618	-1.404	1.623	-1.142
Hengelo	PAARD	gaarne	-0.751	1.068	0.404	0.615
Hengelo	KAAS	gaat	-0.584	1.112	-0.403	0.855
Hengelo	KIJK	gordijnen	-1.261	1.393	-0.943	1.346
Hengelo	KAART	graven	1.034	-0.391	1.922	-0.805
Hengelo	HUIS	huis	-1.211	0.402	-1.331	0.479
Hengelo	HUIS	huis	-0.901	0.319	-0.787	0.617
Hengelo	HUIS	huizen	-0.509	0.117	-0.979	0.386
Hengelo	KIJK	ijzer	-1.14	1.044	-1.028	1.03
Hengelo	KAART	kaart	1.484	-0.007	1.528	-0.316
Hengelo	KAAS	kaas	-0.144	1.156	-0.182	0.984
Hengelo	KIJK	kijken	-1.001	1.062	-1.284	1.122
Hengelo	HUIS	kruipen	-0.54	-1.259	-0.44	-1.309
Hengelo	HUIS	kuikens	-1.118	0.804	-0.605	0.909
Hengelo	KAAS	maakte	1.915	-1.059	1.448	-0.66
Hengelo	PRAAT	naar	0.91	-0.76	0.403	-0.327
Hengelo	KAAS	nagel	0.355	0.594	0.387	0.331
Hengelo	PRAAT	opstaan	1.104	-1.635	1.437	-1.389
Hengelo	PRAAT	paaltje	0.623	-0.81	0.513	-0.915
Hengelo	PAARD	paard	-0.624	1.044	0.525	0.553
Hengelo	KIJK	pijn	-1.147	0.853	-0.98	0.834
Hengelo	KIJK	prijzen	-1.591	0.645	-1.172	1.075
Hengelo	KAAS	raakte	2.012	-0.494	2.231	-0.704
Hengelo	KIJK	rijden	-0.451	0.817	-0.442	0.931
Hengelo	HUIS	ruiken	-0.575	-1.285	-0.567	-1.53
Hengelo	PRAAT	slaan	0.003	-1.217	0.766	-1.267
Hengelo	KIJK	spijkers	-0.892	0.894	-0.774	1.156
Hengelo	KIJK	spijkers	-0.719	0.928	-0.934	1.103

Hengelo	KAAS	staat	-0.497	1.122	-0.492	0.977
Hengelo	KIJK	stijf	-0.997	1.091	-1.138	1.172
Hengelo	KIJK	trouwerij	-0.309	0.99	-0.568	1.06
Hengelo	HUIS	uitging	-0.962	0.674	-0.988	0.551
Hengelo	KAART	vaak	1.268	-0.804	1.456	-0.506
Lochem	PRAAT	blaar	-0.165	-1.641	0.376	-1.406
Lochem	HUIS	buiten	-0.3	0.039	-0.064	0.492
Lochem	PRAAT	draad	0.882	-1.707	1.596	-1.89
Lochem	PRAAT	ga	0.918	-1.921	0.631	-1.867
Lochem	PAARD	gaarne	-0.887	0.83	0.349	0.312
Lochem	KAAS	gaat	-0.509	0.921	-0.395	0.996
Lochem	KIJK	gordijnen	-0.964	1.059	-1.234	1.287
Lochem	KAART	graven	0.062	0.301	0.471	0.65
Lochem	HUIS	huis	-0.717	0.243	-0.592	0.404
Lochem	KIJK	ijzer	-1.09	1.303	-1.335	1.072
Lochem	KAAS	kaas	0.99	0.461	2.197	0.303
Lochem	KIJK	kijken	-0.692	0.905	-1.223	1.029
Lochem	HUIS	kruipen	-0.26	-1.012	-0.352	-1.001
Lochem	HUIS	kuikens	-0.248	-0.188	-0.17	-0.32
Lochem	KAAS	maakte	2.289	-0.042	1.9	-0.202
Lochem	PRAAT	naar	0.859	-1.355	0.996	-1.603
Lochem	KAAS	nagel	-0.246	0.751	0.314	0.246
Lochem	PRAAT	opstaan	0.941	-0.823	0.389	-1.106
Lochem	PRAAT	paaltje	0.068	-0.817	-0.062	-0.77
Lochem	PAARD	paard	-0.643	0.838	0.612	0.237
Lochem	KIJK	pijn	-0.94	1.002	-0.865	1.064
Lochem	KIJK	prijzen	-0.386	0.728	-0.57	0.938
Lochem	KAAS	raakte	1.335	-0.332	2.457	-0.346
Lochem	KIJK	rijden	-1.053	0.228	-1.327	0.87
Lochem	HUIS	ruiken	0.079	-1.063	-0.11	-1.115
Lochem	PRAAT	slaan	-0.475	-1.88	-0.34	-2.172
Lochem	KIJK	spijkers	-0.333	0.862	-1.149	0.889
Lochem	KIJK	spijkers	-0.413	0.682	-0.326	0.835
Lochem	KAAS	staat	-0.228	0.968	-0.224	1.053
Lochem	KIJK	stijf	-0.702	0.858	-1.692	0.773
Lochem	HUIS	uitging	-0.931	0.425	-0.69	0.523
Lochem	KAART	vaak	1.31	-0.551	2.885	-0.244
Ruurlo	PRAAT	allemaal	0.282	-0.977	0.12	-0.51
Ruurlo	PRAAT	blaar	0.183	-0.669	1.141	-0.845
Ruurlo	HUIS	buiten	-0.338	-1.395	-0.169	-1.317
Ruurlo	PRAAT	daar	0.874	0.026	0.778	-0.072
Ruurlo	PRAAT	draad	0.541	-0.662	0.28	-1.03
Ruurlo	PRAAT	ga	0.156	-1.363	-0.262	-1.159
Ruurlo	PAARD	gaarne	-0.394	1.321	2.335	-0.263
Ruurlo	PRAAT	gaat	0.108	-1.25	0.55	-0.988
Ruurlo	KAAS	gaat	-0.398	0.667	0.015	0.324

Ruurlo	PRAAT	gaat	0.68	-1.552	0.535	-1.088
Ruurlo	KIJK	gordijnen	-1	1.75	-1.058	1.862
Ruurlo	KAART	graven	0.463	-0.349	1.876	-0.719
Ruurlo	HUIS	huis	-0.763	-1.261	-0.676	-1.196
Ruurlo	HUIS	huis	-0.843	-0.432	-1.025	-0.46
Ruurlo	HUIS	huizen	-0.665	-1.194	-0.922	-0.87
Ruurlo	KIJK	ijzer	-1.147	1.662	-0.932	1.003
Ruurlo	KAART	kaart	2.424	0.618	2.688	0.078
Ruurlo	KAAS	kaas	-0.843	1.534	-0.751	1.424
Ruurlo	KIJK	kijken	-0.935	1.149	-0.98	0.963
Ruurlo	HUIS	kruipen	-0.68	-1.032	-0.725	-1.29
Ruurlo	HUIS	kuikens	-0.739	0.181	-0.75	0.041
Ruurlo	KAAS	maakte	2.554	-0.354	2.457	-0.277
Ruurlo	PRAAT	naar	0.388	-0.6	1.211	-0.72
Ruurlo	KAAS	nagel	-0.246	1.059	0.468	0.619
Ruurlo	PRAAT	opstaan	0.199	-1.129	0.428	-0.9
Ruurlo	PRAAT	paaltje	0.132	-0.642	0.278	-0.625
Ruurlo	PAARD	paard	-0.514	1.322	1.421	0.048
Ruurlo	KIJK	pijn	-1.258	1.23	-1.091	1.339
Ruurlo	KIJK	prijzen	-1.004	1.219	-0.961	1.056
Ruurlo	KAAS	raakte	1.047	0.059	1.86	-0.042
Ruurlo	HUIS	ruiken	-0.302	-1.016	-0.447	-1.35
Ruurlo	PRAAT	slaan	0.133	-1.274	1.151	-1.169
Ruurlo	KIJK	spijkers	-0.908	1.101	-1.022	1.097
Ruurlo	KIJK	spijkers	-0.791	0.843	-0.76	1.146
Ruurlo	KAAS	staat	-0.467	1.035	-0.293	1.206
Ruurlo	KIJK	stijf	-0.94	1.069	-0.995	1.153
Ruurlo	KIJK	trouwerij	-0.226	1.135	-1.13	1.278
Ruurlo	HUIS	uitging	-0.434	0.084	-0.562	-0.049
Ruurlo	KAART	vaak	0.659	0.126	0.928	0.265
Steenderen	PRAAT	allemaal	1.981	-1.24	2.16	-1.299
Steenderen	PRAAT	blaar	-0.056	-0.557	0.586	-1.009
Steenderen	HUIS	buiten	-0.621	-0.368	-0.723	0.085
Steenderen	PRAAT	daar	0.153	-1.268	0.698	-1.328
Steenderen	PRAAT	draad	0.403	-1.103	1.348	-1.263
Steenderen	PRAAT	ga	1.105	-1.034	2.66	-1.237
Steenderen	KAAS	gaat	-0.446	0.95	-0.431	0.937
Steenderen	PRAAT	gaat	1.5	-1.44	-0.053	-1.091
Steenderen	KIJK	gordijnen	-0.967	0.958	-0.72	1.206
Steenderen	KAART	graven	1.412	-0.503	-0.132	-1.003
Steenderen	HUIS	huis	-0.576	0.71	-0.891	0.915
Steenderen	HUIS	huis	-0.816	1.094	-1.129	1.23
Steenderen	HUIS	huizen	-0.72	0.296	-1.136	0.503
Steenderen	KIJK	ijzer	-0.888	1.182	-0.783	1.239
Steenderen	KAART	kaart	1.371	0.077	1.902	-0.088
Steenderen	KAAS	kaas	0.765	0.064	1.383	-0.427

Steenderen	KIJK	kijken	-1.083	1.033	-1.217	1.295
Steenderen	HUIS	kruipen	-0.001	-1.46	-0.191	-1.705
Steenderen	HUIS	kuikens	-0.889	0.957	-1.033	0.874
Steenderen	KAAS	maakte	0.467	-1.243	0.504	-0.925
Steenderen	KAAS	nagel	0.37	0.204	0.612	0.262
Steenderen	PRAAT	opstaan	1.754	-1.099	1.052	-1.574
Steenderen	PRAAT	paaltje	0.606	-0.777	0.715	-1.059
Steenderen	PAARD	paard	-0.657	0.965	0.056	0.502
Steenderen	KIJK	pijn	-1.523	1.098	-1.649	1.104
Steenderen	KIJK	prijzen	-0.918	0.846	-0.544	0.996
Steenderen	KAAS	raakte	0.846	-0.899	-0.215	-0.971
Steenderen	KIJK	rijden	-0.632	0.777	-0.6	0.846
Steenderen	HUIS	ruiken	0.06	-1.163	-0.627	-1.484
Steenderen	PRAAT	slaan	1.566	-1.173	1.239	-1.335
Steenderen	KIJK	spijkers	-1.12	0.818	-0.991	1.043
Steenderen	KIJK	spijkers	-0.414	1.195	-0.481	0.79
Steenderen	KAAS	staat	-0.408	0.847	-0.363	0.631
Steenderen	KIJK	stijf	-1.023	0.943	-0.975	0.473
Steenderen	KIJK	trouwerij	-0.386	1.023	-0.159	0.948
Steenderen	HUIS	uitging	-0.736	1.111	-1.216	0.833
Steenderen	KAART	vaak	0.837	-0.939	1.024	0.2
Varsseveld	PRAAT	blaar	0.58	-1.492	1.821	-1.237
Varsseveld	HUIS	buiten	-1.035	0.212	-0.899	0.12
Varsseveld	PRAAT	daar	0.105	-0.633	0.719	-0.937
Varsseveld	PRAAT	draad	0.724	-1.317	1.529	-1.336
Varsseveld	PRAAT	ga	0.206	-1.456	1.888	-1.58
Varsseveld	PRAAT	gaan	0.444	-1.601	0.529	-0.922
Varsseveld	KIJK	gaat	-0.579	0.994	0.101	0.721
Varsseveld	KIJK	gordijnen	-0.871	1.133	-0.788	1.175
Varsseveld	KAART	graven	1.623	-0.624	1.58	-1.166
Varsseveld	HUIS	huis	-0.97	0.281	-0.919	0.45
Varsseveld	HUIS	huizen	-0.788	0.449	-1.139	0.287
Varsseveld	KIJK	ijzer	-0.853	1.377	-1.467	1.209
Varsseveld	KAART	kaart	1.788	-0.338	1.938	-0.245
Varsseveld	KAAS	kaas	-0.772	0.836	-0.497	0.938
Varsseveld	KIJK	kijken	-1.274	1.162	-1.209	1.188
Varsseveld	HUIS	kruipen	-0.595	-1.091	-0.748	-1.184
Varsseveld	KAAS	nagel	0.799	0.488	0.456	0.577
Varsseveld	PRAAT	opstaan	0.616	-1.148	0.105	-1.361
Varsseveld	PRAAT	paaltje	0.189	-0.595	0.262	-0.507
Varsseveld	PAARD	paard	-0.706	1.141	1.179	0.093
Varsseveld	KIJK	pijn	-0.507	1.244	-1.268	1.202
Varsseveld	KIJK	prijzen	-0.538	1.004	-0.962	0.916
Varsseveld	KAAS	raakte	0.472	-0.003	0.705	0.432
Varsseveld	KIJK	rijden	-0.046	0.974	-0.72	1.23
Varsseveld	HUIS	ruiken	-0.677	-1.031	-0.45	-1.463

Varsseveld	PRAAT	slaan	0.996	-1.132	1.288	-1.289
Varsseveld	KIJK	spijkers	-1.125	0.889	-0.424	0.886
Varsseveld	KAAS	staat	-0.743	0.703	-0.551	0.543
Varsseveld	KIJK	stijf	-0.838	1.116	-1.073	1.172
Varsseveld	KAART	vaak	1.636	-0.912	1.752	-0.541
Veldhunten	PRAAT	allemaal	0.857	-1.36	1.229	-1.286
Veldhunten	PRAAT	blaar	0.632	-1.215	1.126	-0.633
Veldhunten	HUIS	buiten	-0.887	0.331	-0.56	0.532
Veldhunten	PRAAT	daar	-0.255	-1.618	1.396	-0.747
Veldhunten	PRAAT	draad	1.376	-1.365	1.171	-1.247
Veldhunten	PRAAT	ga	1.513	-1.924	0.37	-1.307
Veldhunten	PRAAT	gaan	0.355	-1.687	0.288	-1.571
Veldhunten	KIJK	gordijnen	-0.988	1.009	-0.808	1.033
Veldhunten	KAART	graven	1.831	-0.644	2.134	-0.957
Veldhunten	HUIS	huis	-0.983	0.5	-1.002	0.715
Veldhunten	HUIS	huis	-0.843	0.472	-1.101	0.721
Veldhunten	HUIS	huizen	-0.665	0.874	-0.577	0.631
Veldhunten	KIJK	ijzer	-0.579	0.921	-0.981	0.955
Veldhunten	KAART	kaart	1.586	-0.378	1.355	-0.332
Veldhunten	KAAS	kaas	-0.775	0.874	0.528	0.439
Veldhunten	KIJK	kijken	-1.106	0.964	-1.078	0.949
Veldhunten	HUIS	kruipen	0.309	-1.4	-0.198	-1.346
Veldhunten	HUIS	kuikens	-0.561	-0.004	-0.566	-0.006
Veldhunten	KAAS	maakte	0.942	-1.287	0.31	-0.949
Veldhunten	KAAS	nagel	-0.129	0.742	0.233	0.306
Veldhunten	PRAAT	opstaan	-0.11	-1.91	0.757	-1.5
Veldhunten	PRAAT	paaltje	0.965	-1.367	1.508	-1.049
Veldhunten	PAARD	paard	-0.87	1.039	1.17	0.313
Veldhunten	KIJK	pijn	-1.003	0.927	-0.627	0.637
Veldhunten	KIJK	prijzen	-0.472	0.992	-0.367	0.988
Veldhunten	KAAS	raakte	-0.86	0.955	-0.769	1.323
Veldhunten	KIJK	rijden	0.345	0.539	0.092	0.85
Veldhunten	HUIS	ruiken	-1.766	0.022	-1.082	0.243
Veldhunten	PRAAT	slaan	1.358	-1.152	2.117	-1.033
Veldhunten	KIJK	spijkers	-0.777	0.903	-0.977	1.188
Veldhunten	KIJK	spijkers	-0.673	0.891	-0.78	1.006
Veldhunten	KAAS	staat	-0.518	1.014	-0.364	0.848
Veldhunten	KIJK	stijf	-0.887	0.864	-1.406	1.054
Veldhunten	KIJK	trouwerij	0.046	0.721	-0.567	1.022
Veldhunten	HUIS	uitging	-0.989	0.53	-0.762	0.649
Veldhunten	KAART	vaak	1.573	-0.684	1.801	-0.531
Vorden	PRAAT	allemaal	1.228	-1.423	1.141	-1.354
Vorden	PRAAT	blaar	-0.145	-1.035	0.625	-0.888
Vorden	HUIS	buiten	-0.778	-0.662	-1.078	-0.695
Vorden	PRAAT	daar	0.44	-0.734	-0.241	-0.928
Vorden	PRAAT	draad	0.476	-1.346	0.534	-1.087



Vorden	PRAAT	ga	0.727	-1.307	1.154	-1.286
Vorden	PRAAT	gaat	0.237	-1.491	0.455	-1.117
Vorden	KAAS	gaat	-0.909	1.032	-0.521	1.007
Vorden	PRAAT	gaat	0.224	-1.455	0.475	-1.135
Vorden	PRAAT	gaat	0.02	-1.056	0.794	-0.826
Vorden	KIJK	gordijnen	-0.711	1.115	-0.655	1.209
Vorden	KAART	graven	0.929	-0.649	1.932	-0.463
Vorden	HUIS	huis	-0.925	0.152	-1.378	0.464
Vorden	HUIS	huis	-0.593	0.167	-0.681	0.346
Vorden	HUIS	huizen	-0.98	0.028	-0.84	-0.055
Vorden	KIJK	ijzer	-0.718	1.135	-1.404	0.955
Vorden	KAAS	kaart	1.034	0.683	2.188	0.471
Vorden	KAAS	kaas	1.133	-0.093	1.701	-0.295
Vorden	KIJK	kijken	-1.411	1.516	-1.457	1.121
Vorden	HUIS	kruipen	-0.75	-0.814	-0.831	-0.832
Vorden	HUIS	kuikens	-0.842	0.151	-0.641	-0.013
Vorden	KAAS	maakte	2.206	-0.36	2.813	-0.244
Vorden	KAAS	nagel	0.201	1.066	0.223	1.129
Vorden	PRAAT	opstaan	0.729	-0.74	1.039	-1.31
Vorden	PRAAT	paaltje	0.863	-0.598	0.773	-0.734
Vorden	PAARD	paard	-0.744	1.045	0.433	0.859
Vorden	KIJK	pijn	-1.102	2.071	-1.402	1.842
Vorden	KIJK	prijzen	-0.55	1.016	-0.893	1.243
Vorden	KAAS	raakte	0.889	-0.486	2.028	-0.247
Vorden	KIJK	rijden	-0.308	0.416	-0.947	0.738
Vorden	HUIS	ruiken	-0.377	-1.157	-0.009	-1.783
Vorden	PRAAT	slaan	0.491	-1.274	0.553	-1.544
Vorden	KIJK	spijkers	-0.721	1.399	-0.493	1.244
Vorden	KIJK	spijkers	-0.133	0.866	-0.518	0.871
Vorden	KAAS	staat	-0.758	1.02	-0.712	1.138
Vorden	KIJK	stijf	-0.694	1.31	-1.251	0.839
Vorden	KIJK	trouwerij	-0.635	1.196	-0.898	1.125
Vorden	HUIS	uitging	-0.597	-0.42	-0.985	0.184
Vorden	KAART	vaak	1.284	-0.352	1.246	0.116
Vragender	PRAAT	allemaal	0.515	-1.318	0.657	-1.263
Vragender	PRAAT	blaar	0.581	-1.144	1	-0.92
Vragender	HUIS	buiten	-0.285	-1.154	-0.503	-0.924
Vragender	PRAAT	daar	1.474	-0.659	0.979	-0.89
Vragender	PRAAT	draad	0.952	-0.905	1.092	-0.934
Vragender	PRAAT	ga	-0.368	-1.624	0.464	-1.525
Vragender	KAAS	gaat	-0.842	0.766	-0.768	0.993
Vragender	PRAAT	gaat	0.798	-0.863	0.375	-0.575
Vragender	KIJK	gordijnen	-1.052	1.165	-0.847	1.434
Vragender	KAART	graven	3.163	-0.515	1.632	-0.582
Vragender	HUIS	huis	-0.535	-0.876	-0.714	-0.971
Vragender	HUIS	huizen	-0.688	-0.767	-0.85	-0.572

