Tone and intonation in the Lemiers dialect of Ripuarian

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by Jorina Bodelier
Student number 5740401
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Supervisor: P.P.G. Boersma

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Many thanks to my supervisor, Paul Boersma, and others who helped me along the way – thanks to Björn Köhnlein for methodological suggestions and to the pilot participant as well as the experiment participant.

N.B. The picture on the front page is of the mediaeval *auw kapel* [ɑu[1] kɑpɛl[1]], 'old chapel' in Lemiers.

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Abstract

Ripuarian is part of the Franconian tone area, in which there is a contrast between two tonal accents. In most dialects of Franconian languages there is also a variety of intonation patterns, which means that tonal accents are not necessarily always produced the same way, but, due to the interaction with different intonation patterns, are realised differently. Then whether the word concerned is in focus, before the focus or after the focus in the sentence can also make a difference, as well as whether this target word is sentence-final or not. This thesis examines the expression of tone in the Ripuarian dialect spoken in the village of Lemiers (Vaals, NL) under different intonational contexts. After some preliminary work with a native speaker establishing three different intonation patterns and a lack of tone on short vowels (unless they are followed by a sonorant consonant, in which case the vowel and the consonant bear the tone together), the experiment involves another native speaker doing a reading task of 120 individual sentences with four minimal pairs. Under most conditions a contrast could be observed for each pair, although in some conditions the contrast was neutralised for some minimal pairs. The contrasts were not purely tonal: in many instances, duration as well as intensity also played a role. In some cases vowel quality was also used in a distinctive way, when in other cases of the same pair this did not occur. An interesting phenomenon took place in the intensity contours: throughout the data an apparently random selection of intensity contours for tone elements (i.e. the two moras which receive tone) of both accent 1 and 2 showed two intensity peaks.

Introduction

Lemiers (or *Lemieësj* [ləˈmiə^{1}ʃ], as it is called locally) is a small village within the municipality of Vaals, the Netherlands, the number of inhabitants of which is not entirely clear but is estimated at 1200. We can assume that in the Lemiers dialect of Ripuarian (which will be referred to as *Lemierser* here, after the local name of *Lemieësjer* [ləˈmiə^{1}ʒəʁ]), in the larger area, lexical and grammatical tone is used, as well as a variety of intonation patterns. When we look at words in isolation we can immediately establish that Lemierser has a binary tonal contrast (i.e. a contrast between two *tone accents*, one which we will call accent 1, also known as 'stoottoon', 'Stoßton' or 'Schärfung', and the other which we will call accent 2, also known as 'sleeptoon', 'Schleifton' or 'Trägheitsakzent' (e.g. Jongen 1972, Gussenhoven & Peters 2004, Gussenhoven 2009)). In the phonetic notation used here, a superscript *1* (^{1}) is placed after elements with accent 1, and a superscript *2* (^{2}) is placed after elements with accent 2.

Tone (as we know it from, for example, Chinese, in which, depending on the tone that is used, *ma* means 'mother', 'hemp', 'horse' or 'scold' (Howie, 1976)) and intonation (the difference between sentence types, often expressed in writing using punctuation marks, such as in the difference between 'That's today!' and 'That's today?') both manifest themselves in pitch, which means that in a language which has both, some form of interaction between

the two probably exists (as one cannot produce two different pitches at the same time). Previous research into tonality in Franconian languages (e.g. Gussenhoven 2000, Hanssen 2005, Fournier et al. 2006) shows that, due to the interaction between tone and intonation, elements carrying tone indeed do have different patterns in different intonational contexts. In this thesis, the patterns which *Lemierser* tonal elements take on in different contexts will be investigated.