Vragender	KIJK	ijzer	-1.078	1.472	-0.956	1.106
Vragender	KAART	kaart	1.881	0.578	2.333	0.645
Vragender	KIJK	kaas	-0.853	1.509	-0.543	1.38
Vragender	KIJK	kijken	-0.827	1.227	-1.032	1.293
Vragender	HUIS	kruipen	-0.846	-0.863	-0.735	-1.053
Vragender	HUIS	kuikens	-0.651	0.848	-0.805	0.834
Vragender	KAAS	maakte	0.659	-0.032	1.447	0.153
Vragender	PRAAT	naar	-0.365	-0.737	-0.47	-0.836
Vragender	KAAS	nagel	-0.044	0.827	-0.099	0.839
Vragender	KAAS	nagel	0.14	0.85	0.459	0.923
Vragender	PRAAT	opstaan	-0.106	-0.888	0.279	-0.92
Vragender	PRAAT	paaltje	0.609	-1.205	0.579	-1.364
Vragender	PAARD	paard	-0.663	0.87	1.266	-0.183
Vragender	KIJK	pijn	-1.154	1.444	-0.528	1.246
Vragender	KIJK	prijzen	-0.83	1.027	-0.927	0.974
Vragender	KAAS	raakte	1.805	-0.032	1.772	-0.038
Vragender	KIJK	rijden	-1.326	1.094	-1.074	1.343
Vragender	HUIS	ruiken	-0.976	-1.357	-1.261	-1.332
Vragender	PRAAT	slaan	0.145	-0.86	0.437	-0.91
Vragender	KAAS	staat	-0.316	1.086	-0.507	0.963
Vragender	KIJK	stijf	-0.817	1.226	-1.073	1.225
Vragender	KIJK	trouwerij	-0.053	0.686	-0.455	0.974
Vragender	HUIS	uitging	-0.66	-0.663	-0.75	-0.758
Vragender	KAART	vaak	1.259	-0.156	1.475	0.165
Winterswijk	PRAAT	blaar	0.633	-1.986	1.114	-1.605
Winterswijk	HUIS	buiten	-0.215	-1.343	-0.143	-1.532
Winterswijk	PRAAT	daar	0.597	-0.951	1.32	-1.523
Winterswijk	PRAAT	draad	0.667	-0.97	0.783	-1.217
Winterswijk	PAARD	gaarne	-0.173	1.224	0.947	0.043
Winterswijk	KAAS	gaat	-0.61	0.359	-0.659	0.539
Winterswijk	PRAAT	gaat	0.333	-1.714	0.669	-1.073
Winterswijk	KIJK	gordijnen	-1.042	0.944	-0.781	1.074
Winterswijk	KAART	graven	1.771	-0.86	2.005	-1.064
Winterswijk	HUIS	huis	-1.085	-1.025	-0.346	-1.087
Winterswijk	HUIS	huizen	-0.735	0.751	-0.893	0.642
Winterswijk	KIJK	ijzer	-1.26	1.24	-1.399	0.414
Winterswijk	KAART	kaart	2.052	-0.33	2.034	-0.308
Winterswijk	KAAS	kaas	-0.673	1.425	-0.654	1.455
Winterswijk	KIJK	kijken	-0.827	1.044	-0.881	1.117
Winterswijk	HUIS	kruipen	-0.833	-1.198	-0.505	-1.373
Winterswijk	HUIS	kuikens	-0.887	0.289	-0.966	0.289
Winterswijk	KAAS	maakte	0.999	-0.023	0.627	0.395
Winterswijk	KAAS	nagel	-0.032	0.891	0.184	0.636
Winterswijk	KAAS	nagel	0.226	0.793	0.169	0.684
Winterswijk	KAAS	nagel	0.646	0.604	0.26	0.637
Winterswijk	PRAAT	paaltje	0.237	-0.626	0.601	-0.451

Winterswijk	PAARD	paard	-0.406	1.074	1.003	-0.179
Winterswijk	KIJK	pijn	-0.952	1.474	-1.008	1.162
Winterswijk	KIJK	prijzen	-0.872	0.958	-1.094	0.973
Winterswijk	KAAS	raakte	1.781	-0.437	2.525	-0.4
Winterswijk	KIJK	rijden	-0.484	1.114	-1.036	1.305
Winterswijk	HUIS	ruiken	-0.622	-1.393	-1.901	-1.705
Winterswijk	PRAAT	slaan	0.596	-1.2	0.669	-1.427
Winterswijk	KAAS	staat	-0.407	0.71	-0.331	0.412
Winterswijk	KIJK	stijf	-0.758	0.675	-0.92	0.582
Winterswijk	KIJK	trouwerij	-0.532	0.705	-0.832	1.023
Winterswijk	HUIS	uitging	-0.209	0.413	-0.692	-0.168
Winterswijk	KAART	vaak	1.547	-0.582	1.66	-0.32
Zwolle	PRAAT	allemaal	0.832	-1.341	0.653	-0.772
Zwolle	PRAAT	blaar	-0.116	-1.187	0.869	-0.889
Zwolle	HUIS	buiten	-0.682	-1.388	-0.582	-1.248
Zwolle	PRAAT	daar	0.407	-0.385	0.619	-0.523
Zwolle	PRAAT	daar	0.22	-1.633	0.933	-0.921
Zwolle	PRAAT	draad	0.773	-0.813	1.186	-0.749
Zwolle	PRAAT	ga	0.694	-1.199	1.068	-1.064
Zwolle	PAARD	gaarne	-0.482	1.055	1.216	0.197
Zwolle	KAAS	gaat	-0.698	1.143	-0.395	1.035
Zwolle	KAAS	gaat	0.828	1.04	1.74	0.784
Zwolle	PRAAT	gaat	0.601	-1.479	1.313	-1.326
Zwolle	KIJK	gordijnen	-1.294	1.419	-1.237	1.425
Zwolle	KAART	graven	1.198	-0.051	1.463	-0.396
Zwolle	HUIS	huis	-0.773	-0.946	-0.762	-0.784
Zwolle	HUIS	huis	-0.704	-0.862	-0.602	-1.014
Zwolle	HUIS	huizen	-0.736	0.523	-1.231	0.234
Zwolle	KIJK	ijzer	-1.6	1.482	-1.294	1.108
Zwolle	KAART	kaart	1.265	0.112	1.783	0.039
Zwolle	KAAS	kaas	-0.946	1.189	-0.464	0.841
Zwolle	KIJK	kijken	-1.191	1.375	-1.736	1.22
Zwolle	HUIS	kruipen	-0.563	-1.029	-0.772	-1.119
Zwolle	HUIS	kuikens	-1.082	0.13	-1.164	-0.354
Zwolle	KAAS	maakte	1.188	-0.151	1.748	-0.175
Zwolle	KAAS	nagel	-0.037	0.825	0.659	0.514
Zwolle	KAAS	nagel	-0.086	0.949	0.215	0.671
Zwolle	KAAS	nagel	0.329	0.418	0.404	0.461
Zwolle	PRAAT	opstaan	1.253	-1.251	1.893	-1.227
Zwolle	PRAAT	paaltje	0.299	-1.689	0.778	-1.664
Zwolle	PAARD	paard	-0.701	1.031	0.975	0.151
Zwolle	KIJK	pijn	-1.086	1.37	-1.04	1.522
Zwolle	KIJK	prijzen	-0.959	1.075	-1.074	0.937
Zwolle	KAAS	raakte	1.27	-0.198	1.617	-0.252
Zwolle	KIJK	rijden	-1.138	1.424	-1.15	1.275
Zwolle	HUIS	ruiken	-0.336	-0.979	-0.699	-1.267

Zwolle	PRAAT	slaan	0.726	-0.639	0.93	-0.944
Zwolle	KAAS	staat	-0.828	1.131	-0.544	0.922
Zwolle	KIJK	stijf	-1.176	1.302	-1.096	0.834
Zwolle	KIJK	trouwerij	-0.524	0.991	-0.588	1.323
Zwolle	HUIS	uitging	-0.763	-0.493	-1.125	-0.976
Zwolle	KAART	vaak	0.713	-0.044	1.399	-0.058

## 2015

Speaker	Vowel	Context	F*1	F*2	F*1 gl	F*2 gl
F31Zelhem	PRAAT	allemaal	0.874	-0.996	0.373	-1.25
F31Zelhem	PRAAT	blaar	-0.246	-1.368	1.315	-1.25
F31Zelhem	HUIS	buiten	-0.795	-0.448	0.148	0.095
F31Zelhem	PRAAT	daar	-0.115	-1.227	0.809	-0.872
F31Zelhem	PRAAT	daar	0.535	-1.114	1.19	-0.647
F31Zelhem	PRAAT	draad	0.734	-1.133	1.36	-0.75
F31Zelhem	PRAAT	ga	0.649	-1.383	0.674	-1.148
F31Zelhem	PRAAT	gaan	0.553	-1.319	0.796	-1.013
F31Zelhem	KAAS	gaat	-0.336	0.968	0.255	0.616
F31Zelhem	PRAAT	gaat	0.008	-1.359	1.049	-0.819
F31Zelhem	KIJK	gordijnen	-1.284	1.333	-0.992	1.178
F31Zelhem	KIJK	gordijnen	-1.343	1.219	-1.126	1.322
F31Zelhem	KAART	graven	0.834	0.047	1.648	-0.451
F31Zelhem	HUIS	huis	-1.316	-0.102	-0.973	0.207
F31Zelhem	HUIS	huis	-1.235	-0.147	-0.868	0.395
F31Zelhem	HUIS	huizen	-1.267	-0.399	-0.92	-0.25
F31Zelhem	KIJK	ijzer	-1.339	1.243	-1.138	1.258
F31Zelhem	PRAAT	jaar	0.406	-0.743	1.061	-0.804
F31Zelhem	KAART	kaart	-0.856	1.098	1.298	0.371
F31Zelhem	KAAS	kaas	0.5	0.876	1.456	0.542
F31Zelhem	KAAS	kaas	0.177	0.784	1.184	0.217
F31Zelhem	KIJK	kijken	-1.249	1.082	-0.84	1.436
F31Zelhem	KIJK	kijken	-1.157	1.567	-1.09	1.574
F31Zelhem	KIJK	kijken	-1.156	1.48	-1.097	1.517
F31Zelhem	KIJK	kijken	-1.141	1.519	-1.068	1.469
F31Zelhem	HUIS	kruipen	-0.4	-1.568	0.263	-1.704
F31Zelhem	HUIS	kruipen	-0.299	-1.515	-0.15	-1.514
F31Zelhem	HUIS	kuikens	-1.065	-0.4	-1.076	-0.717
F31Zelhem	HUIS	kuikens	-1.038	-0.08	-0.858	-0.324
F31Zelhem	KAAS	maakte	1.445	0.256	1.391	0.776
F31Zelhem	PRAAT	naar	0.747	-0.571	1.1	-0.623
F31Zelhem	KAAS	nagel	0.449	0.847	1.522	0.199
F31Zelhem	KAAS	nagel	0.952	0.693	1.411	0.373
F31Zelhem	PRAAT	opstaan	0.59	-0.844	0.103	-1.397
F31Zelhem	PRAAT	paaltje	0.165	-0.438	0.512	-1.07
F31Zelhem	PAARD	paard	-0.196	0.939	1.331	0.355
F31Zelhem	PAARD	paard	-0.728	1.169	1.559	-0.152
F31Zelhem	PAARD	paard	-0.467	1.6	1.954	-0.055
F31Zelhem	KIJK	pijn	-1.07	0.993	-0.963	0.908
F31Zelhem	KIJK	pijn	-1.208	0.659	-0.967	1.241
F31Zelhem	PRAAT	praten	0.95	-1.365	1.267	-1.11
F31Zelhem	PRAAT	praten	0.941	-1.136	1.039	-0.852
F31Zelhem	KIJK	prijzen	-0.793	1.064	-0.845	1.411

F31Zelhem	KAAS	raakte	2.233	-0.431	1.885	-0.155
F31Zelhem	KIJK	rijden	0.952	0.624	-0.713	1.033
F31Zelhem	HUIS	ruiken	-0.526	-1.635	0.074	-1.708
F31Zelhem	HUIS	ruiken	-0.324	-1.605	-0.598	-1.647
F31Zelhem	PRAAT	slaan	1.098	-1.175	1.674	-0.919
F31Zelhem	HUIS	sluiten	-0.556	-0.29	-0.342	-0.459
F31Zelhem	KIJK	spijkers	-0.987	0.946	-0.977	1.459
F31Zelhem	KIJK	spijkers	-0.983	0.832	-0.927	0.804
F31Zelhem	KIJK	spijkers	-0.884	0.243	-0.886	0.499
F31Zelhem	KAAS	staat	-0.048	0.767	0.092	0.581
F31Zelhem	KIJK	stijf	-1.074	1.172	-0.838	1.166
F31Zelhem	KIJK	trouwerij	0.182	0.801	0.048	1.047
F31Zelhem	HUIS	uit	-0.844	-0.192	-0.854	0.203
F31Zelhem	HUIS	uitging	-0.819	-1.169	-1.012	-0.514
F31Zelhem	KAART	vaak	1.52	-0.507	1.926	-0.243
F32Halle	PRAAT	allemaal	0.369	-1.572	-0.05	-1.692
F32Halle	PRAAT	blaar	-0.085	-1.6	1.43	-0.638
F32Halle	HUIS	buiten	-0.869	-0.202	-0.774	-0.002
F32Halle	PRAAT	daar	0.502	-0.994	1.192	-0.918
F32Halle	PRAAT	daar	0.284	-1.202	1.246	-0.964
F32Halle	PRAAT	draad	0.648	-1.528	1.153	-1.321
F32Halle	PRAAT	ga	0.911	-1.321	-0.606	-1.331
F32Halle	KAAS	gaat	-0.054	1.2	-0.125	0.778
F32Halle	PRAAT	gaat	0.978	-1.189	1.445	-0.755
F32Halle	PRAAT	gaat	1.239	-1.016	1.523	-0.739
F32Halle	KIJK	gordijnen	-0.918	0.793	-0.935	0.953
F32Halle	KIJK	gordijnen	-0.754	0.73	-0.926	1.18
F32Halle	KAART	graven	1.911	-0.519	2.084	-0.414
F32Halle	HUIS	huis	-1.053	0.292	-0.81	0.319
F32Halle	HUIS	huis	-0.997	0.294	-0.868	0.327
F32Halle	HUIS	huizen	-1.582	0.106	-0.932	0.266
F32Halle	KIJK	ijzer	-0.54	1.375	-0.931	1.574
F32Halle	KAAS	kaas	0.038	0.967	0.094	0.709
F32Halle	KAAS	kaas	-0.094	1.452	0.151	0.6
F32Halle	KIJK	kijken	-1.188	1.207	-1.254	1.294
F32Halle	KIJK	kijken	-0.902	1.218	-0.305	1.417
F32Halle	KIJK	kijken	-0.319	1.289	-1.526	1.313
F32Halle	KIJK	kijken	-0.909	1.249	-0.951	0.995
F32Halle	HUIS	kruipen	-0.672	-1.149	-0.684	-1.605
F32Halle	HUIS	kruipen	-0.485	-1.197	-0.64	-1.688
F32Halle	HUIS	kuikens	-0.642	-0.283	-0.866	-0.49
F32Halle	HUIS	kuikens	-0.737	0.013	-0.79	-0.032
F32Halle	KAAS	maakte	1.793	-0.504	1.987	-0.172
F32Halle	PRAAT	naar	0.978	-1.333	1.095	-0.655
F32Halle	KAAS	nagel	1.01	0.288	1.116	-0.416
F32Halle	KAAS	nagel	0.934	0.941	1.284	0.585

F32Halle	PRAAT	opstaan	1.244	-1.053	0.73	-1.233
F32Halle	PRAAT	paaltje	0.304	-0.514	0.435	-1.329
F32Halle	PAARD	paard	-0.023	0.363	1.461	-0.33
F32Halle	PAARD	paard	-0.183	1.104	1.255	-0.944
F32Halle	PAARD	paard	-0.158	1.256	1.679	0.185
F32Halle	KIJK	pijn	-1.049	0.862	-0.945	0.795
F32Halle	KIJK	pijn	-0.865	0.931	-0.96	0.84
F32Halle	PRAAT	praten	0.835	-1.302	1.178	-1.604
F32Halle	PRAAT	praten	0.91	-1.384	1.306	-1.405
F32Halle	KIJK	prijzen	-0.972	0.655	-0.982	0.707
F32Halle	KAAS	raakte	1.815	-0.26	2.003	-0.212
F32Halle	KIJK	rijden	-0.411	1.103	-0.427	1.158
F32Halle	HUIS	ruiken	-0.176	-1.169	-0.742	-1.43
F32Halle	PRAAT	slaan	1.024	-1.318	1.481	-1.112
F32Halle	KIJK	spijkers	-0.994	0.927	-1.053	1.255
F32Halle	KIJK	spijkers	-0.708	0.58	-0.748	0.873
F32Halle	KAAS	staat	-0.03	1.05	-0.072	0.752
F32Halle	KIJK	stijf	-0.788	0.917	-0.799	1.055
F32Halle	KIJK	trouwerij	-0.063	0.682	-0.867	1.286
F32Halle	HUIS	uit	-0.915	0.106	-1.765	0.696
F32Halle	HUIS	uitging	-0.719	-0.112	-0.862	0.289
F33Hummelo	PRAAT	allemaal	0.891	-1.794	0.238	-1.94
F33Hummelo	PRAAT	blaar	1.074	-0.366	1.391	-0.395
F33Hummelo	HUIS	buiten	-0.625	-0.109	-0.808	0.129
F33Hummelo	PRAAT	daar	0.474	-0.973	0.277	-0.547
F33Hummelo	PRAAT	daar	-0.211	-0.403	0.828	-1.033
F33Hummelo	PRAAT	draad	1.1	-1.236	1.379	-0.839
F33Hummelo	PRAAT	ga	0.965	-1.559	-0.737	-1.698
F33Hummelo	PRAAT	gaan	0.739	-1.371	0.224	-1.431
F33Hummelo	PAARD	gaarne	2.734	-0.026	1.78	-0.128
F33Hummelo	KAAS	gaat	-0.045	0.559	-0.161	0.246
F33Hummelo	KIJK	gordijnen	-0.761	0.971	-1.187	1.033
F33Hummelo	KIJK	gordijnen	-0.256	0.723	-1.127	0.836
F33Hummelo	KAART	graven	1.545	-0.297	1.595	-0.026
F33Hummelo	HUIS	huis	-0.939	-0.38	-1.237	0.085
F33Hummelo	HUIS	huizen	-0.472	0.097	-1.049	0.263
F33Hummelo	KIJK	ijzer	-0.192	2.061	-1.485	1.884
F33Hummelo	PRAAT	jaar	-0.239	-1.462	1.862	-0.539
F33Hummelo	KAAS	kaas	1.121	0.06	1.21	0.071
F33Hummelo	KAAS	kaas	0.614	0.784	1.021	0.614
F33Hummelo	KIJK	kijken	-0.949	0.679	-0.868	0.557
F33Hummelo	KIJK	kijken	-1.214	1.083	-0.937	1.263
F33Hummelo	KIJK	kijken	-0.85	0.748	-0.878	0.803
F33Hummelo	HUIS	kruipen	-0.407	-1.874	-0.349	-1.822
F33Hummelo	HUIS	kruipen	0.033	-2.002	-0.7	-1.824
F33Hummelo	HUIS	kuikens	-0.835	-0.183	-0.724	-0.241

F33Hummelo	KAAS	maakte	1.525	-0.497	1.191	-0.167
F33Hummelo	KAAS	nagel	1.093	0.646	1.6	0.325
F33Hummelo	KAAS	nagel	1.102	0.803	1.379	0.47
F33Hummelo	PRAAT	opstaan	0.885	-0.997	-0.475	-1.795
F33Hummelo	PRAAT	paaltje	0.336	-0.46	0.475	-1.178
F33Hummelo	PAARD	paard	-0.53	0.359	1.746	-0.084
F33Hummelo	PAARD	paard	-0.698	1.184	0.856	0.012
F33Hummelo	PAARD	paard	-0.568	1.202	1.353	0.437
F33Hummelo	KIJK	pijn	-1.254	0.982	-1.261	1.127
F33Hummelo	KIJK	pijn	-0.583	1.252	-1.221	1.632
F33Hummelo	PRAAT	praten	0.699	-1.268	1.339	-1.261
F33Hummelo	KIJK	prijzen	-0.326	0.682	-0.172	1.137
F33Hummelo	KAAS	raakte	1.558	-0.945	1.582	-0.144
F33Hummelo	KIJK	rijden	0.024	1.044	-0.833	1.17
F33Hummelo	HUIS	ruiken	-0.474	-0.371	-0.269	-0.546
F33Hummelo	HUIS	ruiken	-0.641	-0.664	-1.082	-0.508
F33Hummelo	PRAAT	slaan	0.494	-1.408	0.105	-1.672
F33Hummelo	KIJK	spijkers	-1.012	0.942	-0.974	0.951
F33Hummelo	KIJK	spijkers	-0.896	1.149	-1.082	1.415
F33Hummelo	KIJK	spijkers	-0.884	1.163	-1.108	1.407
F33Hummelo	KAAS	staat	-0.051	0.623	0.014	0.422
F33Hummelo	KIJK	stijf	-1.16	0.637	-1.267	0.603
F33Hummelo	HUIS	uit	-0.649	0.056	-0.964	0.202
F33Hummelo	HUIS	uitging	-0.712	0.36	-1.065	0.52
F34Uift	PRAAT	allemaal	1.086	-1.616	0.356	-1.937
F34Uift	PRAAT	blaar	0.637	-1.166	0.728	-1.035
F34Uift	HUIS	buiten	-0.564	0.176	-1.429	0.201
F34Uift	PRAAT	daar	0.914	-0.683	0.384	-0.821
F34Uift	PRAAT	daar	-0.244	-0.966	0.753	-1.003
F34Uift	PRAAT	draad	0.625	-1.1	1.067	-0.992
F34Uift	PRAAT	ga	0.157	-1.44	0.708	-1.263
F34Uift	PRAAT	gaan	0.38	-1.277	1.129	-1.162
F34Uift	PRAAT	gaan	1.018	-1.704	1.854	-1.359
F34Uift	PAARD	gaarne	1.085	-0.319	1.273	-0.546
F34Uift	KAAS	gaat	-0.454	1.317	-0.292	1.007
F34Uift	KIJK	gordijnen	-0.895	1.362	-0.568	1.769
F34Uift	KIJK	gordijnen	-0.521	1.357	-0.592	1.75
F34Uift	KAART	graven	1.119	-0.266	1.903	-0.499
F34Uift	HUIS	huis	-1.47	0.206	-0.587	0.186
F34Uift	HUIS	huis	-0.846	0.066	-1.125	-0.164
F34Uift	HUIS	huizen	-0.616	0.158	-1.273	0.059
F34Uift	KIJK	ijzer	-0.809	1.525	-0.821	1.27
F34Uift	KAART	kaart	1.541	-0.221	1.816	-0.128
F34Uift	KAAS	kaas	0.486	0.751	1.153	0.56
F34Uift	KAAS	kaas	1.551	0.1	1.054	-0.531
F34Uift	KIJK	kijken	-1.284	1.072	-1.467	1.202