Looking at the map (fig. 1) we can see that the Benrath line (which divides areas in which *maken* is used from areas in which *machen* is used; i.e. it divides areas in which the High German consonant shift for /k/ has taken place (*machen*) from those areas in which it has not (*maken*), cf. Durrell (1990)), which coincides with the border between Ripuarian and Limburgian, curves eastward to the north and south of Lemiers. This means that Lemiers is one of the few Ripuarian dialects spoken in the Netherlands, amongst which are also the local dialect of Kerkrade and Bocholtz. As such, Lemiers borders on the Limburgian-speaking area (notably the Limburgian-speaking village of Vijlen). Both Ripuarian and Limburgian are within the Franconian tone area however, which runs roughly from Venlo to Trier and from Hasselt to Koblenz, or, again roughly, areas 2, 3, 4 and 5 on the map (fig. 1). Both languages do not, however, have the same distribution of tone, meaning that words which have the same etymological roots do not necessarily receive the same tone accent (this difference of distribution is elaborated upon in the next chapter). Lemierser, being a Ripuarian dialect, follows the Ripuarian distribution of tone. Even so however, it may be possible that some 'contamination' of variables to do with tonality may have taken place due to the proximity to Limburgian. So far, in terms of research on tonality, no dialects of either language close to the language border in the vicinity of Lemiers have been investigated, so no predictions can be made about this based on the literature. In fact, the

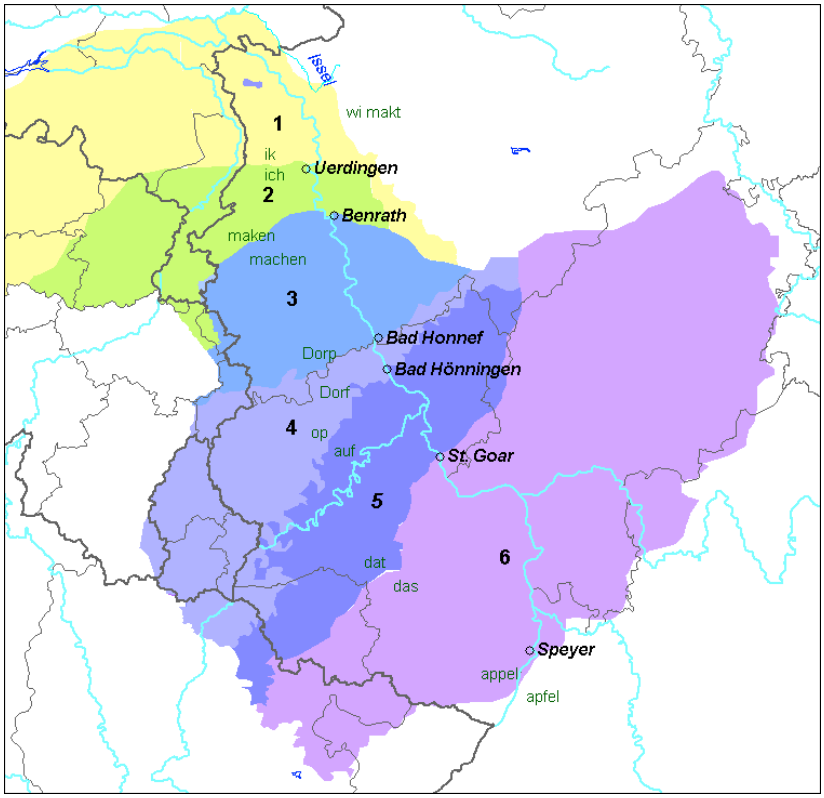


fig. 1: map of the 'Rhenish Fan' which shows several isoglosses in the wider area. Between the maken/machen and dorp/dorf isoglosses (area 3) we find Ripuarian. (© 2010 Hans Erren, under a Creative Commons licence, see under references)

whole area of South-East Limburg, in which Lemiers lies, has been neglected in research on tonality so far.

Of course most people in the Netherlands, including those in Lemiers, can speak Dutch. Ripuarian and Limburgian dialects in the Netherlands are not used in education, where Dutch is the standard. This means that children from Lemiers whose native language is Ripuarian will acquire Dutch at least once they enter primary school (usually aged 4) and are at least from then on bilingual. Dutch is also the language of administration and generally seen as the 'H-language' or high prestige language.