F34Uift	KIJK	kijken	-0.83	1.196	-1.219	1.22
F34Uift	KIJK	kijken	-0.489	1.382	-1.402	1.134
F34Uift	KIJK	kijken	-1.584	0.694	-1.156	0.667
F34Uift	HUIS	kruipen	-0.141	-0.344	-0.922	-0.31
F34Uift	HUIS	kruipen	-0.251	-0.256	-0.488	-0.022
F34Uift	HUIS	kuikens	-0.971	0.393	-1.44	0.209
F34Uift	HUIS	kuikens	-0.88	-0.054	-1.272	0.029
F34Uift	KAAS	maakte	1.558	-0.544	2.434	-0.543
F34Uift	PRAAT	naar	0.433	-1.217	0.431	-0.996
F34Uift	PRAAT	naar	1.12	-0.459	0.501	-0.508
F34Uift	KAAS	nagel	1.156	-0.341	1.533	-0.509
F34Uift	KAAS	nagel	0.891	-1.162	1.214	-1.445
F34Uift	PRAAT	opstaan	0.701	-1.133	1.134	-0.998
F34Uift	PRAAT	paaltje	0.681	-1.724	0.495	-1.818
F34Uift	PAARD	paard	0.13	1.197	0.798	0.311
F34Uift	PAARD	paard	-0.46	1.239	1.062	-0.336
F34Uift	PAARD	paard	-0.903	1.17	0.714	-0.032
F34Uift	KIJK	pijn	-0.435	1.112	-0.644	1.154
F34Uift	KIJK	pijn	-0.782	1.434	-0.677	1.303
F34Uift	PRAAT	praten	1.051	-1.391	1.363	-1.485
F34Uift	KIJK	prijzen	-0.933	1.34	-1.243	1.496
F34Uift	KAAS	raakte	0.953	-0.512	1.786	-0.598
F34Uift	KIJK	rijden	-0.078	1.036	-0.287	0.934
F34Uift	HUIS	ruiken	-0.326	0.008	-1.517	-0.253
F34Uift	HUIS	ruiken	-0.508	-0.07	-1.501	-0.4
F34Uift	PRAAT	slaan	-0.501	-2.105	0.207	-1.548
F34Uift	KIJK	spijkers	-0.526	0.662	-0.301	1.143
F34Uift	KIJK	spijkers	-0.231	1.069	-1.669	0.972
F34Uift	KIJK	spijkers	-0.973	0.923	-1.012	1.229
F34Uift	KAAS	staat	0.736	-0.384	1.223	-0.585
F34Uift	KIJK	stijf	-0.384	1.438	-0.475	1.051
F34Uift	KIJK	trouwerij	0.077	-0.168	-0.228	0.794
F34Uift	HUIS	uit	-0.984	0.632	-1.054	0.729
F34Uift	HUIS	uitging	-0.33	-0.145	-1.298	-0.799
F39Terborg	PRAAT	allemaal	1.115	-2.607	0.661	-2.327
F39Terborg	PRAAT	blaar	1.091	-0.742	1.102	-0.285
F39Terborg	HUIS	buiten	-1.073	-1.538	-0.994	-0.436
F39Terborg	PRAAT	daar	0.77	-0.83	0.553	-0.881
F39Terborg	PRAAT	draad	0.511	-0.178	0.925	-0.628
F39Terborg	PRAAT	ga	0.169	-1.875	0.925	-1.163
F39Terborg	PRAAT	gaan	0.579	0.423	0.706	-0.635
F39Terborg	PRAAT	gaan	0.856	-0.375	0.764	-0.69
F39Terborg	PAARD	gaarne	0.806	0.295	0.979	-0.728
F39Terborg	PRAAT	gaat	1.125	-0.4	1.066	-0.677
F39Terborg	KIJK	gordijnen	-1.064	1.125	-1.624	0.956
F39Terborg	KIJK	gordijnen	-1.205	1.01	-1.251	0.946

F39Terborg	KAART	graven	0.905	0.095	1.121	-0.018
F39Terborg	HUIS	huis	0.67	-0.934	-0.349	-0.468
F39Terborg	HUIS	huis	0.561	-0.99	-0.278	-0.713
F39Terborg	HUIS	huizen	0.685	-0.803	-0.549	-0.399
F39Terborg	KIJK	ijzer	-0.933	1.634	-1.235	1.253
F39Terborg	KAART	kaart	0.989	0.212	1.677	-0.317
F39Terborg	KAAS	kaas	-0.278	1.986	0.295	0.767
F39Terborg	KAAS	kaas	1.171	-0.101	1.347	-0.04
F39Terborg	KIJK	kijken	0.958	0.108	0.183	1.136
F39Terborg	KIJK	kijken	-1.539	1.645	-1.57	1.67
F39Terborg	KIJK	kijken	0.852	-0.039	0.715	0.757
F39Terborg	HUIS	kruipen	-0.944	-0.108	-1.245	-0.621
F39Terborg	HUIS	kruipen	-0.749	0.322	-1.566	-0.456
F39Terborg	HUIS	kuikens	0.766	-1.523	0.428	-1.288
F39Terborg	HUIS	kuikens	-1.058	-0.351	-1.768	0.045
F39Terborg	KAAS	maakte	0.666	-1.073	1	-0.465
F39Terborg	KAAS	nagel	0.742	0.749	0.038	0.917
F39Terborg	KAAS	nagel	0.767	1.002	-0.112	0.753
F39Terborg	PRAAT	opstaan	0.739	-1.064	0.245	-2.041
F39Terborg	PRAAT	paaltje	1.178	-1.245	0.855	-1.772
F39Terborg	PAARD	paard	-0.517	1.318	1.191	0.457
F39Terborg	PAARD	paard	-0.465	1.424	0.489	0.863
F39Terborg	PAARD	paard	1.007	-0.517	1.303	-0.391
F39Terborg	KIJK	pijn	-1.454	1.067	-1.395	1.593
F39Terborg	KIJK	pijn	-1.177	0.982	-0.685	1.484
F39Terborg	PRAAT	praten	0.491	-1.239	0.791	-1.41
F39Terborg	KIJK	prijzen	0.641	-0.267	-0.427	0.872
F39Terborg	KAAS	raakte	0.654	-0.251	0.91	-0.386
F39Terborg	KIJK	rijden	0.087	0.564	-1.051	1.731
F39Terborg	HUIS	ruiken	-0.953	0.923	-1.591	0.238
F39Terborg	HUIS	ruiken	-0.522	-0.812	-1.511	-0.807
F39Terborg	PRAAT	slaan	1.375	-1.101	1.052	-1.363
F39Terborg	KIJK	spijkers	-1.316	0.565	-1.144	1.168
F39Terborg	KIJK	spijkers	-1.38	0.377	-1.8	0.68
F39Terborg	KIJK	spijkers	-1.172	0.669	-1.192	0.937
F39Terborg	KAAS	staat	-0.524	0.74	-0.478	0.549
F39Terborg	KIJK	stijf	-1.527	1.228	-1.08	1.281
F39Terborg	KIJK	trouwerij	0.618	-0.542	0.65	0.657
F39Terborg	HUIS	uitging	-1.015	0.492	-1.607	1.086
F39Terborg	KAART	vaak	0.751	-0.747	1.107	-0.091
F44Zelhem	PRAAT	blaar	-0.309	-1.525	1.469	-1.054
F44Zelhem	HUIS	buiten	-0.628	-0.325	-0.901	0.063
F44Zelhem	PRAAT	daar	0.289	-1.032	-0.472	-1.041
F44Zelhem	PRAAT	daar	0.165	-0.801	0.378	-0.87
F44Zelhem	PRAAT	draad	0.737	-1.074	1.444	-1.181
F44Zelhem	PRAAT	ga	0.443	-1.495	-0.083	-1.466

F44Zelhem	PAARD	gaarne	-0.539	1.334	1.179	0.3
F44Zelhem	PRAAT	gaat	0.426	-1.377	0.766	-1.275
F44Zelhem	KAAS	gaat	-0.152	0.085	-0.098	-0.071
F44Zelhem	PRAAT	gaat	0.674	-1.447	1.176	-1.028
F44Zelhem	PRAAT	gaat	0.822	-1.369	0.949	-1.345
F44Zelhem	KIJK	gordijnen	-0.774	1.367	-0.871	1.21
F44Zelhem	KAART	graven	1.806	-0.327	1.786	-0.249
F44Zelhem	HUIS	huis	-0.94	-0.219	-1.039	0.574
F44Zelhem	HUIS	huis	-1.049	0.081	-1.108	0.591
F44Zelhem	HUIS	huizen	-1.025	0.25	-0.814	0.358
F44Zelhem	KIJK	ijzer	-0.651	1.41	-0.726	1.005
F44Zelhem	KAAS	kaas	-0.595	1.103	-0.571	0.75
F44Zelhem	KAAS	kaas	-0.392	1.145	-0.298	0.972
F44Zelhem	KIJK	kijken	-0.961	0.627	-1.075	0.771
F44Zelhem	KIJK	kijken	-0.919	1.222	-0.55	1.347
F44Zelhem	HUIS	kruipen	-0.696	-0.527	-0.29	-0.89
F44Zelhem	HUIS	kruipen	-0.622	-1.247	-0.715	-1.576
F44Zelhem	HUIS	kuikens	-0.873	-0.17	-0.637	-0.156
F44Zelhem	KAAS	maakte	2.516	-0.649	2.536	-0.253
F44Zelhem	KAAS	nagel	1.212	0.893	1.042	0.722
F44Zelhem	KAAS	nagel	1.228	0.721	1.273	0.435
F44Zelhem	PRAAT	opstaan	1.64	-1.507	-0.108	-1.537
F44Zelhem	PRAAT	paaltje	0.557	-1.293	0.822	-1.524
F44Zelhem	PAARD	paard	-0.411	0.613	0.935	0.129
F44Zelhem	PAARD	paard	-0.59	1.014	1.553	0.204
F44Zelhem	PAARD	paard	-0.159	0.881	1.421	0.162
F44Zelhem	KIJK	pijn	-0.934	1.171	-1.015	0.519
F44Zelhem	KIJK	pijn	-0.883	1.284	-1.151	1.129
F44Zelhem	PRAAT	praten	0.836	-1.069	0.923	-1.203
F44Zelhem	KIJK	prijzen	-0.768	1.109	-0.491	0.923
F44Zelhem	KAAS	raakte	1.276	-0.336	2.134	-0.264
F44Zelhem	KIJK	rijden	-0.859	1.032	-1.021	1.372
F44Zelhem	HUIS	ruiken	-0.468	-1.542	-0.834	-1.636
F44Zelhem	PRAAT	slaan	0.636	-1.016	1.898	-1.173
F44Zelhem	PRAAT	slaan	0.973	-1.25	1.841	-0.977
F44Zelhem	KIJK	spijkers	-0.839	0.777	-0.073	0.953
F44Zelhem	KIJK	spijkers	-0.967	1.073	-0.802	1.371
F44Zelhem	KIJK	spijkers	-0.929	0.859	-1.033	1.1
F44Zelhem	KAAS	staat	-0.447	0.806	-0.487	0.766
F44Zelhem	KIJK	stijf	-1.04	0.958	-1.111	1.084
F44Zelhem	KIJK	trouwerij	-0.642	0.683	-0.917	1.322
F44Zelhem	HUIS	uitging	-0.667	-0.15	-0.735	-0.113
F48Ruurlo	PRAAT	allemaal	0.883	-1.414	-0.242	-1.641
F48Ruurlo	PRAAT	blaar	-0.133	-1.371	0.654	-1.363
F48Ruurlo	HUIS	buiten	-0.804	-0.582	-0.98	0.206
F48Ruurlo	PRAAT	daar	0.167	-1.202	0.436	-1.216

F48Ruurlo	PRAAT	draad	0.845	-1.185	0.938	-1.205
F48Ruurlo	PRAAT	ga	0.605	-1.129	1.294	-1.077
F48Ruurlo	PAARD	gaarne	-0.689	0.531	0.936	0.534
F48Ruurlo	PRAAT	gaat	1.08	-1.161	1.083	-0.601
F48Ruurlo	KAAS	gaat	-0.578	1.11	-0.433	0.983
F48Ruurlo	PRAAT	gaat	0.295	-1.443	0.246	-1.17
F48Ruurlo	PRAAT	gaat	0.295	-1.382	1.007	-1.016
F48Ruurlo	KIJK	gordijnen	-0.562	1.036	-0.632	0.786
F48Ruurlo	KAART	graven	2.138	0.106	2.557	-0.062
F48Ruurlo	HUIS	huis	-0.954	0.527	-0.619	0.611
F48Ruurlo	HUIS	huis	-0.787	0.577	-0.581	0.648
F48Ruurlo	HUIS	huizen	-0.726	-0.053	-0.772	0.06
F48Ruurlo	KIJK	ijzer	-0.7	1.125	-0.944	1.11
F48Ruurlo	KAAS	kaas	-0.587	1.123	-0.456	1.05
F48Ruurlo	KAAS	kaas	-0.638	1.146	-0.804	1.123
F48Ruurlo	KIJK	kijken	-1.078	1.166	-0.99	1.27
F48Ruurlo	KIJK	kijken	-0.765	0.922	-1.075	1.014
F48Ruurlo	HUIS	kruipen	-0.423	-1.122	-0.73	-1.49
F48Ruurlo	HUIS	kruipen	-0.536	-1.224	-0.46	-1.394
F48Ruurlo	HUIS	kuikens	-0.749	-0.388	-0.926	-0.495
F48Ruurlo	HUIS	kuikens	-0.632	-0.365	-0.16	-0.288
F48Ruurlo	KAAS	maakte	0.429	-0.553	2.523	-0.8
F48Ruurlo	KAAS	nagel	0.507	0.856	1.797	0.78
F48Ruurlo	KAAS	nagel	0.04	0.725	2.281	0.175
F48Ruurlo	PRAAT	opstaan	0.553	-1.068	0.158	-1.304
F48Ruurlo	PRAAT	paaltje	0.608	-1.121	0.835	-1.101
F48Ruurlo	PAARD	paard	0.001	0.963	1.416	0.776
F48Ruurlo	PAARD	paard	-0.381	0.966	0.75	0.47
F48Ruurlo	PAARD	paard	-0.782	1.091	1.27	0.589
F48Ruurlo	KIJK	pijn	-1.013	1.171	-0.983	1.283
F48Ruurlo	PRAAT	praten	0.698	-1.074	1.225	-1.148
F48Ruurlo	KIJK	prijzen	-0.949	1.027	-0.621	1.1
F48Ruurlo	KAAS	raakte	1.148	-1.127	2.317	-0.636
F48Ruurlo	HUIS	ruiken	-0.367	-1.157	-1.059	-1.335
F48Ruurlo	HUIS	ruiken	-0.126	-1.346	0.04	-1.564
F48Ruurlo	PRAAT	slaan	2.061	-0.207	3.453	-0.032
F48Ruurlo	PRAAT	slaan	-0.321	-0.957	-0.463	-1.436
F48Ruurlo	KIJK	spijkers	-0.527	0.583	-1.323	0.854
F48Ruurlo	KIJK	spijkers	-0.825	1.025	-1.272	1.082
F48Ruurlo	KIJK	spijkers	-0.395	0.779	-0.186	0.906
F48Ruurlo	KAAS	staat	-0.348	0.899	-0.358	0.951
F48Ruurlo	KAAS	staat	-0.453	1.006	-0.495	0.915
F48Ruurlo	KIJK	stijf	-0.861	1.081	-1.045	1.047
F48Ruurlo	KIJK	trouwerij	-0.477	1.074	-0.715	1.405
F48Ruurlo	HUIS	uitging	-0.605	0.127	-0.476	0.537
F50Zelhem	PRAAT	allemaal	0.558	-1.57	0.268	-1.461

F50Zelhem	PRAAT	blaar	-0.518	-1.574	1.459	-1.106
F50Zelhem	HUIS	buiten	-0.8	-0.184	-1.008	-0.711
F50Zelhem	PRAAT	daar	-0.024	-0.808	0.551	-0.922
F50Zelhem	PRAAT	daar	0.002	-1.266	0.355	-1.07
F50Zelhem	PRAAT	draad	0.128	-1.172	0.908	-1.175
F50Zelhem	PRAAT	ga	0.624	-1.269	0.464	-1.401
F50Zelhem	PRAAT	gaan	0.571	-1.184	1.162	-1.009
F50Zelhem	PAARD	gaarne	-0.696	1.357	1.518	-0.19
F50Zelhem	KAAS	gaat	-0.279	1.084	-1.049	1.374
F50Zelhem	PRAAT	gaat	0.565	-1.401	0.997	-1.248
F50Zelhem	KIJK	gordijnen	-0.984	1.003	-0.653	1.209
F50Zelhem	KIJK	gordijnen	-0.766	1.074	-0.604	1.25
F50Zelhem	KAART	graven	1.157	-0.399	1.821	-0.351
F50Zelhem	HUIS	huis	-1.732	-0.195	-0.891	0.145
F50Zelhem	HUIS	huis	-0.821	-0.257	-0.967	-0.13
F50Zelhem	HUIS	huizen	-0.56	-0.186	-0.333	0.172
F50Zelhem	KIJK	ijzer	-0.802	1.119	-0.992	1.124
F50Zelhem	KAART	kaart	0.781	0.012	2.053	-0.17
F50Zelhem	KAAS	kaas	1.485	-0.26	1.616	-0.231
F50Zelhem	KAAS	kaas	0.261	1.036	0.42	0.893
F50Zelhem	KIJK	kijken	-0.815	1.382	-0.811	1.337
F50Zelhem	KIJK	kijken	-0.837	1.215	-0.866	1.313
F50Zelhem	KIJK	kijken	-0.834	1.098	-0.876	1.33
F50Zelhem	KIJK	kijken	-0.682	1.171	-0.883	1.089
F50Zelhem	KIJK	kijken	-0.946	1.203	-1.412	1.124
F50Zelhem	HUIS	kruipen	-0.513	-1.187	-0.528	-1.5
F50Zelhem	HUIS	kruipen	-0.568	-1.246	-0.885	-1.606
F50Zelhem	HUIS	kuikens	-0.866	-0.546	-1.125	-0.69
F50Zelhem	HUIS	kuikens	-1.416	-0.467	-1.474	-0.428
F50Zelhem	KAAS	maakte	1.674	-0.177	2.212	-0.186
F50Zelhem	PRAAT	naar	1.008	-1.083	0.842	-1.088
F50Zelhem	KAAS	nagel	1.826	-0.004	2.518	-0.305
F50Zelhem	KAAS	nagel	0.444	1.14	1.069	0.348
F50Zelhem	PRAAT	opstaan	0.927	-0.955	1.764	-1.42
F50Zelhem	PRAAT	paaltje	0.716	-0.53	0.693	-1.241
F50Zelhem	PAARD	paard	-0.796	1.082	1.392	-0.065
F50Zelhem	PAARD	paard	-0.682	1.296	1.104	-0.045
F50Zelhem	KIJK	pijn	-0.867	0.912	-0.887	0.963
F50Zelhem	KIJK	pijn	-0.801	1.119	-0.867	1.022
F50Zelhem	KIJK	prijzen	-0.051	0.924	-0.472	1.182
F50Zelhem	KAAS	raakte	1.469	-0.419	2.042	-0.28
F50Zelhem	KIJK	rijden	0.425	-0.106	-0.834	1.049
F50Zelhem	HUIS	ruiken	-0.704	-1.323	-0.698	-1.587
F50Zelhem	HUIS	ruiken	-0.53	-1.317	-0.624	-1.572
F50Zelhem	PRAAT	slaan	0.519	-1.358	1.047	-1.259
F50Zelhem	KIJK	spijkers	-0.897	1.169	-0.928	1.285