In order to investigate tonality in Lemierser, the prevalence of tones needs to become clear; for many Limburgian and Ripuarian dialects (e.g. Gussenhoven & Van der Vliet 1999, Gussenhoven 2009, Hanssen 2005), it has been established that tonality is expressed in syllables with two sonorant moras, where both moras are vowels (forming a long vowel or diphthong) or a vowel and a sonorant (that is, [m, n, ŋ, l, ʁ]). We could call this a bimoraic tone accent. In at least Moresnet (Jongen, 1972), Borgloon (Peters, 2007) and Hasselt (Peters, 2006) however, tonality is also expressed in syllables where the rhyme consists of a vowel and a non-sonorant consonant (although it has to be noted that Hasselt only has one known intonation contour (Peters, 2006), unlike many other dialects in the area, which therefore have a more complicated system of interaction between tone and intonation). In several pilot studies it is investigated whether, in Lemiers, 'short vowels' (i.e. syllables with a rhyme consisting of a vowel that is one mora long and a non-sonorant consonant) can take on different accents as well as which, and how many, intonation patterns Lemierser has. The main aim of this thesis – describing the quality of tonal words in different intonational contexts – is researched in the experiment which is designed based on the results of the pilot studies.

Rather than just tone (pitch) we will also look at duration (the length of accent 1 is shorter than accent 2 in many dialects (e.g. Jongen 1972, Gussenhoven & Van der Vliet 1999, Hanssen 2005, Peters 2007, Gussenhoven 2009) and intensity contours (loudness) which for the Cologne dialect drops quickly in accent 1 and less quickly in accent 2 (Gussenhoven 2009), meaning that accent 1 becomes less loud quicker than accent 2.

What can we expect the results to be? For at least some Limburgian dialects it is known that there is tonal neutralisation in certain contexts or situations (Hanssen 2005, Gussenhoven & Van der Vliet 1999), which means that it is possible that neutralisation takes place here also. From research into Ripuarian dialects however, it is to be expected that there is no neutralisation in any context, and since Lemierser is a dialect of Ripuarian and not Limburgian, it would be expected that Lemierser is like other Ripuarian dialects. As previously mentioned, due to the extreme proximity of Lemierser both to transitional dialects such as that of Moresnet and to Limburgian, some similarity to or influence of Limburgian is not unlikely. It can be expected that duration for accent 2 is longer than for

accent 1 as in other dialects, and it can also be expected that the intensity for accent 1 drops earlier than for accent 2.

Literature overview

Tonogenesis and the history of Franconian tone

As previously mentioned, the larger area surrounding Lemiers, which encompasses several Franconian languages, exhibits tonal phenomena. There are different distributions of tonal accents in Franconian languages; in the historical development of tone (tonogenesis), different trajectories taken in different areas resulted in two broad classifications: tone distribution A and tone distribution B. Both distributions have in common that there are two tone accents (accent 1 and 2) in which accent 1 is lexically toneless (e.g. Gussenhoven 1999, Peters 2006). Distribution B is the reversal of distribution A (that is, elements taking accent 1 in distribution A take accent 2 in distribution B, and elements with accent 2 in distribution A take accent 1 in distribution B).

Distribution A is further classified into the A and A2 distribution (e.g. Tans, 1938). Roughly speaking we can say that Limburgian follows rule A2, and that Ripuarian follows rule A. What rules A and A2 have in common is that vowels which were *long* and *mid* or *low* in Low and Central Franconian dialects around the year 1100, when (according to Boersma 2006) tonogenesis occurred, now receive *accent 1*, and vowels which were *long* and *high* at that time, *diphthongs*, and vowels which were *short* at the time but have since lengthened, now have *accent 2*.

There is an exception to the accent 2 rule (the rule that long high vowels, diphthongs and short vowels which since lengthened receive accent 2), and this exception is what makes the difference between rule A and A2. In rule A-dialects, long high vowels, diphthongs and originally short (now lengthened) vowels have *accent 1* rather than accent 2 when followed by what was *then* a voiced consonant and a schwa. In rule A2-dialects, however, these vowels have accent 1 under the same conditions as for A-dialects (when followed by what is or at least used to be a voiced consonant and a schwa) *only* if the original schwa has now been deleted (Tans, 1938).