F50Zelhem	KIJK	spijkers	-0.217	0.998	-0.243	1.105
F50Zelhem	KIJK	spijkers	-0.386	0.923	-0.137	1.089
F50Zelhem	KAAS	staat	-0.325	0.902	-0.371	0.959
F50Zelhem	KIJK	stijf	-0.414	0.978	-1.034	1.216
F50Zelhem	KIJK	trouwerij	0.43	0.284	-0.113	1.179
F50Zelhem	HUIS	uit	-0.654	-0.117	-0.425	-0.111
F50Zelhem	HUIS	uitging	-0.773	-0.266	-0.888	-0.23
F50Zelhem	KAART	vaak	1.563	-0.358	2.022	-0.268
F53Zelhem	PRAAT	allemaal	0.947	-1.727	0.708	-1.732
F53Zelhem	PRAAT	blaar	-0.093	-1.606	0.781	-1.221
F53Zelhem	HUIS	buiten	-0.808	-0.08	-0.583	0.066
F53Zelhem	PRAAT	draad	0.833	-0.937	1.173	-1.265
F53Zelhem	PRAAT	ga	0.889	-1.298	1.142	-1.247
F53Zelhem	PRAAT	gaat	0.367	-1.357	0.988	-0.81
F53Zelhem	KIJK	gordijnen	-0.78	0.989	-0.901	0.952
F53Zelhem	KIJK	gordijnen	-0.578	1.144	-0.616	1.172
F53Zelhem	KAART	graven	1.43	-0.692	1.791	-0.857
F53Zelhem	HUIS	huis	-0.562	0.674	-0.855	0.695
F53Zelhem	HUIS	huis	-0.842	0.342	-1.467	0.512
F53Zelhem	HUIS	huizen	-0.56	-0.101	-0.653	0.406
F53Zelhem	KIJK	ijs	-0.793	1.048	-0.273	1.017
F53Zelhem	KIJK	ijzer	-0.911	1.323	-0.938	1.063
F53Zelhem	PRAAT	jaar	-0.18	-1.415	2.274	-0.818
F53Zelhem	KAART	kaart	1.643	-1.228	2.022	-0.916
F53Zelhem	KAAS	kaas	1.552	-0.005	1.446	-0.252
F53Zelhem	KAAS	kaas	0.208	0.96	0.595	0.614
F53Zelhem	KIJK	kijken	-1.576	1.179	-0.935	1.085
F53Zelhem	KIJK	kijken	-1.195	1.119	-0.808	1.153
F53Zelhem	KIJK	kijken	-0.718	1.152	-0.892	1.259
F53Zelhem	HUIS	kruipen	0.151	-1.092	-0.469	-1.347
F53Zelhem	HUIS	kruipen	-0.733	-1.567	-0.904	-1.744
F53Zelhem	HUIS	kuikens	-1.151	-0.049	-0.798	-0.153
F53Zelhem	HUIS	kuikens	-0.957	-0.248	-0.783	-0.544
F53Zelhem	KAAS	maakte	0.706	-1.284	0.012	-1.288
F53Zelhem	KAAS	nagel	0.47	0.734	1.204	0.511
F53Zelhem	KAAS	nagel	0.387	0.644	1.616	0.635
F53Zelhem	PRAAT	opstaan	0.664	-1.333	0.361	-1.546
F53Zelhem	PRAAT	paaltje	0.885	-0.494	1.068	-0.836
F53Zelhem	PAARD	paard	0.397	0.868	0.822	0.002
F53Zelhem	PAARD	paard	-0.158	0.908	1.012	-0.001
F53Zelhem	PAARD	paard	-0.483	1.022	1.281	0.089
F53Zelhem	KIJK	pijn	-0.919	1.172	-1.177	1.202
F53Zelhem	KIJK	pijn	-0.962	0.962	-0.989	1.184
F53Zelhem	PRAAT	praten	0.475	-1.347	1.327	-1.132
F53Zelhem	KIJK	prijzen	-0.922	0.947	-1.162	0.926
F53Zelhem	KAAS	raakte	1.86	-0.989	1.516	-0.11

F53Zelhem	KIJK	rijden	0.114	-0.156	-0.241	1.01
F53Zelhem	KIJK	rijden	0.118	0.656	-0.6	1.103
F53Zelhem	HUIS	ruiken	-0.504	-1.224	-0.544	-1.529
F53Zelhem	PRAAT	slaan	0.622	-1.444	1.741	-1.597
F53Zelhem	KIJK	spijkers	-0.236	0.647	-0.653	0.794
F53Zelhem	KIJK	spijkers	-1.156	0.775	-1.324	0.85
F53Zelhem	KIJK	spijkers	-0.858	1.013	-0.785	1.118
F53Zelhem	KAAS	staat	-0.45	0.862	-0.392	0.712
F53Zelhem	KIJK	stijf	-1.454	1.024	-1.521	1.025
F53Zelhem	HUIS	uitging	-0.571	-0.124	-0.543	0.057
F53Zelhem	KAART	vaak	1.502	-0.518	1.814	-0.12
F56Silvolde	PRAAT	allemaal	1.239	-1.656	0.101	-1.894
F56Silvolde	PRAAT	blaar	-0.638	-2.067	0.834	-0.998
F56Silvolde	HUIS	buiten	-1.165	-0.121	-0.765	0.491
F56Silvolde	PRAAT	daar	0.849	-1.541	0.737	-1.215
F56Silvolde	PRAAT	draad	0.698	-1.916	0.952	-1.296
F56Silvolde	PRAAT	ga	0.981	-1.533	0.893	-1.214
F56Silvolde	PRAAT	gaan	0.385	-1.676	1.555	-1.354
F56Silvolde	PRAAT	gaan	0.378	-1.502	1.145	-1.271
F56Silvolde	KAAS	gaat	-0.427	1.104	-0.38	0.773
F56Silvolde	KIJK	gordijnen	-1.389	1.491	-1.249	1.489
F56Silvolde	KIJK	gordijnen	-1.361	1.112	-0.957	1.046
F56Silvolde	KAART	graven	1.713	-0.143	1.303	-0.337
F56Silvolde	HUIS	huis	-1.648	-0.085	-1.068	0.094
F56Silvolde	HUIS	huis	-1.207	-0.085	-0.98	0.624
F56Silvolde	HUIS	huizen	-1.298	0.03	-1.236	0.279
F56Silvolde	KIJK	ijzer	-1.337	1.747	-1.201	1.397
F56Silvolde	PRAAT	jaar	-0.071	-0.348	0.377	-0.641
F56Silvolde	PRAAT	jaar	0.379	-0.193	0.344	-0.991
F56Silvolde	KAART	kaart	1.43	-0.052	1.709	-0.229
F56Silvolde	KAAS	kaas	1.557	-0.13	1.454	-0.291
F56Silvolde	KAAS	kaas	0.542	0.555	0.814	0.457
F56Silvolde	KIJK	kijken	-0.644	1.227	-0.691	1.338
F56Silvolde	KIJK	kijken	-0.592	1.039	-0.592	1.042
F56Silvolde	KIJK	kijken	-1.033	1.453	-0.969	1.355
F56Silvolde	KIJK	kijken	-0.7	1.328	-0.729	1.3
F56Silvolde	HUIS	kruipen	-0.538	-2.026	-1.319	-2.428
F56Silvolde	HUIS	kruipen	-0.682	-0.291	-0.582	-0.559
F56Silvolde	HUIS	kuikens	-0.343	0.073	-0.659	0.134
F56Silvolde	KAAS	maakte	1.399	-0.783	1.222	-0.47
F56Silvolde	PRAAT	naar	1.006	-0.676	0.805	-0.698
F56Silvolde	KAAS	nagel	1.207	0.346	0.695	0.547
F56Silvolde	KAAS	nagel	1.302	0.467	0.487	0.653
F56Silvolde	PRAAT	opstaan	0.451	-1.167	0.427	-1.758
F56Silvolde	PRAAT	paaltje	0.406	-0.448	0.75	-0.515
F56Silvolde	PAARD	paard	1.475	-0.611	1.429	-0.486

F56Silvolde	PAARD	paard	-0.842	1.241	-0.097	0.535
F56Silvolde	PAARD	paard	-0.685	1.117	1.074	0.232
F56Silvolde	KIJK	pijn	-1.087	0.902	-0.976	1.265
F56Silvolde	KIJK	pijn	-1.227	1.268	-1.033	1.297
F56Silvolde	PRAAT	praten	1.713	-0.171	1.607	-0.227
F56Silvolde	PRAAT	praten	0.49	-1.067	0.625	-1.173
F56Silvolde	KIJK	prijzen	0.982	-0.34	0.542	0.416
F56Silvolde	KAAS	raakte	0.973	-0.429	1.5	-0.299
F56Silvolde	KIJK	rijden	-0.763	0.719	0.028	1.084
F56Silvolde	HUIS	ruiken	-0.977	-0.546	-1.475	-0.645
F56Silvolde	HUIS	ruiken	-0.732	-0.633	-0.716	-0.338
F56Silvolde	PRAAT	slaan	0.931	-0.992	1.468	-0.948
F56Silvolde	KIJK	spijkers	-0.801	0.492	-1.016	0.889
F56Silvolde	KIJK	spijkers	-0.545	0.707	-0.632	1.069
F56Silvolde	KIJK	spijkers	-0.602	0.827	-0.779	1.019
F56Silvolde	KAAS	staat	-0.557	0.836	-0.534	0.553
F56Silvolde	KIJK	stijf	-0.361	0.985	-0.351	1
F56Silvolde	KIJK	trouwerij	-1.156	1.364	-0.919	1.118
F56Silvolde	HUIS	uitging	-1.326	-0.091	-1.352	0.199
F56Silvolde	KAART	vaak	1.387	-0.402	1.238	-0.129
F67Zelhem	PRAAT	allemaal	1.237	-1.744	1.362	-1.582
F67Zelhem	HUIS	buiten	-0.811	-0.37	-1.061	-0.135
F67Zelhem	PRAAT	daar	1.007	-0.643	1.23	-0.764
F67Zelhem	PRAAT	ga	0.161	-1.558	0.987	-0.887
F67Zelhem	PAARD	gaarne	-0.141	0.767	1.159	0.117
F67Zelhem	PRAAT	gaat	0.482	-1.739	0.887	-1.277
F67Zelhem	PRAAT	gaat	0.627	-1.533	1.232	-1.194
F67Zelhem	KIJK	gordijnen	-0.858	1.497	-0.82	1.537
F67Zelhem	KIJK	gordijnen	-0.879	1.448	-0.753	1.369
F67Zelhem	KAART	graven	0.81	0.217	1.439	-0.358
F67Zelhem	HUIS	huis	-1.106	-0.21	-0.903	0.28
F67Zelhem	HUIS	huis	-1.001	-0.255	-0.946	-0.026
F67Zelhem	HUIS	huizen	-0.937	0.099	-0.736	0.066
F67Zelhem	KIJK	ijzer	-0.752	1.159	-0.82	0.95
F67Zelhem	KAART	kaart	2.412	-0.171	1.942	-0.025
F67Zelhem	KAAS	kaas	0.238	0.814	0.371	0.701
F67Zelhem	KAAS	kaas	1.739	-0.42	1.729	-0.442
F67Zelhem	KAAS	kaas	-0.046	0.984	-0.196	0.931
F67Zelhem	KIJK	kijken	-0.836	1.003	-0.875	0.802
F67Zelhem	KIJK	kijken	-1.211	0.553	-1.221	0.495
F67Zelhem	HUIS	kruipen	-0.691	-1.769	-0.568	-2.095
F67Zelhem	HUIS	kuikens	-1.081	-0.575	-0.813	-0.927
F67Zelhem	HUIS	kuikens	-0.914	-0.103	-0.376	-0.689
F67Zelhem	HUIS	luister	-0.541	-0.154	-0.136	-0.14
F67Zelhem	KAAS	nagel	0.465	0.818	0.455	0.728
F67Zelhem	KAAS	nagel	0.87	0.416	0.768	0.405



F67Zelhem	PRAAT	opstaan	0.905	-1.469	1.613	-1.051
F67Zelhem	PRAAT	paaltje	0.226	-0.663	0.601	-1.36
F67Zelhem	PAARD	paard	-0.121	0.767	0.821	0.036
F67Zelhem	PAARD	paard	-0.552	1.257	1.345	0.159
F67Zelhem	PAARD	paard	-0.265	1.035	1.187	0.023
F67Zelhem	KIJK	pijn	-0.614	0.964	-0.857	1.103
F67Zelhem	KIJK	pijn	-0.923	1.233	-0.832	1.123
F67Zelhem	PRAAT	praten	0.747	-0.989	1.603	-1.07
F67Zelhem	KIJK	prijzen	-0.768	0.874	-0.794	1.244
F67Zelhem	KAAS	raakte	1.143	-0.371	2.303	-0.347
F67Zelhem	KIJK	rijden	-0.665	0.282	-0.841	1.055
F67Zelhem	KIJK	rijden	-0.715	0.351	-1.193	1.201
F67Zelhem	HUIS	ruiken	-0.659	-2.03	-0.699	-2.305
F67Zelhem	PRAAT	slaan	0.276	-1.621	-0.492	-2.131
F67Zelhem	KIJK	spijkers	-0.726	0.535	-0.626	0.689
F67Zelhem	KIJK	spijkers	-0.956	0.801	-0.814	0.977
F67Zelhem	KIJK	spijkers	-0.861	0.465	-0.766	0.891
F67Zelhem	KAAS	staat	-0.324	1.103	0.044	1.005
F67Zelhem	KIJK	stijf	-0.807	0.976	-0.829	0.96
F67Zelhem	HUIS	uitging	-0.528	-0.441	-0.545	-0.465
F67Zelhem	KAART	vaak	1.67	-0.843	2.706	-0.327
F70Ruurlo	PRAAT	allemaal	1.05	-1.542	1.089	-1.394
F70Ruurlo	PRAAT	blaar	0.475	-1.821	1.752	-1.1
F70Ruurlo	HUIS	buiten	-0.954	-0.428	-1.13	0.366
F70Ruurlo	PRAAT	daar	0.207	-0.036	0.6	-0.59
F70Ruurlo	PRAAT	daar	0.555	-1.037	1.659	-0.572
F70Ruurlo	PRAAT	draad	0.929	-1.472	1.169	-1.041
F70Ruurlo	PRAAT	ga	0.234	-1.784	1.252	-1.258
F70Ruurlo	PRAAT	gaan	-0.082	-1.546	1.273	-1.333
F70Ruurlo	PRAAT	gaan	0.764	-1.525	1.624	-1.456
F70Ruurlo	PAARD	gaarne	-0.495	1.379	1.688	0.214
F70Ruurlo	KAAS	gaat	-0.626	1.159	-0.781	1.016
F70Ruurlo	KIJK	gordijnen	-0.864	1.081	-0.633	1.203
F70Ruurlo	KAART	graven	0.841	-0.04	2.219	-0.137
F70Ruurlo	HUIS	huis	-0.829	0.459	-1.234	0.481
F70Ruurlo	HUIS	huis	-0.684	0.417	-0.36	0.131
F70Ruurlo	HUIS	huizen	-0.947	0.411	-0.682	0.239
F70Ruurlo	KIJK	ijzer	-1.092	1.091	-1.457	0.967
F70Ruurlo	KAAS	kaas	-0.91	1.287	-0.483	1.059
F70Ruurlo	KIJK	kijken	-1.199	1.017	-1.35	1.074
F70Ruurlo	KIJK	kijken	-0.947	1.405	-1.293	1.509
F70Ruurlo	KIJK	kijken	-0.463	1.044	-0.503	1.036
F70Ruurlo	KIJK	kijken	-1.061	1.181	-1.279	1.207
F70Ruurlo	HUIS	kruipen	-1.159	-1.15	-0.238	-1.234
F70Ruurlo	HUIS	kruipen	-0.491	-1.02	-0.56	-1.053
F70Ruurlo	HUIS	kuikens	-0.218	-0.596	-0.703	-0.717

F70Ruurlo	HUIS	kuikens	-0.669	-0.181	-0.506	-0.356
F70Ruurlo	PRAAT	naar	1.337	-0.647	1.206	-0.274
F70Ruurlo	PRAAT	naar	1.487	-0.95	1.278	-1.219
F70Ruurlo	KAAS	nagel	0.729	0.772	0.746	0.679
F70Ruurlo	KAAS	nagel	1.081	0.976	0.594	0.266
F70Ruurlo	PRAAT	opstaan	1.372	-1.037	0.972	-1.13
F70Ruurlo	PRAAT	paaltje	0.81	-0.591	1.033	-0.604
F70Ruurlo	PAARD	paard	-0.67	1.08	1.132	0.529
F70Ruurlo	PAARD	paard	-0.527	0.995	1.973	-0.292
F70Ruurlo	KIJK	pijn	-1.098	1.047	-0.884	0.862
F70Ruurlo	KIJK	pijn	-0.945	0.531	-0.631	1.073
F70Ruurlo	PRAAT	praten	0.809	-1.597	1.148	-1.085
F70Ruurlo	KIJK	prijzen	-0.309	0.967	-0.199	0.967
F70Ruurlo	KAAS	raakte	2.07	0.074	2.44	-0.167
F70Ruurlo	HUIS	ruiken	-0.69	-0.829	-0.724	-1.143
F70Ruurlo	HUIS	ruiken	-0.668	-1.501	-0.671	-1.533
F70Ruurlo	PRAAT	slaan	0.044	-1.091	1.241	-1.482
F70Ruurlo	KIJK	spijkers	-0.9	0.434	-0.775	0.8
F70Ruurlo	KIJK	spijkers	-0.446	0.159	-0.441	0.284
F70Ruurlo	KIJK	spijkers	-0.352	0.489	0.106	0.937
F70Ruurlo	KAAS	staat	-0.422	1.161	-0.267	1.216
F70Ruurlo	KIJK	stijf	-0.359	1.088	-0.411	1.136
F70Ruurlo	KIJK	trouwerij	-0.828	1.047	-0.647	1.111
F70Ruurlo	HUIS	uitging	-0.92	0.135	-1.319	0.343
F71Ruurlo	PRAAT	allemaal	0.781	-1.819	0.582	-1.649
F71Ruurlo	PRAAT	blaar	-0.231	-1.708	1.275	-0.755
F71Ruurlo	HUIS	buiten	-1.252	-0.252	-1.169	0.429
F71Ruurlo	PRAAT	draad	0.255	-1.742	0.423	-1.573
F71Ruurlo	PRAAT	ga	0.578	-1.631	0.81	-1.655
F71Ruurlo	PRAAT	gaat	0.704	-1.393	1.141	-1.216
F71Ruurlo	PRAAT	gaat	0.202	-1.645	0.719	-0.951
F71Ruurlo	PRAAT	gaat	-0.177	-1.782	0.176	-1.391
F71Ruurlo	KIJK	gordijnen	2.1	-0.25	1.427	0.702
F71Ruurlo	KIJK	gordijnen	-1.026	1.113	-1.061	1.264
F71Ruurlo	KAART	graven	0.927	-0.222	1.542	-0.292
F71Ruurlo	HUIS	huis	-1.208	0.153	-0.427	0.48
F71Ruurlo	HUIS	huis	-1.209	0.449	-1.606	0.435
F71Ruurlo	HUIS	huizen	-1.792	0.344	-0.603	0.277
F71Ruurlo	KIJK	ijzer	1.307	0.387	-0.115	1.395
F71Ruurlo	KAAS	kaas	-0.133	0.547	0.656	0.755
F71Ruurlo	KAAS	kaas	-0.279	1.434	-0.724	1.554
F71Ruurlo	KIJK	kijken	-0.233	1.304	-0.799	1.099
F71Ruurlo	KIJK	kijken	-0.926	0.774	-0.807	1.004
F71Ruurlo	KIJK	kijken	-1.662	0.355	-0.919	0.847
F71Ruurlo	HUIS	kuikens	-1.012	0.06	-1.49	-0.127
F71Ruurlo	KAAS	maakte	0.232	0.808	0.635	0.89