Even though words with tone-carrying elements may have undergone phonological changes since then, they tend not to switch from accent 1 to 2 or vice versa. More recently introduced words with elements which fulfil the criteria for tone-bearing units also receive either accent, such as loanwords like, for example, the Dutch *braadpan* ‘frying pan’ which is pronounced [bʁa:^{1}tpɑn^{1}], *vakantie* ‘holiday’ which is [vɑkɑn^{2}si], the word *auto* ‘car’ which is [ɑu^{1}to], or *baby*, which is [be^{1}bi]. Some (perhaps not so established) loanwords or new words may vary in their pronunciation (they may sometimes receive accent 1 and sometimes accent 2). The mechanism that determines which tone a new word receives (if such a definitive choice for one accent is made at all) is not clear– that said, in the case of

[bʁa:[1]t] we can probably assume that it had to take accent 1 in order not to be confused with [bʁa:[2]t], 'brought'.

Tone and intonation in current-day dialects of Franconian languages

Firstly, how is intonation realised? We have already established that intonation uses pitch patterns, but how does this work exactly in Franconian languages? In sentences, at the start and at the end, so-called boundary tones are used. This means that what intonation 'is' mainly happens at the beginning and at the end of a sentence. The boundary tones, especially the boundary tones at the end, differ over different intonation patterns of the same dialect, which is how different intonation patterns are distinguished. Examples of this in different dialects will be described later.

In the introduction, the existence of durational and intensity differences between accent 1 and 2 were also mentioned. We know that accent 1 is shorter than accent 2 in many dialects (Gussenhoven & Van der Vliet 1999, Hanssen 2005, Gussenhoven, 2009), including Cologne (Gussenhoven & Peters, 2004) although not in Hasselt (Peters, 2006) or Roermond (Gussenhoven, 2000).

No previous work on tone and/or intonation in Lemierser exists. There is also no research about any of the Ripuarian dialects spoken in the Netherlands or any Limburgian dialects in the vicinity of Lemiers so far. Jongen (1972), in his work on the transition dialect of Moresnet, Belgium (which is approximately 10 kilometres from Lemiers) did focus on tone, but did not research different intonational contexts. The lack of tonal descriptions of close dialects means we have to look further afield in order to be able to compare and predict the tonal phenomena we could find in Lemiers; previously described dialects which are geographically closest to Lemiers are the Limburgian dialects of Maastricht (Gussenhoven, 2009) and Sittard (Hanssen, 2005). We will look at the tonal description of these as well as other dialects briefly, although the problem here is that it becomes difficult to hypothesise what the nature of Lemierser tone will be like, as it is unclear where to look for comparison, and, as a result, what to look for in Lemierser. However, even if we cannot give a very accurate hypothesis for Lemierser it is important to know the situation in other dialects so that, once we have results, we can see where Lemierser fits in.

As mentioned in the introduction, for some dialects of languages in the Franconian tone area it has been established that, as well as long vowels or short vowels and a sonorant consonant, *short* vowels (i.e. single moras) can have a tone contrast. Jongen (1972) found this in Moresnet. Hasselt and Borgloon also exhibit the same phenomenon (Peters, 2006 and Peters, 2007, respectively). For Hasselt, Peters (2006) interprets the contrast to be a syllabic instead of a mora-based contrast. Maastricht (Gussenhoven, 2009) does not exhibit this phenomenon of single-mora tone. However, for many other dialects short vowels have not

been investigated and for those dialects, we only know that long vowels or short vowels followed by a sonorant consonant can have tone.

Some dialects exhibit neutralisation of the tonal contrast in some contexts or situations. This has not been reported for Ripuarian dialects. Having said that, research on Ripuarian tonality is very sparse, although there is an analysis for the Cologne Ripuarian dialect by Gussenhoven & Peters (2004). When looking for information on current-day Franconian tone we must therefore rely mainly on research on Limburgian dialects.

In the Cologne dialect (Gussenhoven & Peters, 2004) the intensity drops quickly for accent 1, which Gussenhoven and Peters explain as an enhancing feature which strengthens the effect of the durational cue as it makes accent 1 seem even shorter. They found that the durational cue is quite strong here, stronger than in, for example, Maastricht. Their explanation for the strength of the durational cue is that, since they believe Cologne to be the origin of Central Franconian tone, other dialects which adapted to the Cologne way of speaking strengthened the tonal cue over the durational cue (although both would have been present in the Cologne dialect at the time). This would be opposed to a view where the Cologne dialect strengthened the durational cue with respect to an earlier stage where the durational cue was less salient.

Gussenhoven (2009) found no contrast on short vowels (single moras) for Maastricht Limburgian. As described earlier, we do know that it exists in dialects to the west of Maastricht (Borgloon, cf. Peters, 2007, and Hasselt, cf. Peters, 2006).

Hanssen (2005) investigated the Limburgian dialect of Sittard, which has two intonation contours (declarative and interrogative). In the declarative pattern a distinction between accent 1 and 2 was not always made. The contrast was, in some but not all cases, neutralised when the syllable was in the in the non-focus non-final position and the non-focus final position, whereas this distinction was always made in the interrogative pattern, even when the target word was outside of the sentence focus. The pitch contours are shown in fig. 2.

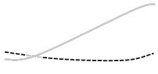
	Focus non-final	Focus final	Non-focus non-final	Non-focus final
Declarative				
Interrogative				

fig. 2: Sittard pitch contours for accent 1 (grey) and 2 (black) in declarative and interrogative sentences, after Hanssen (2005).

In Roermond, there are also two intonation patterns, again a declarative pattern, used for statements and wh-questions, and an interrogative pattern, used for polar (i.e. yes/no) questions (Gussenhoven, 2000). The tonal contrast between accent 1 and accent 2 is neutralised under nonfocused nonfinal conditions. The Roermond pitch contours are shown in fig. 3.

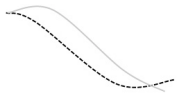
	Focus non-final	Focus final	Non-focus non-final	Non-focus final
Declarative			no contrast	
Interrogative			no contrast	

fig. 3: Roermond pitch contours for accent 1 (grey) and 2 (black) in declarative and interrogative sentences, after Gussenhoven (2000).

When looking at the interaction between tone and intonation we have to keep in mind that the position of the target word in the sentence is important, as well as the position of the focus in the sentence. The focus is the element which receives the emphasis in the sentence, as in the difference between 'It's *your* shoe' and 'It's your *shoe*'. Words at the end of a sentence are also pronounced in an especially salient way. These two factors (focus and finality) are therefore important to take into account. This is corroborated by the fact that partial neutralisation of the contrast (i.e. where contrasting elements become homophonous) takes place in some dialects such as Sittard (Hanssen, 2006) and Roermond (Gussenhoven, 2000) in non-focus non-final contexts.

Another example of how focus and sentence finality play a role is shown in research done by Fournier et al. (2006). They compared the perception of minimal pairs, pronounced in different contexts and taken out of their context, in the dialect of Weert (where the distinction is not tonal but purely durational) and Roermond (where the distinction is mainly tonal and, according to Fournier et al., duration does not play a role in distinguishing accent 1 from accent 2 in perception). The participants were native speakers of the dialect they listened to. Fournier et al. found that, whilst rates of recognition in Weert were generally high, as duration need not be affected by prosody, recognition in Roermond was considerably varied; words in sentence-final and/or focus position were recognised correctly much more often than words in other positions. The fact that finality and focus made a difference in the tonal Roermond dialect shows that the difference between contrasting words is at least less salient in non-final and/or non-focus positions.

This overview of Franconian tone has given us the basis for our hypotheses regarding Lemierser tone: no neutralisation, similarity to Cologne. However, before embarking on

research, we will take a closer look at Lemierser itself, in order to see what we know or can infer about its tonal properties given the above overview.

Some notes on Lemierser

Firstly, we will establish why Lemierser classifies as a Ripuarian dialect. As previously mentioned, Ripuarian falls 'below' the Benrath line, which distinguishes Central German from Low German and Dutch. The words given below contain High German consonant shift-typical affricates and fricatives (the relevant consonants are in bold).

etymological [t]

affricate (onset)	*fricative* (coda)
[**ts**βei^{2}] 'two'	[e:^{2}**s**ə] 'to eat'
[**ts**eŋ^{1}] 'ten'	[bi:^{2}**s**ə] 'to bite'
[**ts**ɑŋ^{2}k] 'tooth'	[we:^{2}**s**ə] 'to know'

etymological[k]

fricative (coda) *only*

[ma:^{2}**χ**ə] 'to make'

[da:^{2}**χ**] 'roof'/'day'