F71Ruurlo	KAAS	nagel	2.102	-0.552	1.045	-1.043
F71Ruurlo	KAAS	nagel	0.745	0.361	1.19	0.318
F71Ruurlo	PRAAT	opstaan	0.386	-1.574	0.758	-1.183
F71Ruurlo	PAARD	paard	0.589	0.997	1.532	-0.237
F71Ruurlo	PAARD	paard	-0.171	0.745	0.799	-0.173
F71Ruurlo	PAARD	paard	-0.854	1.181	1.327	-0.131
F71Ruurlo	KIJK	pijn	-0.334	0.646	-0.347	0.776
F71Ruurlo	PRAAT	praten	1.006	-0.914	1.267	-0.925
F71Ruurlo	PRAAT	praten	1.064	-0.61	1.287	-0.938
F71Ruurlo	KIJK	prijzen	-1.181	0.63	-0.69	1.049
F71Ruurlo	HUIS	ruiken	-0.047	-1.058	0.106	-1.367
F71Ruurlo	HUIS	ruiken	-0.435	-1.325	-0.443	-1.301
F71Ruurlo	PRAAT	slaan	1.023	0.204	2.17	0.122
F71Ruurlo	KIJK	spijkers	-0.823	0.716	-0.605	0.759
F71Ruurlo	KIJK	spijkers	-1.389	0.712	-1.683	0.311
F71Ruurlo	KIJK	spijkers	-1.002	0.977	-0.458	1.094
F71Ruurlo	KAAS	staat	-0.366	1.044	-0.125	1.067
F71Ruurlo	KIJK	trouwerij	-0.197	0.873	-0.255	1.36
F71Ruurlo	HUIS	uitging	-1.226	-0.035	-1.376	0.62
F72Zelhem	PRAAT	allemaal	1.093	-1.592	0.689	-1.568
F72Zelhem	PRAAT	blaar	0.317	-1.776	1.095	-0.732
F72Zelhem	HUIS	buiten	-1.045	-0.305	-1.02	-0.141
F72Zelhem	PRAAT	daar	0.288	-0.993	0.554	-0.996
F72Zelhem	PRAAT	daar	0.117	-1.508	1.404	-0.863
F72Zelhem	PRAAT	draad	0.773	-1.293	1.192	-1.289
F72Zelhem	PRAAT	ga	0.915	-1.354	0.992	-1.365
F72Zelhem	KAAS	gaat	-0.451	0.58	-0.063	0.433
F72Zelhem	PRAAT	gaat	0.771	-1.516	1.095	-1.303
F72Zelhem	PRAAT	gaat	1.018	-1.322	0.872	-1.1
F72Zelhem	KIJK	gordijnen	-1.008	1.322	0.203	1.472
F72Zelhem	KIJK	gordijnen	-1.157	1.34	-0.159	1.281
F72Zelhem	KAART	graven	1.587	-0.712	1.419	-0.597
F72Zelhem	HUIS	huis	-0.486	-0.019	-0.573	-0.081
F72Zelhem	HUIS	huis	-1.15	-0.027	-1.026	0.25
F72Zelhem	HUIS	huis	-1.12	-0.162	-1.163	-0.208
F72Zelhem	HUIS	huizen	-0.909	-0.252	-0.802	0.026
F72Zelhem	KIJK	ijzer	-0.698	1.343	-0.656	1.3
F72Zelhem	KAART	kaart	1.869	-0.415	2.537	-0.356
F72Zelhem	KAAS	kaas	0.161	0.608	0.611	0.533
F72Zelhem	KAAS	kaas	-0.043	0.602	-0.487	0.323
F72Zelhem	KIJK	kijken	-0.605	1.276	-0.759	1.349
F72Zelhem	KIJK	kijken	-0.932	1.246	-0.99	1.333
F72Zelhem	KIJK	kijken	-1.235	1.122	-1.435	1.26
F72Zelhem	HUIS	kruipen	-0.326	-0.623	0.048	-0.718
F72Zelhem	HUIS	kruipen	-0.297	-1.359	-0.545	-1.953
F72Zelhem	HUIS	kuikens	-0.856	-0.378	-0.964	-0.582

F72Zelhem	HUIS	kuikens	-0.697	-0.446	-0.689	-0.534
F72Zelhem	KAAS	maakte	0.703	0.016	0.046	0.192
F72Zelhem	PRAAT	naar	1	-0.756	0.814	-0.876
F72Zelhem	KAAS	nagel	0.887	0.671	1.047	0.164
F72Zelhem	KAAS	nagel	1.072	0.829	1.493	0.544
F72Zelhem	PRAAT	paaltje	0.683	-0.659	1.105	-1.034
F72Zelhem	PAARD	paard	-0.244	1.16	0.94	0.49
F72Zelhem	PAARD	paard	-0.412	1.227	0.521	0.207
F72Zelhem	PAARD	paard	-0.651	1.148	0.795	-0.034
F72Zelhem	KIJK	pijn	-1.343	1.382	-0.994	1.234
F72Zelhem	KIJK	pijn	-1.065	1.025	-1.174	1.226
F72Zelhem	PRAAT	praten	1.065	-1.14	1.197	-1.266
F72Zelhem	KIJK	prijzen	-1.055	1.168	-0.72	1.205
F72Zelhem	KAAS	raakte	1.789	-0.438	2.297	-0.416
F72Zelhem	KIJK	rijden	-0.365	1.07	-1.181	1.334
F72Zelhem	KIJK	rijden	-0.893	1.063	-1.362	1.183
F72Zelhem	HUIS	ruiken	-0.809	-0.462	-0.571	-0.507
F72Zelhem	HUIS	ruiken	-0.583	-1.395	-0.575	-1.776
F72Zelhem	PRAAT	slaan	1.248	-1.301	1.458	-1.317
F72Zelhem	PRAAT	slaan	1.1	-1.357	1.561	-1.381
F72Zelhem	KIJK	spijkers	-0.717	0.834	-0.773	1.063
F72Zelhem	KIJK	spijkers	-0.847	1.141	-0.915	1.085
F72Zelhem	KIJK	spijkers	-0.766	0.449	-0.541	1.075
F72Zelhem	KAAS	staat	-0.494	0.235	-0.038	0.169
F72Zelhem	KIJK	stijf	-1.07	1.296	-0.979	1.259
F72Zelhem	KIJK	trouwerij	-0.312	0.802	-0.535	0.984
F72Zelhem	HUIS	uitging	-1.02	-0.31	-0.926	-0.179
F72Zelhem	KAART	vaak	1.32	-0.532	2.516	-0.354
M26Uift	PRAAT	allemaal	0.106	-2.148	0.168	-1.865
M26Uift	PRAAT	blaar	1.469	-0.476	1.187	-0.357
M26Uift	HUIS	buiten	-1.023	0.166	-1.034	0.09
M26Uift	PRAAT	daar	-0.211	-0.931	0.207	-1.331
M26Uift	PRAAT	draad	1.151	-0.297	1.36	-0.632
M26Uift	PRAAT	ga	0.419	-1.336	1.189	-1.297
M26Uift	PAARD	gaarne	1.316	-0.623	0.744	-0.286
M26Uift	KIJK	gordijnen	-1.208	1.157	-0.559	1.303
M26Uift	KIJK	gordijnen	-1.145	1.133	-0.33	1.177
M26Uift	KAART	graven	0.637	-1.004	0.647	-1.362
M26Uift	HUIS	huis	-1.061	0.44	-0.996	0.45
M26Uift	HUIS	huizen	-1.067	0.479	-0.97	0.269
M26Uift	KIJK	ijzer	0.886	0.154	-0.352	0.786
M26Uift	KAART	kaart	1.17	0.096	1.727	-0.403
M26Uift	KAAS	kaas	1.493	-1.131	1.465	-1.349
M26Uift	KAAS	kaas	1.208	0.006	1.494	-0.502
M26Uift	KIJK	kijken	-1.013	0.929	-1.107	1.158
M26Uift	KIJK	kijken	-1.308	0.941	-1.503	1.531

M26Uift	KIJK	kijken	-1.076	1.06	-1.074	1.453
M26Uift	HUIS	kruipen	-0.765	0.055	-0.795	-0.373
M26Uift	HUIS	kruipen	-0.714	0.531	-0.919	0.45
M26Uift	HUIS	kuikens	0.447	-0.098	-0.148	-0.257
M26Uift	HUIS	kuikens	-0.881	0.393	-1.336	0.54
M26Uift	KAAS	maakte	1.573	-0.499	1.59	-0.549
M26Uift	KAAS	nagel	1.353	0.469	0.615	0.464
M26Uift	PRAAT	opstaan	1	-1.227	1.085	-1.302
M26Uift	PRAAT	paaltje	0.924	-1.438	0.84	-1.592
M26Uift	PAARD	paard	-0.252	1.028	0.772	-0.206
M26Uift	KIJK	pijn	-1.283	1.42	-1.669	1.8
M26Uift	KIJK	pijn	-1.42	1.276	-1.063	1.277
M26Uift	PRAAT	praten	0.365	-1.42	0.967	-1.297
M26Uift	PRAAT	praten	0.49	-1.516	0.623	-1.341
M26Uift	KIJK	prijzen	-0.759	0.781	-0.88	0.872
M26Uift	KAAS	raakte	1.461	-0.398	1.405	-0.403
M26Uift	HUIS	ruiken	-0.556	-0.523	-0.658	0.337
M26Uift	HUIS	ruiken	-0.337	-0.186	-0.767	0.175
M26Uift	PRAAT	slaan	0.544	-1.303	1.064	-1.534
M26Uift	PRAAT	slaan	0.213	-1.46	0.556	-1.296
M26Uift	KIJK	spijkers	-1.058	1.056	-1.16	0.947
M26Uift	KIJK	spijkers	-1.068	1.354	-1.135	1.451
M26Uift	KIJK	spijkers	-0.933	0.918	-0.811	1.245
M26Uift	KAAS	staat	-0.31	1.121	-0.028	1.166
M26Uift	KIJK	stijf	0.617	0.127	-0.19	1.703
M26Uift	KIJK	trouwerij	0.096	0.305	-0.776	0.936
M26Uift	HUIS	uitging	-0.865	-0.15	-0.898	0.12
M26Uift	KAART	vaak	1.271	-0.979	1.557	-0.422
M33Bredevoort	PRAAT	allemaal	-0.599	-1.982	0.035	-2.03
M33Bredevoort	PRAAT	blaar	1.193	-0.725	1.76	-0.491
M33Bredevoort	HUIS	buiten	-1.253	0.074	-1.088	0.883
M33Bredevoort	PRAAT	daar	0.103	-1.344	1.063	-0.967
M33Bredevoort	PRAAT	draad	0.12	0.219	1.61	-0.131
M33Bredevoort	PRAAT	ga	0.576	-1.799	0.435	-1.711
M33Bredevoort	PRAAT	gaan	0.15	-1.801	-0.031	-1.294
M33Bredevoort	PAARD	gaarne	-0.759	1.068	0.92	-0.172
M33Bredevoort	KAAS	gaat	-0.521	1.495	-0.676	1.548
M33Bredevoort	KIJK	gordijnen	-1.313	1.077	-1.214	1.36
M33Bredevoort	KAART	graven	0.271	0.371	1.541	-0.47
M33Bredevoort	HUIS	huis	-1.364	0.433	-0.92	0.761
M33Bredevoort	HUIS	huizen	-1.387	0.364	-0.82	0.453
M33Bredevoort	KIJK	ijzer	-1.466	1.039	-1.259	1.184
M33Bredevoort	KAART	kaart	1.112	0.049	2.02	-0.641
M33Bredevoort	KAAS	kaas	1.425	-0.583	0.489	-0.561
M33Bredevoort	KAAS	kaas	1.068	0.078	1.507	-0.595
M33Bredevoort	KIJK	kijken	0.356	0.062	-0.492	1.212

M33Bredevoort	KIJK	kijken	-1.104	1.231	-0.631	1.499
M33Bredevoort	HUIS	kruipen	0.343	-0.957	0.117	0.084
M33Bredevoort	HUIS	kruipen	-0.463	-1.886	-0.026	-1.84
M33Bredevoort	HUIS	kuikens	-0.892	0.128	-0.994	-0.224
M33Bredevoort	KAAS	maakte	0.873	-0.777	1.057	-0.588
M33Bredevoort	KAAS	nagel	1.379	-0.059	1.521	-0.664
M33Bredevoort	KAAS	nagel	1.106	-0.194	0.964	-0.799
M33Bredevoort	PRAAT	opstaan	0.651	-1.129	0.616	-1.742
M33Bredevoort	PRAAT	paaltje	0.92	-1.147	0.814	-1.676
M33Bredevoort	PAARD	paard	-0.956	1.059	0.813	0.017
M33Bredevoort	KIJK	pijn	0.552	-0.388	-0.146	0.708
M33Bredevoort	KIJK	pijn	-1.397	1.167	-1.243	1.304
M33Bredevoort	PRAAT	praten	0.877	0.086	1.164	-0.48
M33Bredevoort	PRAAT	praten	0.335	0.215	1.638	-0.422
M33Bredevoort	KIJK	prijzen	-0.657	1.787	-1.147	1.563
M33Bredevoort	KAAS	raakte	0.327	0.188	1.312	-0.397
M33Bredevoort	KIJK	rijden	-0.352	0.538	-1.077	1.013
M33Bredevoort	HUIS	ruiken	0.273	-1.108	0.266	-0.434
M33Bredevoort	HUIS	ruiken	-1.007	-0.088	-1.419	-0.605
M33Bredevoort	PRAAT	slaan	1.271	-0.539	1.728	-0.696
M33Bredevoort	KIJK	spijkers	0.541	-0.344	-0.161	0.836
M33Bredevoort	KIJK	spijkers	-0.722	0.981	-0.809	1.063
M33Bredevoort	KIJK	spijkers	-0.947	0.828	-1.315	1.167
M33Bredevoort	KAAS	staat	-0.971	1.103	-0.869	1.04
M33Bredevoort	KIJK	stijf	-1.107	1.192	-1.44	1.092
M33Bredevoort	KIJK	trouwerij	-0.369	1.039	-1.049	1.519
M33Bredevoort	HUIS	uitging	-1.129	-0.664	-1.013	0.266
M33Bredevoort	KAART	vaak	0.539	-0.782	0.819	-0.516
M35Hummelo	PRAAT	allemaal	0.89	-0.935	0.894	-1.151
M35Hummelo	PRAAT	blaar	1.115	-0.528	1.73	-0.393
M35Hummelo	HUIS	buiten	-0.461	-0.188	-0.894	0.191
M35Hummelo	PRAAT	daar	0.159	-1.057	0.364	-0.82
M35Hummelo	PRAAT	daar	0.294	-1.466	0.779	-0.836
M35Hummelo	PRAAT	draad	0.683	-1.182	0.715	-1.053
M35Hummelo	PRAAT	ga	0.321	-1.201	0.713	-1.198
M35Hummelo	PRAAT	gaat	0.779	-1.341	0.665	-1.263
M35Hummelo	PRAAT	gaat	0.474	-1.156	0.74	-1.216
M35Hummelo	KIJK	gordijnen	-0.975	1.154	-1.116	1.103
M35Hummelo	KIJK	gordijnen	-0.935	1.229	-1.114	1.355
M35Hummelo	KAART	graven	1.455	-0.489	1.305	-0.794
M35Hummelo	HUIS	huis	-0.913	-0.023	-0.948	0.132
M35Hummelo	HUIS	huis	-1.032	0.352	-0.951	0.427
M35Hummelo	HUIS	huizen	-1.1	0.688	-1.039	0.696
M35Hummelo	KIJK	ijzer	0.094	2.091	-0.811	1.717
M35Hummelo	KAART	kaart	1.493	-0.126	1.519	-0.122
M35Hummelo	KAAS	kaas	-0.795	0.941	-0.526	0.531

M35Hummelo	KAAS	kaas	-0.759	1.44	-0.417	1.175
M35Hummelo	KIJK	kijken	-1.079	1.79	-0.839	1.69
M35Hummelo	KIJK	kijken	-0.476	0.93	-0.766	0.375
M35Hummelo	HUIS	kruipen	-0.207	-1.101	-0.565	-1.3
M35Hummelo	HUIS	kruipen	-0.475	-1.174	-0.391	-1.357
M35Hummelo	HUIS	kuikens	-0.57	0.104	-0.641	0.17
M35Hummelo	HUIS	kuikens	-1.364	-0.019	-1.012	-0.103
M35Hummelo	PRAAT	naar	0.67	-0.661	0.001	-0.732
M35Hummelo	KAAS	nagel	1.91	-0.302	1.969	-0.502
M35Hummelo	KAAS	nagel	2.087	-0.089	0.879	0.143
M35Hummelo	KAAS	nagel	2.173	-0.203	2.116	-0.364
M35Hummelo	PRAAT	opstaan	0.674	-1.018	-0.112	-1.082
M35Hummelo	PAARD	paard	-0.48	1.207	0.384	0.359
M35Hummelo	PAARD	paard	-0.615	1.48	0.565	0.587
M35Hummelo	KIJK	pijn	-1.018	1.674	-0.987	1.729
M35Hummelo	KIJK	pijn	-1.076	1.086	-0.671	1.019
M35Hummelo	PRAAT	praten	0.991	-0.791	0.973	-0.931
M35Hummelo	KIJK	rijden	0.83	0.802	0.516	1.304
M35Hummelo	HUIS	ruiken	-0.668	-1.076	-0.627	-1.316
M35Hummelo	HUIS	ruiken	-0.402	-1.322	-0.852	-1.487
M35Hummelo	PRAAT	slaan	0.68	-1.091	1.005	-1.281
M35Hummelo	KIJK	spijkers	-1.155	1.028	-1.066	1.024
M35Hummelo	KIJK	spijkers	-0.833	1.019	-0.764	1.049
M35Hummelo	KAAS	staat	1.012	-0.459	1.04	-0.383
M35Hummelo	KIJK	stijf	-1.162	1.309	-1.313	1.192
M35Hummelo	HUIS	uit	-1.223	0.336	-0.879	0.938
M35Hummelo	HUIS	uitgang	-0.933	0.05	-0.916	0.096
M35Hummelo	KAART	vaak	1.429	-0.803	1.84	-0.223
M35Ruurlo	PRAAT	allemaal	0.846	-1.696	1.186	-1.76
M35Ruurlo	PRAAT	blaar	-0.081	-1.322	1.217	-1.142
M35Ruurlo	HUIS	buiten	1.63	0.769	0.353	-0.054
M35Ruurlo	PRAAT	daar	0.724	-0.718	0.673	-0.576
M35Ruurlo	PRAAT	draad	0.741	-0.734	1.304	-0.748
M35Ruurlo	PRAAT	gaan	1.058	-1.332	1.199	-1.533
M35Ruurlo	KAAS	gaat	-0.646	1.347	-0.631	0.808
M35Ruurlo	PRAAT	gaat	1.153	-1.085	1.067	-0.463
M35Ruurlo	KIJK	gordijnen	-1.657	1.623	-0.92	0.788
M35Ruurlo	KIJK	gordijnen	-1.49	0.624	-0.853	0.743
M35Ruurlo	KAART	graven	1.654	-0.117	1.485	-0.218
M35Ruurlo	HUIS	huis	-0.82	0.094	-0.371	0.131
M35Ruurlo	HUIS	huis	-0.758	-0.311	0.199	0.311
M35Ruurlo	HUIS	huizen	-0.777	0.025	-0.014	0.453
M35Ruurlo	KIJK	ijzer	-1.364	1.214	-0.219	0.503
M35Ruurlo	KAAS	kaas	-0.283	1.44	0.006	0.974
M35Ruurlo	KAAS	kaas	-0.873	1.282	-0.106	0.98
M35Ruurlo	KIJK	kijken	-1.409	0.98	-0.821	1.005

M35Ruurlo	KIJK	kijken	-1.071	0.971	-0.948	0.702
M35Ruurlo	HUIS	kruipen	-0.132	-1.153	-0.132	-1.621
M35Ruurlo	HUIS	kruipen	-0.01	-1.348	-0.002	-1.458
M35Ruurlo	HUIS	kuikens	-1.261	0.013	-1.011	0.154
M35Ruurlo	HUIS	kuikens	-0.599	0.042	-1.074	-0.573
M35Ruurlo	KAAS	maakte	1.38	-0.554	2.034	-0.501
M35Ruurlo	KAAS	nagel	0.723	0.726	0.894	0.861
M35Ruurlo	KAAS	nagel	0.288	1.192	0.514	0.977
M35Ruurlo	PRAAT	opstaan	1.228	-0.837	1.344	-0.678
M35Ruurlo	PRAAT	paaltje	0.849	-1.916	0.945	-1.896
M35Ruurlo	PAARD	paard	0.225	1.082	0.869	0.16
M35Ruurlo	PAARD	paard	-0.493	1.332	1.059	-0.292
M35Ruurlo	PAARD	paard	-0.215	1.337	1.131	0.325
M35Ruurlo	KIJK	pijn	-1.335	1.074	-0.813	0.793
M35Ruurlo	KIJK	pijn	-1.478	1.102	-0.488	0.981
M35Ruurlo	PRAAT	praten	1.442	-1.186	1.578	-1.199
M35Ruurlo	PRAAT	praten	0.903	-1.145	1.52	-0.91
M35Ruurlo	KIJK	prijzen	-0.39	0.801	-1.861	0.568
M35Ruurlo	KAAS	raakte	1.043	0.29	1.412	0.171
M35Ruurlo	KIJK	rijden	-0.245	0.377	-0.934	1.062
M35Ruurlo	HUIS	ruiken	-0.706	-1.445	0.125	-1.911
M35Ruurlo	HUIS	ruiken	0.618	-1.722	-0.108	-1.679
M35Ruurlo	PRAAT	slaan	0.997	-1.047	1.166	-1.398
M35Ruurlo	KIJK	spijkers	-1.106	0.595	-1.11	0.625
M35Ruurlo	KIJK	spijkers	-1.196	0.553	-1.316	0.688
M35Ruurlo	KIJK	spijkers	-1.458	0.594	-1.353	0.652
M35Ruurlo	KAAS	staat	-0.449	0.818	-0.408	0.608
M35Ruurlo	KIJK	stijf	-1.234	0.933	-1.307	0.954
M35Ruurlo	KIJK	trouwerij	0.855	0.896	-0.202	0.901
M35Ruurlo	HUIS	uitging	-0.913	-1.069	-0.19	-0.66
M37Ruurlo	PRAAT	allemaal	0.688	-1.002	0.414	-1.565
M37Ruurlo	PRAAT	blaar	1.009	-0.971	1.266	-0.673
M37Ruurlo	HUIS	bruiloft	0.472	-0.747	0.165	-0.86
M37Ruurlo	HUIS	buiten	-0.319	-0.322	-0.077	-0.145
M37Ruurlo	PRAAT	daar	-0.01	-1.429	1.179	-0.798
M37Ruurlo	PRAAT	draad	1.271	-1.325	1.578	-1.636
M37Ruurlo	PRAAT	ga	0.812	-0.969	1.226	-1.107
M37Ruurlo	PRAAT	gaat	1.069	-1.077	1.218	-0.88
M37Ruurlo	KAAS	gaat	-0.575	1.042	-0.227	0.764
M37Ruurlo	PRAAT	gaat	1.004	-1.279	1.723	-1.279
M37Ruurlo	KIJK	gordijnen	-1.001	1.294	-0.773	0.976
M37Ruurlo	KIJK	gordijnen	-0.813	1.539	-0.716	1.316
M37Ruurlo	KAART	graven	1.486	-0.292	1.453	-0.542
M37Ruurlo	HUIS	huis	-1.307	-0.043	-0.994	0.356
M37Ruurlo	HUIS	huis	-0.823	-0.006	-0.343	0.251
M37Ruurlo	HUIS	huizen	-0.776	0.067	-0.392	0.332



M37Ruurlo	KIJK	ijzer	-0.765	1.61	-0.667	1.197
M37Ruurlo	PRAAT	jaar	0.111	-1.517	1.319	-0.79
M37Ruurlo	KAART	kaart	1.819	-0.28	1.942	-0.2
M37Ruurlo	KAAS	kaas	0.563	0.927	-0.268	-0.116
M37Ruurlo	KAAS	kaas	-0.533	1.231	-0.381	0.713
M37Ruurlo	KIJK	kijken	-1.091	1.307	-1.236	1.531
M37Ruurlo	KIJK	kijken	-0.903	1.114	-0.656	1.192
M37Ruurlo	KIJK	kijken	-0.965	1.114	-0.683	0.973
M37Ruurlo	KIJK	kijken	-1.265	1.058	-0.985	1.191
M37Ruurlo	HUIS	kruipen	-0.122	-1.464	-1.386	-1.44
M37Ruurlo	HUIS	kruipen	-0.13	-1.6	0.141	-1.571
M37Ruurlo	HUIS	kuikens	-1.22	0.042	-1.672	0.063
M37Ruurlo	HUIS	kuikens	-0.928	-0.079	-0.951	-0.136
M37Ruurlo	KIJK	maakte	-0.241	0.26	-0.406	0.704
M37Ruurlo	KAAS	nagel	0.009	0.564	1.059	0.235
M37Ruurlo	KAAS	nagel	0.188	0.939	0.804	0.378
M37Ruurlo	PRAAT	opstaan	1.805	-1.369	1.147	-0.977
M37Ruurlo	PRAAT	paaltje	0.355	-0.174	1.42	-1.372
M37Ruurlo	PAARD	paard	-0.499	0.949	0.701	-0.147
M37Ruurlo	PAARD	paard	-0.504	1.147	1.442	-0.079
M37Ruurlo	KIJK	pijn	-1.275	1.027	-0.549	0.857
M37Ruurlo	KIJK	pijn	-1.302	1.399	-0.193	1.239
M37Ruurlo	PRAAT	praten	0.618	-1.506	1.035	-1.266
M37Ruurlo	PRAAT	praten	-0.613	-1.353	0.998	-1.4
M37Ruurlo	KIJK	prijzen	-0.62	1.101	-1.14	1.347
M37Ruurlo	KAAS	raakte	1.695	-0.409	2.161	-0.384
M37Ruurlo	KIJK	rijden	-0.161	0.36	-1.178	0.952
M37Ruurlo	KIJK	rijden	-0.478	0.995	-1.036	1.273
M37Ruurlo	HUIS	ruiken	0.015	-1.344	-0.169	-1.679
M37Ruurlo	HUIS	ruiken	-0.279	-0.71	-0.474	-0.572
M37Ruurlo	PRAAT	slaan	1.024	-1.406	1.299	-1.301
M37Ruurlo	PRAAT	slaan	0.971	-1.127	0.882	-1.236
M37Ruurlo	KIJK	spijkers	-0.723	0.783	-1.354	1.335
M37Ruurlo	KIJK	spijkers	-0.66	0.646	-1.048	0.746
M37Ruurlo	KIJK	spijkers	-0.485	0.683	-0.159	1.104
M37Ruurlo	KAAS	staat	-0.72	1.22	-0.129	0.517
M37Ruurlo	KIJK	stijf	-1.198	0.985	-1.107	1.017
M37Ruurlo	HUIS	uit	-0.746	0.181	-0.857	0.465
M37Ruurlo	HUIS	uitging	-0.623	-0.116	-1.055	0.385
M37Ruurlo	KAART	vaak	2.093	-0.551	2.281	-0.381
M38Ruurlo	PRAAT	allemaal	0.484	-2.167	0.798	-1.967
M38Ruurlo	PRAAT	blaar	0.51	-1.437	1.392	-0.829
M38Ruurlo	HUIS	buiten	-0.767	0.02	-0.552	0.467
M38Ruurlo	PRAAT	draad	0.852	-1.238	1.109	-0.889
M38Ruurlo	PRAAT	ga	0.932	-1.531	1.387	-1.27
M38Ruurlo	PAARD	gaarne	0.837	0.77	0.44	0.269

M38Ruurlo	KAAS	gaat	-0.559	0.952	-0.328	0.734
M38Ruurlo	PRAAT	gaat	0.699	-1.594	0.314	-1.063
M38Ruurlo	PRAAT	gaat	0.838	-1.272	1.124	-0.926
M38Ruurlo	KIJK	gordijnen	-0.932	0.866	-0.617	1.324
M38Ruurlo	KIJK	gordijnen	-0.909	0.934	-0.661	1.161
M38Ruurlo	KAART	graven	1.08	-0.173	1.429	-0.622
M38Ruurlo	HUIS	huis	-0.889	0.506	-0.892	0.559
M38Ruurlo	HUIS	huizen	-0.956	0.514	-0.773	0.39
M38Ruurlo	KIJK	ijzer	-1.055	1.75	-0.915	0.944
M38Ruurlo	KAART	kaart	2.163	-0.346	1.873	-0.204
M38Ruurlo	KAAS	kaas	0.54	0.791	0.669	0.402
M38Ruurlo	KAAS	kaas	0.244	0.643	0.198	0.384
M38Ruurlo	KIJK	kijken	-0.788	0.993	-0.942	1.147
M38Ruurlo	KIJK	kijken	-0.921	1.1	-0.896	1.201
M38Ruurlo	KIJK	kijken	-0.978	1.175	-1.079	1.345
M38Ruurlo	KIJK	kijken	-1.277	1.103	-1.364	1.187
M38Ruurlo	HUIS	kruipen	-0.519	-1.6	-0.578	-1.746
M38Ruurlo	HUIS	kruipen	-0.805	-1.71	-0.81	-2.04
M38Ruurlo	HUIS	kuikens	-0.94	-0.212	-1.116	-0.427
M38Ruurlo	HUIS	kuikens	-0.903	0.086	-0.725	-0.317
M38Ruurlo	KAAS	maakte	1.841	-0.597	2.424	-0.411
M38Ruurlo	KAAS	nagel	0.393	0.909	0.883	0.409
M38Ruurlo	KAAS	nagel	0.428	0.963	0.431	-0.207
M38Ruurlo	PRAAT	opstaan	1.051	-1.07	-0.012	-1.247
M38Ruurlo	PRAAT	paaltje	0.566	-0.916	0.656	-1.385
M38Ruurlo	PAARD	paard	-0.152	0.803	1.213	0.127
M38Ruurlo	PAARD	paard	-0.23	0.815	1.351	0.187
M38Ruurlo	PAARD	paard	-0.423	0.929	1.214	0.268
M38Ruurlo	KIJK	pijn	-0.808	0.891	-0.737	0.894
M38Ruurlo	KIJK	pijn	-0.707	1.147	-0.305	1.499
M38Ruurlo	PRAAT	praten	0.973	-1.131	1.06	-1.061
M38Ruurlo	PRAAT	praten	0.829	-1.136	0.902	-1.217
M38Ruurlo	KIJK	prijzen	-0.581	0.924	-0.523	0.892
M38Ruurlo	KAAS	raakte	1.322	-0.342	2.089	-0.277
M38Ruurlo	HUIS	ruiken	-0.615	-1.276	-0.674	-1.44
M38Ruurlo	HUIS	ruiken	-0.697	-1.046	-0.803	-1.112
M38Ruurlo	PRAAT	slaan	1.03	-1.363	1.772	-1.217
M38Ruurlo	KIJK	spijkers	-0.949	0.844	-0.904	0.458
M38Ruurlo	KIJK	spijkers	-0.823	0.716	-0.717	1.031
M38Ruurlo	KIJK	spijkers	-0.904	0.627	-0.779	0.928
M38Ruurlo	KAAS	staat	-0.688	0.69	-0.714	0.563
M38Ruurlo	KIJK	stijf	-1.141	0.754	-1.583	1.133
M38Ruurlo	HUIS	uit	-0.89	0.51	-0.915	0.7
M38Ruurlo	HUIS	uitging	-1.015	0.265	-1.042	0.333
M38Ruurlo	KAART	vaak	1.589	-0.551	1.844	-0.341
M42Zelhem	PRAAT	allemaal	1.393	-1.721	1.037	-1.543

M42Zelhem	PRAAT	blaar	1.234	-1.301	1.835	-0.969
M42Zelhem	HUIS	buiten	-0.827	-0.15	-0.957	0.544
M42Zelhem	PRAAT	daar	0.888	-1.384	1.141	-1.044
M42Zelhem	PRAAT	draad	1.164	-1.32	1.325	-1.178
M42Zelhem	PRAAT	ga	1.375	-1.402	1.566	-1.381
M42Zelhem	PAARD	gaarne	-1.012	1.031	1.019	-0.084
M42Zelhem	KAAS	gaat	-0.525	1.11	-0.07	0.453
M42Zelhem	PRAAT	gaat	0.601	-1.603	0.861	-1.299
M42Zelhem	PRAAT	gaat	0.525	-1.32	1.013	-1.153
M42Zelhem	KIJK	gordijnen	-0.945	1.458	-1.026	1.499
M42Zelhem	KIJK	gordijnen	-0.769	0.998	-0.886	0.936
M42Zelhem	KAART	graven	1.534	-0.386	1.602	-0.872
M42Zelhem	HUIS	huis	-0.567	0.156	-0.894	0.327
M42Zelhem	HUIS	huis	-0.834	-0.103	-0.932	0.267
M42Zelhem	HUIS	huis	-0.779	-0.09	-1.005	0.46
M42Zelhem	HUIS	huizen	-0.901	-0.081	-0.988	0.152
M42Zelhem	KIJK	ijzer	-1.272	1.256	-0.821	0.368
M42Zelhem	PRAAT	jaar	0.646	-1.102	1.343	-0.994
M42Zelhem	KAART	kaart	1.316	0.066	1.767	-0.459
M42Zelhem	KAAS	kaas	0.655	0.499	0.609	0.118
M42Zelhem	KAAS	kaas	0.581	0.699	0.784	0.147
M42Zelhem	KIJK	kijken	-0.374	1.021	-0.363	1.005
M42Zelhem	KIJK	kijken	-0.251	0.973	-0.036	1.081
M42Zelhem	KIJK	kijken	-0.956	1.207	-1.122	1.31
M42Zelhem	KIJK	kijken	-0.992	1.038	-0.69	1.199
M42Zelhem	HUIS	kruipen	-0.474	-1.247	-0.497	-2.175
M42Zelhem	HUIS	kruipen	-0.509	-1.435	-0.508	-1.804
M42Zelhem	HUIS	kuikens	-1.005	-0.314	-1.122	-0.187
M42Zelhem	HUIS	kuikens	-0.942	0.035	-0.918	-0.316
M42Zelhem	KAAS	maakte	1.064	0.432	0.655	0.493
M42Zelhem	PRAAT	naar	0.965	-1.386	1.057	-1.197
M42Zelhem	KAAS	nagel	0.324	0.372	0.966	-0.052
M42Zelhem	PRAAT	opstaan	1.298	-1.218	1.578	-1.296
M42Zelhem	PRAAT	paaltje	0.556	-0.675	0.935	-1.317
M42Zelhem	PAARD	paard	-0.497	0.657	1.646	-0.222
M42Zelhem	PAARD	paard	-0.087	0.716	1.062	-0.099
M42Zelhem	PAARD	paard	0.007	0.708	1.255	-0.129
M42Zelhem	KIJK	pijn	-0.832	1.003	-0.892	1.423
M42Zelhem	KIJK	pijn	-1.073	1.214	-0.852	1.304
M42Zelhem	KIJK	prijzen	-1.251	1.152	-0.827	1.315
M42Zelhem	KAAS	raakte	1.532	-0.326	1.703	-0.27
M42Zelhem	KIJK	rijden	-0.729	0.53	-1.106	1.384
M42Zelhem	HUIS	ruiken	-0.52	-0.262	-0.706	-0.279
M42Zelhem	HUIS	ruiken	-0.343	-1.423	-0.511	-1.877
M42Zelhem	PRAAT	slaan	1.278	-1.42	1.828	-1.468
M42Zelhem	KIJK	spijkers	-0.834	0.574	-0.97	0.93

M42Zelhem	KIJK	spijkers	-0.979	0.871	-0.979	1.274
M42Zelhem	KIJK	spijkers	-0.821	1.136	-0.842	1.547
M42Zelhem	KAAS	staat	-0.651	0.817	-0.294	0.45
M42Zelhem	KIJK	stijf	-1.035	1.498	-1.005	1.371
M42Zelhem	KIJK	trouwerij	-0.665	0.829	-0.132	0.451
M42Zelhem	HUIS	uit	-0.963	-0.016	-0.946	0.258
M42Zelhem	HUIS	uitging	-1.083	0.028	-1.162	0.475
M42Zelhem	KAART	vaak	1.286	-0.864	1.55	-0.413
M43Silvolde	PRAAT	allemaal	0.008	-1.946	-0.301	-2.066
M43Silvolde	PRAAT	blaar	1.477	-0.374	2.231	-0.319
M43Silvolde	HUIS	buiten	-1.085	-0.165	-0.933	0.046
M43Silvolde	PRAAT	daar	-0.174	-1.384	0.058	-1.292
M43Silvolde	PRAAT	daar	-0.304	-0.486	0.562	-0.626
M43Silvolde	PRAAT	draad	0.738	-1.09	0.872	-1.167
M43Silvolde	PRAAT	ga	0.281	-1.438	0.656	-1.529
M43Silvolde	PRAAT	gaan	0.534	-1.44	1.695	-1.662
M43Silvolde	PRAAT	gaan	0.307	-1.318	0.106	-1.177
M43Silvolde	PAARD	gaarne	1.403	-0.149	1.215	-0.475
M43Silvolde	KAAS	gaat	-0.63	1.199	-0.271	0.823
M43Silvolde	KIJK	gordijnen	0.71	0.176	1.044	0.591
M43Silvolde	KIJK	gordijnen	-1.274	1.083	-0.955	1.097
M43Silvolde	KAART	graven	1.126	-0.443	1.514	-0.556
M43Silvolde	HUIS	huis	-1.058	0.108	-0.923	0.193
M43Silvolde	HUIS	huis	-1.24	0.298	-0.928	0.109
M43Silvolde	HUIS	huizen	-1.056	-0.211	-0.855	0.297
M43Silvolde	KIJK	ijzer	-0.996	1.35	-0.977	1.32
M43Silvolde	PRAAT	jaar	-0.121	-1.316	0.117	-0.998
M43Silvolde	KAART	kaart	0.544	-0.152	1.619	-0.379
M43Silvolde	KAAS	kaas	1.391	-0.303	1.791	-0.286
M43Silvolde	KAAS	kaas	1.619	-0.056	2.055	-0.234
M43Silvolde	KIJK	kijken	-0.811	1.309	-0.671	1.44
M43Silvolde	KIJK	kijken	-1.235	1.168	-1.316	1.427
M43Silvolde	HUIS	kruipen	-0.767	0.09	-0.691	0.093
M43Silvolde	HUIS	kuikens	-0.885	-0.32	-1.241	-0.476
M43Silvolde	HUIS	kuikens	-0.567	0.106	-0.5	-0.2
M43Silvolde	KAAS	maakte	1.254	-0.166	1.505	-0.033
M43Silvolde	KAAS	nagel	0.513	-0.594	0.851	-0.724
M43Silvolde	KAAS	nagel	2.078	-0.08	1.771	-0.373
M43Silvolde	PRAAT	opstaan	1.207	-0.427	0.907	-0.574
M43Silvolde	PRAAT	paaltje	0.792	-2.154	0.468	-2.286
M43Silvolde	PAARD	paard	-0.568	1.244	0.364	0.462
M43Silvolde	PAARD	paard	-0.634	1.339	0.534	0.467
M43Silvolde	PAARD	paard	-0.655	1.234	0.495	0.254
M43Silvolde	KIJK	pijn	-1.086	1.375	-0.876	1.199
M43Silvolde	KIJK	pijn	-1.228	1.181	-0.918	1.389
M43Silvolde	PRAAT	praten	0.494	-1.357	0.686	-1.299

M43Silvolde	KIJK	prijzen	-0.655	1.11	-1.076	1.108
M43Silvolde	KIJK	rijden	-0.463	0.765	-0.89	1.266
M43Silvolde	HUIS	ruiken	-0.986	-0.189	-0.606	-0.091
M43Silvolde	PRAAT	slaan	0.506	-1.518	0.214	-1.651
M43Silvolde	KIJK	spijkers	-0.519	1.033	-0.454	1.366
M43Silvolde	KIJK	spijkers	-0.89	0.946	-0.778	1.301
M43Silvolde	KIJK	spijkers	-0.695	1.053	-0.454	1.506
M43Silvolde	KAAS	staat	-0.438	0.638	-0.311	0.733
M43Silvolde	KIJK	stijf	-1.038	1.018	-0.89	1.281
M43Silvolde	KIJK	trouwerij	-0.281	0.827	-0.572	0.819
M43Silvolde	HUIS	uitging	-1.104	-0.365	-1.721	-0.479
M43Silvolde	KAART	vaak	1.363	-0.614	1.876	-0.231
M48Zelhem	PRAAT	allemaal	0.814	-1.545	0.219	-1.411
M48Zelhem	PRAAT	blaar	-0.32	-1.496	1.173	-1.382
M48Zelhem	HUIS	buiten	-0.551	-0.311	-0.926	-0.096
M48Zelhem	PRAAT	daar	0.233	-0.673	0.581	-0.754
M48Zelhem	PRAAT	draad	0.797	-1.042	1.113	-1.046
M48Zelhem	PRAAT	ga	0.844	-0.943	1.056	-0.963
M48Zelhem	KAAS	gaat	-0.492	1.002	-0.482	0.882
M48Zelhem	PRAAT	gaat	0.75	-1.016	1.119	-0.827
M48Zelhem	KIJK	gordijnen	-0.535	0.845	-0.724	1.554
M48Zelhem	KAART	graven	0.764	-0.133	1.416	-0.731
M48Zelhem	HUIS	huis	-0.925	0.343	-1.465	0.501
M48Zelhem	HUIS	huis	-0.675	0.196	-1.082	0.055
M48Zelhem	HUIS	huizen	-0.662	-0.069	-1.306	-0.059
M48Zelhem	KIJK	ijzer	-0.819	1.898	-1.539	1.49
M48Zelhem	KAART	kaart	1.292	0.045	1.744	-0.317
M48Zelhem	KAAS	kaas	0.404	0.74	0.546	0.303
M48Zelhem	KAAS	kaas	0.073	0.886	0.483	0.652
M48Zelhem	KIJK	kijken	-1.228	1.364	-1.329	1.465
M48Zelhem	KIJK	kijken	-1.262	1.128	-1.416	1.104
M48Zelhem	HUIS	kruipen	-0.912	-1.165	-1.14	-1.611
M48Zelhem	HUIS	kruipen	-0.468	-0.56	-0.908	-0.56
M48Zelhem	HUIS	kuikens	-0.928	0.226	-1.468	-0.118
M48Zelhem	KAAS	maakte	2.058	-0.314	2.118	-0.127
M48Zelhem	KAAS	nagel	0.474	1.199	0.637	0.537
M48Zelhem	KAAS	nagel	1.305	0.525	0.534	0.511
M48Zelhem	PRAAT	opstaan	0.491	-0.791	1.158	-1.007
M48Zelhem	PRAAT	paaltje	0.66	-1.218	0.695	-1.503
M48Zelhem	PAARD	paard	-0.552	1.251	1.045	0.406
M48Zelhem	PAARD	paard	-0.534	1.006	0.417	0.436
M48Zelhem	PAARD	paard	-0.745	0.97	0.636	0.318
M48Zelhem	KIJK	pijn	-1.426	1.241	-1.304	1.634
M48Zelhem	KIJK	pijn	-0.532	1.349	-1.149	1.77
M48Zelhem	PRAAT	praten	1.032	-1.412	1.284	-1.401
M48Zelhem	PRAAT	praten	0.663	-0.967	1.2	-0.917

M48Zelhem	KIJK	prijzen	-0.549	0.679	-0.692	1.001
M48Zelhem	KAAS	raakte	1.575	-0.106	2.055	-0.143
M48Zelhem	KIJK	rijden	0.158	0.951	-0.646	0.872
M48Zelhem	HUIS	ruiken	-0.097	-1.319	-0.579	-1.422
M48Zelhem	HUIS	ruiken	0.03	-1.466	0.223	-1.752
M48Zelhem	PRAAT	schaap	0.487	-1.197	0.636	-1.657
M48Zelhem	PRAAT	slaan	0.79	-1.13	0.918	-1.302
M48Zelhem	PRAAT	slaan	0.917	-1.363	1.467	-1.43
M48Zelhem	KIJK	spijkers	-0.985	0.665	-1.299	0.724
M48Zelhem	KIJK	spijkers	-1.05	0.63	-1.162	1.145
M48Zelhem	KIJK	spijkers	-0.601	0.523	-1.119	0.74
M48Zelhem	KAAS	staat	0.108	0.623	0.211	0.345
M48Zelhem	KIJK	stijf	-1.261	0.822	-1.318	1.143
M48Zelhem	KIJK	trouwerij	-0.507	1.108	-0.478	1.293
M48Zelhem	HUIS	uitging	-0.94	-0.049	-1.265	0.085
M48Zelhem	KAART	vaak	1.735	-0.346	1.219	-0.014
M49Ruurlo	PRAAT	blaar	0.553	-2.095	1.036	-1.041
M49Ruurlo	HUIS	buiten	-0.581	-0.308	-0.601	-0.052
M49Ruurlo	PRAAT	draad	1.056	-1.308	0.982	-1.209
M49Ruurlo	PRAAT	ga	1.133	-1.447	1.04	-1.191
M49Ruurlo	PRAAT	gaan	0.451	-1.443	1.379	-1.391
M49Ruurlo	PAARD	gaarne	0.134	1.338	0.522	0.015
M49Ruurlo	KIJK	gordijnen	-0.937	0.816	-0.667	1.084
M49Ruurlo	KIJK	gordijnen	-0.529	1.122	-0.272	0.933
M49Ruurlo	KAART	graven	1.622	-0.27	1.966	-0.622
M49Ruurlo	HUIS	huis	-0.873	-0.072	-0.672	0.112
M49Ruurlo	HUIS	huis	-0.73	-0.01	-1.223	-0.005
M49Ruurlo	HUIS	huizen	-0.765	-0.142	-0.74	-0.062
M49Ruurlo	KIJK	ijzer	-1.049	1.341	-0.762	0.511
M49Ruurlo	PRAAT	jaar	0.206	-0.238	0.87	-0.542
M49Ruurlo	KAART	kaart	1.655	-0.018	2.413	-0.318
M49Ruurlo	KAAS	kaas	-0.678	1.005	-0.193	0.894
M49Ruurlo	KAAS	kaas	-0.768	1.182	-0.343	1.333
M49Ruurlo	KIJK	kijken	-0.879	1.303	-0.736	1.277
M49Ruurlo	KIJK	kijken	-1.097	1.26	-1.365	1.397
M49Ruurlo	HUIS	kruipen	-0.244	-1.304	-0.241	-1.48
M49Ruurlo	HUIS	kruipen	-0.705	-1.213	-0.838	-1.919
M49Ruurlo	HUIS	kuikens	-0.977	-0.515	-0.647	-0.619
M49Ruurlo	HUIS	kuikens	-1.08	-0.243	-1.134	-0.421
M49Ruurlo	KAAS	maakte	1.123	-0.187	1.658	-0.374
M49Ruurlo	KAAS	nagel	0.618	0.678	1.356	0.631
M49Ruurlo	KAAS	nagel	0.719	0.866	1.368	-0.071
M49Ruurlo	PRAAT	opstaan	1.212	-1.093	0.56	-1.17
M49Ruurlo	PRAAT	paaltje	0.704	-1.325	0.992	-1.74
M49Ruurlo	PAARD	paard	0.489	1.385	1.651	0.115
M49Ruurlo	PAARD	paard	-0.266	0.777	0.865	0.187

M49Ruurlo	PAARD	paard	-0.313	0.925	0.893	0.033
M49Ruurlo	KIJK	pijn	-1.192	0.685	-0.489	1.249
M49Ruurlo	PRAAT	praten	1.107	-1.036	1.706	-0.97
M49Ruurlo	KIJK	prijzen	-1.173	1.234	-1.091	1.029
M49Ruurlo	HUIS	ruiken	0.287	-1.034	-0.015	-1.211
M49Ruurlo	HUIS	ruiken	-0.159	-1.201	-0.669	-1.816
M49Ruurlo	PRAAT	slaan	1.142	-1.313	1.029	-0.764
M49Ruurlo	KIJK	spijkers	-0.678	0.694	-1.044	0.877
M49Ruurlo	KIJK	spijkers	-1.268	1.101	-1.366	1.113
M49Ruurlo	KIJK	spijkers	-1.085	0.75	-1.19	1.227
M49Ruurlo	KAAS	staat	-0.401	0.974	-0.247	0.851
M49Ruurlo	KIJK	stijf	-0.743	1.377	-0.621	1.109
M49Ruurlo	KIJK	trouwerij	-1.013	1.362	-0.227	0.341
M49Ruurlo	HUIS	uitging	-1.07	-0.488	-1.064	-0.097
M49Ruurlo	KAART	vaak	1.04	-0.642	2.173	-0.464
M50Uift	PRAAT	blaar	0.054	-1.642	1.108	-1.171
M50Uift	HUIS	buiten	-0.753	-0.344	-0.692	0.121
M50Uift	PRAAT	daar	-0.268	-0.981	0.219	-1.018
M50Uift	PRAAT	draad	0.455	-1.127	0.916	-1.052
M50Uift	PRAAT	ga	0.849	-1.086	1.02	-1.264
M50Uift	KIJK	gordijnen	-0.889	1.25	-0.35	0.683
M50Uift	KIJK	gordijnen	-0.687	0.952	-0.829	1.145
M50Uift	KAART	graven	1.345	-0.455	1.437	-0.922
M50Uift	HUIS	huis	-0.657	1.34	-1.212	0.48
M50Uift	HUIS	huizen	-0.912	0.101	-0.877	0.207
M50Uift	KIJK	ijzer	-0.755	1.093	-0.913	1.446
M50Uift	KAART	kaart	1.036	-0.123	2.219	-0.537
M50Uift	KAAS	kaas	1.323	-0.329	1.968	-0.599
M50Uift	KAAS	kaas	1.402	-0.327	2.097	-0.492
M50Uift	KIJK	kijken	-1.117	1.243	-0.991	1.416
M50Uift	KIJK	kijken	-0.981	1.255	-0.783	1.476
M50Uift	KIJK	kijken	-1.008	1.405	-1.345	1.449
M50Uift	HUIS	kruipen	-0.324	-2.012	-0.469	-2.334
M50Uift	HUIS	kruipen	-0.395	-1.263	-0.528	-1.671
M50Uift	HUIS	kuikens	-0.966	0.506	-1.295	0.172
M50Uift	KAAS	maakte	1.764	-0.822	2.069	-0.42
M50Uift	KAAS	nagel	0.465	0.212	0.995	-0.106
M50Uift	KAAS	nagel	0.246	0.26	1.231	-0.872
M50Uift	PRAAT	opstaan	0.932	-0.939	1.109	-0.838
M50Uift	PRAAT	paaltje	0.317	-1.918	0.971	-1.933
M50Uift	PAARD	paard	-0.27	0.442	0.466	-0.198
M50Uift	PAARD	paard	-0.212	0.502	0.376	-0.237
M50Uift	PAARD	paard	-0.503	0.691	0.793	-0.298
M50Uift	KIJK	pijn	-0.72	0.548	-0.115	1.366
M50Uift	KIJK	pijn	-1.061	1.209	-0.379	1.403
M50Uift	PRAAT	praten	0.675	-1.472	0.952	-1.355

M50Uift	KIJK	prijzen	-0.783	1.289	-1.058	1.263
M50Uift	KAAS	raakte	1.211	-0.232	2.772	-0.346
M50Uift	KIJK	rijden	0.482	-0.018	-0.378	0.525
M50Uift	KIJK	rijden	0.219	0.324	-0.452	0.641
M50Uift	HUIS	ruiken	-0.591	-0.309	-0.634	-0.089
M50Uift	HUIS	ruiken	-0.539	0.01	-1.14	-0.155
M50Uift	PRAAT	slaan	0.876	-1.231	1.001	-1.637
M50Uift	KIJK	spijkers	-1.06	0.933	-0.712	1.376
M50Uift	KIJK	spijkers	-0.998	0.886	-1.289	1.457
M50Uift	KIJK	spijkers	-0.858	0.505	-1.04	1.017
M50Uift	KAAS	staat	0.058	-0.023	0.18	-0.125
M50Uift	KIJK	trouwerij	0.212	0.341	-0.604	1.082
M50Uift	HUIS	uitging	-1.221	0.052	-1.207	0.25
M52Uift	PRAAT	allemaal	1.208	-1.831	0.792	-1.911
M52Uift	PRAAT	blaar	0.048	-2.499	0.809	-1.611
M52Uift	HUIS	buiten	-0.793	-0.276	-0.769	-0.095
M52Uift	HUIS	buiten	-0.842	-0.651	-0.807	-0.189
M52Uift	PRAAT	draad	0.756	-1.109	0.8	-1.196
M52Uift	PRAAT	ga	0.629	-1.595	1.204	-1.518
M52Uift	PRAAT	gaan	1.787	-1.193	2.762	-1.052
M52Uift	PAARD	gaarne	-0.485	1.275	0.457	-0.178
M52Uift	PRAAT	gaat	0.406	-1.609	0.908	-1.574
M52Uift	KIJK	gordijnen	-0.774	1.368	-0.516	0.836
M52Uift	KIJK	gordijnen	-0.919	1.256	-0.491	1.841
M52Uift	KAART	graven	0.92	-0.744	1.159	-0.979
M52Uift	HUIS	huis	-1.028	0.309	-1.607	0.345
M52Uift	HUIS	huis	-1.054	-0.152	-1.287	-0.138
M52Uift	HUIS	huizen	-1.011	-0.263	-0.99	-0.006
M52Uift	KIJK	ijzer	-0.901	1.692	-0.641	1.165
M52Uift	KAART	kaart	1.484	-0.341	1.762	-0.46
M52Uift	KAAS	kaas	1.614	-0.431	2.639	-0.469
M52Uift	KAAS	kaas	-0.414	0.832	0.656	-0.033
M52Uift	KIJK	kijken	-0.36	1.091	-0.417	1.306
M52Uift	KIJK	kijken	-0.974	1.028	-0.944	1.44
M52Uift	HUIS	kruipen	-0.445	-0.131	-0.364	-0.093
M52Uift	HUIS	kuikens	-1.039	0.054	-1.064	-0.161
M52Uift	KAAS	maakte	-0.565	0.554	-0.503	1.339
M52Uift	KAAS	nagel	0.239	0.106	0.006	-0.115
M52Uift	KAAS	nagel	0.636	0.34	1.085	-0.127
M52Uift	KAAS	nagel	-0.041	0.325	0.765	0.203
M52Uift	PRAAT	opstaan	0.925	-1.476	0.824	-1.616
M52Uift	PRAAT	paaltje	0.497	-0.439	0.882	-1.203
M52Uift	PAARD	paard	-0.489	0.826	1.017	-0.173
M52Uift	PAARD	paard	-0.753	1.049	0.108	0.182
M52Uift	PAARD	paard	-0.614	1.254	0.728	-0.086
M52Uift	KIJK	pijn	-0.893	1.194	-0.832	1.458



M52Uift	KIJK	pijn	-1.01	1.714	-0.536	1.723
M52Uift	KIJK	prijzen	-0.643	0.805	-0.576	0.768
M52Uift	KAAS	raakte	1.146	-0.617	1.681	-0.32
M52Uift	KIJK	rijden	-0.606	0.514	-0.606	0.779
M52Uift	HUIS	ruiken	-0.926	-0.699	-0.913	0.28
M52Uift	HUIS	ruiken	-0.434	-0.486	-0.335	-0.206
M52Uift	PRAAT	slaan	1.388	-1.639	2.471	-1.974
M52Uift	HUIS	sluiten	-0.878	-0.496	-0.778	0.014
M52Uift	KIJK	spijkers	-0.685	0.637	-0.556	1.342
M52Uift	KIJK	spijkers	-0.602	0.458	-0.511	1.511
M52Uift	KAAS	staat	-0.479	0.351	-0.353	0.088
M52Uift	KIJK	stijf	-0.879	0.65	-1.066	0.703
M52Uift	HUIS	uit	-0.451	-0.026	-1.063	0.383
M52Uift	KAART	vaak	1.554	-0.875	1.756	-0.325
M53Silvolde	PRAAT	allemaal	1.17	-1.511	0.968	-1.462
M53Silvolde	PRAAT	blaar	-0.044	-1.583	2.011	-1.304
M53Silvolde	HUIS	buiten	-0.681	-0.23	-0.414	0.228
M53Silvolde	PRAAT	daar	0.927	-1.289	0.929	-1.269
M53Silvolde	PRAAT	draad	0.743	-1.249	1.269	-1.429
M53Silvolde	PRAAT	ga	1.143	-1.487	1.115	-1.548
M53Silvolde	KIJK	gordijnen	-0.65	0.963	-0.381	1.205
M53Silvolde	KIJK	gordijnen	-0.633	0.998	-0.314	1.09
M53Silvolde	KAART	graven	1.257	-1.088	1.513	-0.862
M53Silvolde	HUIS	huis	-0.48	-0.048	-1.226	0.254
M53Silvolde	HUIS	huis	-1.435	0.288	-1.277	0.724
M53Silvolde	HUIS	huis	-0.578	-0.085	-0.923	0.675
M53Silvolde	HUIS	huizen	-1.051	-0.475	-0.908	0.346
M53Silvolde	KIJK	ijzer	-0.763	1.434	-0.796	0.882
M53Silvolde	PRAAT	jaar	-0.094	-1.786	1.139	-1.392
M53Silvolde	KAART	kaart	1.542	-0.454	2.123	-0.502
M53Silvolde	KAAS	kaas	0.486	0.562	0.975	0.459
M53Silvolde	KAAS	kaas	0.804	0.847	1.156	0.368
M53Silvolde	KIJK	kijken	-1.105	0.838	-0.911	1.056
M53Silvolde	KIJK	kijken	-1	1.069	-0.637	1.237
M53Silvolde	KIJK	kijken	-0.729	1.001	-0.704	0.889
M53Silvolde	KIJK	kijken	-0.671	0.956	-0.466	0.928
M53Silvolde	HUIS	kruipen	0.095	-1.1	-0.061	-1.536
M53Silvolde	HUIS	kruipen	-0.129	-1.223	0.129	-1.717
M53Silvolde	HUIS	kuikens	-1.208	0.022	-1.919	-0.221
M53Silvolde	HUIS	kuikens	-0.825	-0.445	-0.679	-0.739
M53Silvolde	KAAS	nagel	0.364	0.634	0.881	0.47
M53Silvolde	KAAS	nagel	1.015	0.616	0.782	0.626
M53Silvolde	PRAAT	opstaan	0.763	-1.08	1.379	-1.29
M53Silvolde	PAARD	paard	-0.842	1.149	0.5	0.55
M53Silvolde	PAARD	paard	-0.231	0.995	0.575	0.378
M53Silvolde	PAARD	paard	-0.528	1.08	1.068	0.006

M53Silvolde	KIJK	pijn	-1.116	1.15	-0.289	1.436
M53Silvolde	KIJK	pijn	-0.724	1.124	-0.506	1.819
M53Silvolde	PRAAT	praten	0.941	-1.505	1.179	-1.302
M53Silvolde	PRAAT	praten	0.697	-1.398	1.292	-1.27
M53Silvolde	KIJK	prijzen	-1.077	1.207	-1.216	1.305
M53Silvolde	KAAS	raakte	0.856	-0.744	2.229	-0.423
M53Silvolde	KIJK	rijden	0.096	0.165	-0.626	0.993
M53Silvolde	HUIS	ruiken	-0.573	-0.463	-0.699	-0.249
M53Silvolde	HUIS	ruiken	-0.644	-0.342	-0.793	-0.55
M53Silvolde	PRAAT	slaan	1.025	-1.46	1.197	-1.403
M53Silvolde	KIJK	spijkers	-0.358	0.363	-0.28	0.839
M53Silvolde	KIJK	spijkers	-1.108	0.519	-1.259	0.789
M53Silvolde	KIJK	spijkers	-0.881	0.74	-1.019	1.121
M53Silvolde	KIJK	stijf	-1.081	1.055	-1.153	1.165
M53Silvolde	KIJK	trouwerij	0.54	0.05	-0.79	1.208
M53Silvolde	HUIS	uitging	-0.65	-0.389	-0.948	0.396
M53Silvolde	KAART	vaak	1.784	-0.932	2.424	-0.429
M55Zelhem	PRAAT	allemaal	0.262	-1.671	0.667	-1.5
M55Zelhem	PRAAT	blaar	-0.121	-1.706	1.098	-0.857
M55Zelhem	PRAAT	daar	0.185	-1.092	0.083	-1.257
M55Zelhem	PRAAT	draad	1.08	-1.459	1.179	-1.205
M55Zelhem	PRAAT	ga	0.401	-1.234	0.53	-1.317
M55Zelhem	PRAAT	gaan	0.234	-1.108	0.897	-0.995
M55Zelhem	PAARD	gaarne	2.145	-0.735	2.413	-0.921
M55Zelhem	KAAS	gaat	-0.686	1.097	-0.621	1.25
M55Zelhem	KIJK	gordijnen	-0.946	0.94	-0.571	1.215
M55Zelhem	KIJK	gordijnen	-1.313	0.685	-0.835	1.003
M55Zelhem	KAART	graven	1.389	-0.359	1.721	-0.663
M55Zelhem	HUIS	huis	-1.143	0.365	-1.213	0.384
M55Zelhem	HUIS	huis	-1.058	0.627	-0.848	0.327
M55Zelhem	HUIS	huizen	-0.83	0.26	-0.759	0.268
M55Zelhem	KIJK	ijzer	-1.375	0.675	-1.18	0.931
M55Zelhem	PRAAT	jaar	0.163	-0.806	0.813	-0.522
M55Zelhem	KAART	kaart	1.508	-0.108	2.342	-0.378
M55Zelhem	KAAS	kaas	0.042	0.744	0.182	0.364
M55Zelhem	KAAS	kaas	-0.034	1.196	0.43	0.865
M55Zelhem	KIJK	kijken	-0.723	0.975	-0.877	1.204
M55Zelhem	KIJK	kijken	-0.758	1.21	-0.981	1.25
M55Zelhem	HUIS	kruipen	-0.628	-1.079	-0.346	-1.386
M55Zelhem	HUIS	kruipen	-0.637	-1.121	-0.525	-1.628
M55Zelhem	HUIS	kuikens	-0.78	0	-0.897	0.191
M55Zelhem	HUIS	kuikens	-0.529	-0.019	-0.748	-0.138
M55Zelhem	KAAS	maakte	1.591	-0.723	1.898	-0.491
M55Zelhem	KAAS	nagel	0.689	0.941	0.86	0.248
M55Zelhem	KAAS	nagel	-0.313	0.834	0.819	-0.546
M55Zelhem	PRAAT	opstaan	0.884	-1.245	0.409	-1.267

M55Zelhem	PAARD	paard	-0.49	0.775	0.894	0.034
M55Zelhem	PAARD	paard	-1.105	0.844	0.233	0.375
M55Zelhem	PAARD	paard	-0.875	1.365	1.146	0.397
M55Zelhem	KIJK	pijn	-1.315	0.959	-0.453	0.625
M55Zelhem	KIJK	pijn	-0.902	1.316	-0.583	1.371
M55Zelhem	PRAAT	praten	0.363	-1.122	0.778	-1.299
M55Zelhem	KIJK	prijzen	-0.78	0.745	-0.509	0.812
M55Zelhem	KAAS	raakte	1.949	-0.44	2.149	-0.659
M55Zelhem	HUIS	ruiken	-0.679	-1.144	-0.554	-1.639
M55Zelhem	PRAAT	slaan	0.571	-1.639	0.752	-1.668
M55Zelhem	KIJK	spijkers	-0.871	0.852	-0.94	1.023
M55Zelhem	KIJK	spijkers	-0.635	1.037	-0.628	1.03
M55Zelhem	KIJK	spijkers	-0.615	1.032	-0.674	1.036
M55Zelhem	KAAS	staat	-0.639	1.1	-0.268	1.205
M55Zelhem	KIJK	stijf	-1.336	1.241	-1.361	1.267
M55Zelhem	KAART	vaak	1.165	-0.752	1.574	-0.591
M58Varsseveld	PRAAT	allemaal	0.351	-1.536	0.525	-1.504
M58Varsseveld	PRAAT	blaar	-0.455	-1.544	0.757	-1.38
M58Varsseveld	HUIS	buiten	-0.587	0.001	-0.762	0.514
M58Varsseveld	PRAAT	daar	0.038	-1.599	1.258	-1.257
M58Varsseveld	PRAAT	draad	1.116	-1.233	1.207	-1.314
M58Varsseveld	PRAAT	ga	0.947	-1.429	1.889	-1.25
M58Varsseveld	PAARD	gaarne	-0.503	0.946	0.58	0.379
M58Varsseveld	PRAAT	gaat	0.735	-1.506	1.193	-1.329
M58Varsseveld	KIJK	gordijnen	-0.973	1.158	-0.835	1.591
M58Varsseveld	KIJK	gordijnen	-1.157	1.404	-0.862	1.201
M58Varsseveld	KAART	graven	0.149	-0.193	1.433	0.27
M58Varsseveld	HUIS	huizen	-0.949	0.076	-0.936	0.414
M58Varsseveld	KIJK	ijzer	-1.354	1.169	-1.029	0.945
M58Varsseveld	PRAAT	jaar	-0.348	-1.152	0.222	-0.526
M58Varsseveld	KAART	kaart	2.005	0.063	2.544	-0.386
M58Varsseveld	KAAS	kaas	-0.799	1.075	-0.489	0.613
M58Varsseveld	KAAS	kaas	-0.911	1.206	-0.464	0.534
M58Varsseveld	KIJK	kijken	-0.455	0.873	-0.154	0.84
M58Varsseveld	KIJK	kijken	-0.846	1.035	-1.042	1.147
M58Varsseveld	HUIS	kruipen	-0.102	-0.79	0.348	-0.781
M58Varsseveld	HUIS	kruipen	-0.783	-1.437	-0.738	-1.7
M58Varsseveld	HUIS	kuiken	-1.013	0.897	-1.064	0.965
M58Varsseveld	HUIS	kuikens	-0.819	-0.491	-1.18	-0.191
M58Varsseveld	KAAS	maakte	1.469	-0.66	1.83	-0.355
M58Varsseveld	KAAS	nagel	0.095	0.459	1.545	0.373
M58Varsseveld	KAAS	nagel	-0.005	0.552	0.03	0.708
M58Varsseveld	PRAAT	opstaan	0.422	-1.304	0.887	-1.299
M58Varsseveld	PAARD	paard	-0.607	0.731	1.379	0.184
M58Varsseveld	PAARD	paard	-0.559	0.859	1.883	0.27
M58Varsseveld	PAARD	paard	-0.692	0.914	1.247	0.315

M58Varsseveld	KIJK	pijn	-1.023	0.965	-0.548	1.321
M58Varsseveld	KIJK	pijn	-1.067	1.19	-0.833	1.342
M58Varsseveld	PRAAT	praten	1.051	-1.436	2.098	-1.116
M58Varsseveld	PRAAT	praten	0.73	-1.188	1.3	-1.314
M58Varsseveld	KIJK	prijzen	-1.079	1.416	-1.017	0.79
M58Varsseveld	KAAS	raakte	1.4	-0.329	1.952	-0.378
M58Varsseveld	KIJK	rijden	0.048	-0.087	-0.49	0.566
M58Varsseveld	HUIS	ruiken	-0.075	-0.785	-0.071	-0.788
M58Varsseveld	HUIS	ruiken	-0.741	-1.173	-0.249	-1.714
M58Varsseveld	PRAAT	slaan	0.838	-1.3	0.818	-1.301
M58Varsseveld	KIJK	spijkers	-0.594	0.795	-0.856	1.08
M58Varsseveld	KIJK	spijkers	-1.126	0.764	-1.187	0.93
M58Varsseveld	KIJK	spijkers	-0.95	0.563	-1.176	0.759
M58Varsseveld	KAAS	staat	-0.607	0.854	-0.213	0.64
M58Varsseveld	KIJK	stijf	-1.102	1.227	-1.101	1.122
M58Varsseveld	KIJK	trouwerij	-0.351	1.083	-0.589	0.792
M58Varsseveld	HUIS	uitging	0.221	-0.535	-0.507	-0.704
M58Varsseveld	KAART	vaak	1.035	-0.562	1.454	-0.023
M59Uift	PRAAT	allemaal	1.497	-1.547	0.221	-1.765
M59Uift	PRAAT	blaar	0.588	-2.065	0.757	-1.454
M59Uift	HUIS	buiten	-0.877	-0.357	-1.033	-0.021
M59Uift	PRAAT	daar	-0.186	-1.101	0.257	-1.154
M59Uift	PRAAT	draad	-0.005	0.166	0.887	0.032
M59Uift	PRAAT	gaan	0.906	-0.043	1.862	-0.669
M59Uift	PRAAT	gaan	0.885	-0.133	1.339	-1.018
M59Uift	PAARD	gaarne	0.732	-0.083	1.479	-0.455
M59Uift	KAAS	gaat	0.257	-0.024	0.765	-0.638
M59Uift	KIJK	gordijnen	-1.57	1.418	-1.437	1.564
M59Uift	KIJK	gordijnen	-1.416	1.617	-1.311	1.753
M59Uift	KAART	graven	0.525	-1.331	0.449	-1.276
M59Uift	HUIS	huis	0.961	-0.518	-0.279	-0.025
M59Uift	HUIS	huis	0.778	-0.418	-0.363	-0.001
M59Uift	HUIS	huizen	0.643	-0.649	-0.741	0.096
M59Uift	KIJK	ijzer	-1.113	1.375	-1.325	1.18
M59Uift	KAAS	kaas	1.085	-0.17	1.109	-0.48
M59Uift	KAAS	kaas	-0.315	0.909	0.482	0.074
M59Uift	KIJK	kijken	-1.233	1.553	-1.509	1.486
M59Uift	KIJK	kijken	-1.207	1.279	-1.611	1.56
M59Uift	KIJK	kijken	-0.895	1.504	-0.921	1.27
M59Uift	HUIS	kruipen	-0.669	-0.407	-0.628	-0.522
M59Uift	HUIS	kruipen	-0.627	-0.562	-1.027	-0.536
M59Uift	HUIS	kuikens	1.022	-0.711	-0.327	-0.418
M59Uift	HUIS	kuikens	0.859	-0.008	-0.375	0.018
M59Uift	KAAS	maakte	1.412	-1.183	1.935	-1.018
M59Uift	KAAS	nagel	1.021	-1.038	0.362	-1.061
M59Uift	KAAS	nagel	0.783	-0.69	1.559	-0.215

M59Uift	PRAAT	opstaan	1.377	-0.65	1.219	-0.563
M59Uift	PRAAT	paaltje	1.17	-0.976	0.603	-1.307
M59Uift	PAARD	paard	-0.838	0.816	0.056	0.349
M59Uift	PAARD	paard	-0.664	1.186	0.261	0.304
M59Uift	PAARD	paard	-0.858	0.79	-0.067	0.131
M59Uift	KIJK	pijn	-1.273	1.27	-1.314	1.11
M59Uift	KIJK	pijn	-0.962	1.704	-1.253	1.432
M59Uift	PRAAT	praten	0.779	-1.331	0.954	-1.078
M59Uift	KIJK	prijzen	0.576	-0.938	-0.244	0.41
M59Uift	KAAS	raakte	1.106	-0.612	1.505	-0.435
M59Uift	KIJK	rijden	0.535	-0.35	-0.537	0.737
M59Uift	HUIS	ruiken	-0.777	-1.014	-0.862	-0.271
M59Uift	HUIS	ruiken	-0.773	-0.653	-0.857	0.817
M59Uift	PRAAT	slaan	0.466	-1.715	1.364	-1.908
M59Uift	KIJK	spijkers	-1.145	0.717	-1.231	1.511
M59Uift	KIJK	spijkers	0.717	-0.44	0.032	0.876
M59Uift	KIJK	spijkers	-1.261	1.208	-1.028	1.466
M59Uift	KAAS	staat	0.986	-0.518	1.634	-0.399
M59Uift	KIJK	stijf	-1.141	1.016	-0.865	1.297
M59Uift	KIJK	trouwerij	1.189	-0.222	-0.699	1.246
M59Uift	HUIS	uitging	-1.075	0.867	-1.224	1.032
M62Uift	PRAAT	allemaal	0.022	-2.27	0.821	-2.219
M62Uift	PRAAT	blaar	1.451	-0.6	1.504	-0.548
M62Uift	HUIS	buiten	-0.836	-0.202	-1.056	0.149
M62Uift	PRAAT	daar	-0.268	-1.358	-0.117	-1.775
M62Uift	PRAAT	draad	1.083	-0.46	1.451	-0.453
M62Uift	PRAAT	ga	0.508	-1.513	0.555	-1.547
M62Uift	PRAAT	gaan	0.128	-1.67	-0.445	-1.615
M62Uift	KAAS	gaat	1.041	-0.527	1.261	-0.501
M62Uift	KIJK	gordijnen	0.839	-0.028	0.993	0.219
M62Uift	KIJK	gordijnen	-1.27	1.084	-0.992	1.572
M62Uift	KAART	graven	1.394	-0.401	1.468	-0.485
M62Uift	HUIS	huis	-1.109	0.122	-0.969	0.276
M62Uift	HUIS	huis	-1.027	0.14	-1.265	0.326
M62Uift	HUIS	huizen	-1.186	-0.179	-1.289	0.085
M62Uift	KIJK	ijzer	-1.08	1.389	-1.125	1.26
M62Uift	KAART	kaart	1.259	-0.349	1.823	-0.525
M62Uift	KAAS	kaas	1.246	-0.242	1.382	-0.252
M62Uift	KAAS	kaas	1.26	-0.275	1.082	-0.22
M62Uift	KIJK	kijken	-1.094	1.671	-1.13	1.746
M62Uift	KIJK	kijken	-1.052	1.356	-1.025	1.274
M62Uift	KIJK	kijken	-0.918	1.503	-0.915	1.399
M62Uift	HUIS	kruipen	-0.813	-1.121	-0.923	-1.03
M62Uift	HUIS	kruipen	-0.702	-1.017	-0.49	-1.224
M62Uift	HUIS	kuikens	-0.995	0.251	-0.924	0.086
M62Uift	HUIS	kuikens	-0.808	0.167	-0.674	0.029

M62Uift	KAAS	maakte	1.254	-0.557	1.17	-0.365
M62Uift	PRAAT	naar	0	-1.446	-0.161	-1.478
M62Uift	KAAS	nagel	1.363	-0.766	0.859	-0.659
M62Uift	KAAS	nagel	1.134	-0.625	1.107	-0.661
M62Uift	PRAAT	opstaan	0.967	-0.61	0.629	-0.653
M62Uift	PRAAT	paaltje	1.644	-0.632	1.216	-0.781
M62Uift	PAARD	paard	-0.893	1.217	0.639	0.178
M62Uift	PAARD	paard	-0.989	1.112	0.415	0.159
M62Uift	PAARD	paard	-0.676	1.204	0.282	0.243
M62Uift	KIJK	pijn	-1.009	1.554	-0.434	1.668
M62Uift	KIJK	pijn	-0.805	1.575	-0.842	1.657
M62Uift	PRAAT	praten	0.524	-1.503	0.781	-1.341
M62Uift	KIJK	prijzen	1.268	-0.214	-0.125	0.561
M62Uift	KAAS	raakte	1.274	-0.348	1.393	-0.364
M62Uift	KIJK	rijden	1.021	0.012	0.007	0.746
M62Uift	HUIS	ruik	-0.749	-0.22	-0.673	-0.44
M62Uift	PRAAT	slaan	1.309	-0.685	1.257	-0.752
M62Uift	KIJK	spijkers	-0.99	0.932	-1.069	1.389
M62Uift	KIJK	spijkers	-1.023	0.822	-1.043	1.283
M62Uift	KIJK	spijkers	-1.079	0.634	-0.953	1.384
M62Uift	KAAS	staat	-0.598	1.261	-0.47	0.719
M62Uift	KIJK	stijf	-1.043	1.487	-0.912	1.506
M62Uift	KIJK	trouwerij	-0.329	-0.187	-0.716	1.007
M62Uift	HUIS	uitging	-0.979	0.075	-1.019	0.247
M62Uift	KAART	vaak	0.786	-0.667	1.204	-0.183
M63Westendorp	PRAAT	allemaal	1.296	-1.446	0.893	-1.551
M63Westendorp	PRAAT	blaar	0.119	-1.522	1.217	-1.062
M63Westendorp	PRAAT	daar	0.338	-0.968	0.559	-1.161
M63Westendorp	PRAAT	daar	0.705	-1.717	1.054	-1.395
M63Westendorp	PRAAT	ga	0.781	-1.624	1.102	-1.631
M63Westendorp	PRAAT	gaat	0.572	-1.381	1.396	-1.094
M63Westendorp	KIJK	gordijnen	-1.108	1.127	-0.862	1.237
M63Westendorp	KIJK	gordijnen	-1.136	1.171	-0.833	1.221
M63Westendorp	KAART	graven	1.6	-0.574	1.776	-1.012
M63Westendorp	HUIS	huis	-1.106	-0.273	-0.808	0.441
M63Westendorp	HUIS	huis	-0.45	-0.356	-0.854	0.649
M63Westendorp	HUIS	huizen	-0.613	0.066	-0.818	0.352
M63Westendorp	KIJK	ijzer	-1.072	1.019	-1.019	1.061
M63Westendorp	KAART	kaart	1.641	-0.076	1.844	-0.343
M63Westendorp	KAAS	kaas	0.049	0.868	0.626	0.418
M63Westendorp	KAAS	kaas	-0.07	1.1	0.207	0.462
M63Westendorp	KIJK	kijken	-0.817	0.904	-0.822	1.11
M63Westendorp	KIJK	kijken	-0.891	1.104	-0.827	1.177
M63Westendorp	HUIS	kruipen	-0.351	-1.293	-0.387	-1.492
M63Westendorp	HUIS	kruipen	-0.598	-1.385	-0.77	-1.22
M63Westendorp	HUIS	kuikens	-0.59	-0.374	-1.034	-0.381

M63Westendorp	HUIS	kuikens	-1.536	-0.338	-2.031	-0.448
M63Westendorp	KAAS	maakte	1.439	-0.708	1.56	-0.488
M63Westendorp	KAAS	nagel	0.705	1.041	1.034	0.425
M63Westendorp	KAAS	nagel	1.128	0.657	0.729	0.316
M63Westendorp	PRAAT	opstaan	0.984	-1.364	1.454	-1.432
M63Westendorp	PRAAT	paaltje	0.416	-1.145	0.76	-1.039
M63Westendorp	PAARD	paard	-0.405	1.126	1.009	0.002
M63Westendorp	PAARD	paard	-0.749	0.989	0.979	0.197
M63Westendorp	PAARD	paard	-0.723	1.047	0.729	0.479
M63Westendorp	KIJK	pijn	-1.146	1.058	-1.026	1.297
M63Westendorp	KIJK	pijn	-0.835	1.072	-0.849	1.192
M63Westendorp	PRAAT	praten	0.752	-1.377	1.435	-1.202
M63Westendorp	KIJK	prijzen	-0.801	1.011	-0.998	1.018
M63Westendorp	KAAS	raakte	1.924	-0.648	2.008	-0.496
M63Westendorp	KIJK	rijden	0.918	0.122	-0.2	0.629
M63Westendorp	KIJK	rijden	-0.878	0.896	-1.016	0.998
M63Westendorp	HUIS	ruiken	-0.157	-1.259	-0.349	-1.664
M63Westendorp	PRAAT	slaan	0.82	-1.541	0.821	-1.629
M63Westendorp	KIJK	spijkers	-0.858	0.836	-0.857	0.887
M63Westendorp	KIJK	spijkers	-0.88	0.623	-0.967	0.899
M63Westendorp	KIJK	spijkers	-0.702	0.757	-0.734	0.977
M63Westendorp	KAAS	staat	-0.592	0.859	-0.348	0.79
M63Westendorp	KIJK	stijf	-1.024	0.999	-1.227	1.098
M63Westendorp	KIJK	tijd	-0.626	0.893	-0.742	0.959
M63Westendorp	KIJK	trouwerij	-0.107	0.749	-0.464	0.69
M63Westendorp	HUIS	uitging	-0.496	-0.256	-0.714	-0.036
M63Westendorp	KAART	vaak	1.753	-0.418	1.743	-0.254
M72Gaanderen	PRAAT	allemaal	1.429	-1.226	1.364	-1.329
M72Gaanderen	PRAAT	blaar	-0.071	-2.227	1.175	-1.153
M72Gaanderen	HUIS	buiten	-1.009	0.263	-1.21	0.272
M72Gaanderen	PRAAT	daar	0.142	-0.878	-0.641	-0.738
M72Gaanderen	PRAAT	daar	-0.351	-1.061	0.881	-0.753
M72Gaanderen	PRAAT	draad	0.941	-1.659	0.847	-1.182
M72Gaanderen	PRAAT	draad	0.912	-1.269	0.967	-1.059
M72Gaanderen	PRAAT	ga	1.126	0.242	1.362	0.023
M72Gaanderen	PRAAT	gaan	0.592	-1.014	1.08	-1.158
M72Gaanderen	PRAAT	gaan	0.784	-1.228	0.833	-1.256
M72Gaanderen	PRAAT	gaat	0.659	-1.375	0.448	-1.066
M72Gaanderen	KIJK	gordijnen	-1.047	1.092	-0.837	1.051
M72Gaanderen	KAART	graven	1.446	-0.474	1.501	-0.633
M72Gaanderen	HUIS	huis	-1.061	0.796	-1.103	0.627
M72Gaanderen	HUIS	huis	-1.462	0.558	-1.085	0.661
M72Gaanderen	HUIS	huizen	-1.155	0.561	-1.208	0.756
M72Gaanderen	KIJK	ijzer	-1.097	0.925	-1.235	0.709
M72Gaanderen	KAART	kaart	1.596	-0.107	1.704	-0.333
M72Gaanderen	KAAS	kaas	-0.043	0.782	0.485	0.964

M72Gaanderen	KAAS	kaas	-0.171	0.611	0.252	0.53
M72Gaanderen	KIJK	kijken	-1.182	1.13	-1.226	1.226
M72Gaanderen	KIJK	kijken	-1.284	1.174	-1.241	1.195
M72Gaanderen	HUIS	kruipen	-0.652	-1.032	-0.298	-1.484
M72Gaanderen	HUIS	kruipen	-0.381	-1.762	-0.589	-1.749
M72Gaanderen	HUIS	kuikens	-1.478	0.526	-1.534	0.362
M72Gaanderen	HUIS	kuikens	-0.828	0.524	-0.657	0.271
M72Gaanderen	KAAS	maakte	1.54	-0.684	1.59	-0.453
M72Gaanderen	PRAAT	naar	1.261	-1.141	1.537	-1.052
M72Gaanderen	KAAS	nagel	0.36	0.986	0.77	0.537
M72Gaanderen	KAAS	nagel	1.046	1.195	1.304	1.118
M72Gaanderen	KAAS	nagel	0.063	0.909	0.584	0.61
M72Gaanderen	PRAAT	opstaan	0.726	-1.252	1.186	-1.251
M72Gaanderen	PRAAT	paaltje	0.112	-0.289	0.393	-0.804
M72Gaanderen	PAARD	paard	-1.028	1.083	0.568	0.835
M72Gaanderen	PAARD	paard	-0.953	1.052	0.616	0.57
M72Gaanderen	PAARD	paard	-0.81	0.826	0.394	0.639
M72Gaanderen	KIJK	pijn	-1.171	1.145	-0.543	1.432
M72Gaanderen	KIJK	pijn	-1.286	1.043	-1.174	0.978
M72Gaanderen	KIJK	prijzen	-0.969	0.954	-0.846	1.19
M72Gaanderen	KAAS	raakte	1.293	-0.289	1.674	-0.248
M72Gaanderen	HUIS	ruiken	-0.443	-1.522	-0.49	-1.728
M72Gaanderen	PRAAT	schaap	0.772	-1.188	0.842	-1.327
M72Gaanderen	PRAAT	slaan	1.02	-1.437	1.276	-1.349
M72Gaanderen	KIJK	spijkers	-0.984	0.585	-0.968	0.637
M72Gaanderen	KIJK	spijkers	-0.644	0.756	-0.505	0.861
M72Gaanderen	KIJK	spijkers	-0.52	0.654	-0.432	0.945
M72Gaanderen	KAAS	staat	-0.508	0.753	-0.017	0.88
M72Gaanderen	KIJK	stijf	-0.646	1.045	-0.6	0.976
M72Gaanderen	KIJK	trouwerij	-1.08	1.004	-0.961	1.036
M72Gaanderen	HUIS	uitging	-1.045	0.641	-1.284	0.912
M72Gaanderen	KAART	vaak	0.896	-0.871	1.692	-0.526
M73Ruurlo	HUIS	buiten	-0.63	0.506	-1.274	0.35
M73Ruurlo	PRAAT	daar	0.494	-0.779	0.339	-1.024
M73Ruurlo	PRAAT	draad	0.263	-1.161	0.951	-0.995
M73Ruurlo	KIJK	ijzer	-0.571	0.805	-0.502	0.614
M73Ruurlo	KIJK	kijken	-0.779	1.204	-0.803	1.169
M73Ruurlo	HUIS	kuikens	-0.78	-0.393	-0.269	-0.232
M73Ruurlo	PRAAT	naar	0.288	-0.321	-0.946	-0.55
M73Ruurlo	PRAAT	paaltje	0.701	-1.507	0.764	-1.307
M73Ruurlo	PAARD	paard	-0.028	0.981	1.075	0.273
M73Ruurlo	KIJK	pijn	-0.882	1.282	-0.208	1.115
M73Ruurlo	KIJK	pijn	-0.892	1.449	-0.898	1.094
M73Ruurlo	PRAAT	praten	0.784	-1.002	1.487	-0.75
M73Ruurlo	PRAAT	praten	1.746	-0.92	1.666	-0.566
M73Ruurlo	HUIS	ruiken	0.091	-1.549	0.274	-1.911



M73Ruurlo	PRAAT	slaan	2.432	-0.808	2.374	-1.105
M73Ruurlo	KIJK	spijkers	-0.374	0.758	-0.729	1.235
M73Ruurlo	KIJK	spijkers	-0.915	0.993	-1.067	0.871
M73Ruurlo	KIJK	stijf	-0.674	1.029	-0.723	0.644
M73Ruurlo	HUIS	uitging	-0.894	-0.404	-0.891	0.914

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