[ɔ**χ**ə] 'from/belonging to (the city of) Aachen'

[dy:^{1}dəle**ç**] 'clear'

etymological [p]

fricative (coda) *only*

[ʃlɔ**f**ə] 'to sleep'

[kʁu:^{2}**f**ə] 'to crawl'

[lo:^{2}**f**ə] 'to walk'

N.B. Here, we can see that, syllable-finally, what could be called /x/ (etymological /k/) is realised as [ç] after front vowels and as [χ] after back vowels. Etymological /g/ can also become [ç] syllable-finally after front vowels as in [lyç] 'tell a lie (1st pers. pres.)', [lɪ:^{1}ç] 'lay (1st pers. pres.)' but not [li] 'lie (1st pers. pres.)'. Etymological /g/ becomes [ʁ] after back vowels as in [vʁɔaʁə] 'to ask', [jəlɔaʁə] 'lied (perf. part.)', whereas etymological /k/ does not, as in [ma:^{2}χə]. This situation is somewhat similar, although not identical, to that found in Cologne (cf. Gussenhoven & Peters, 2007).

Although not subject to investigation here, we would like to note that a characteristic feature of many Ripuarian dialects is the shift from syllable-initial /g/ [ɣ] (previously [g]) to [j]. Lemierser exhibits this feature; however, the shift is not complete and [ɣ] was not completely replaced by [j] in (syllable) consonant clusters. Thus, we get variation in words like [ɣruə^{1}s/jruə^{1}s] 'big' in Lemierser, which would be [jruə^{1}s] 'big' in Kerkrade Ripuarian (cf. the entry for *jroeës* in the dictionary for Kerkrade Ripuarian: the *Kirchröadsjer Dieksejoneer* (1997)). Perhaps we could say that what we can see is a fuzzy boundary

towards the Limburgian [ɣ]. Does this mean that Lemierser should be classified not as a Ripuarian dialect but as a transition dialect? No, because the difference between Limburgian and Ripuarian is not made based on the prevalence of syllable-initial [j], but rather on the prevalence of the High German consonant shift.

Looking at the distribution of tone, we have to establish whether Lemierser follows the A or the A2 rule. Therefore, we have to look at the pronunciation of words which originally had long high vowels, diphthongs or short vowels which have since then lengthened, followed by an originally voiced consonant and a schwa, where the schwa has not been deleted. After all, under the A2 rule *only* words of this type where the schwa has been *deleted* receive accent 1, and words of this type where the schwa has not been deleted receive accent 2, where under the A rule all words of this type which originally had a schwa received accent 1 as well. When we look at Lemierser words with an originally long high vowel such as [bli:[1]və] 'to stay', or with a lengthened originally short vowel such as [le:[1]və] 'to live' and [za:[1]ʁə] 'to say', we must conclude that Lemierser follows the A rule.

Having now described what we know about Lemierser as well as what we know about tonal dialects within the Franconian tone area, we can now say that the situation for Lemierser should, given the nature of Lemierser, be like that of other Ripuarian dialects: no neutralisation in any contexts (following what little we do know about Ripuarian dialects). The duration of accent 1 words is expected to be shorter than that of accent 2 words and the intensity of accent 1 elements is expected to drop earlier than that of accent 2 elements.

Pilot studies

Preliminary to the investigation into the interaction between tone and intonation (as described under 'Experiment'), several other factors which might or might not influence the nature of tonality in Lemierser were investigated in small pilot studies: which intonation patterns can be identified and can a tonal contrast occur on monomoraic elements as well as bimoraic elements (as is the case in, for example, Moresnet (Jongen, 1972))? These questions had to be answered in order to design the experiment. For the recordings, the sentences were read out by the female native speaker participant (61 years of age) and recorded using a CAD U37 microphone in a quiet (but not soundproof) room.

Intonation patterns

In the wider area three or four intonation patterns tend to be distinguished: a declarative pattern, an interrogative pattern, sometimes a wh-interrogative pattern (distinct from the interrogative pattern), and a continuation pattern. In order to see whether there is an intonation difference between some or all of these sentence types in Lemierser, sentences for each type were devised and read out by the participant.

Thus, our participant read the following sentences, for which we will show a pitch contour:

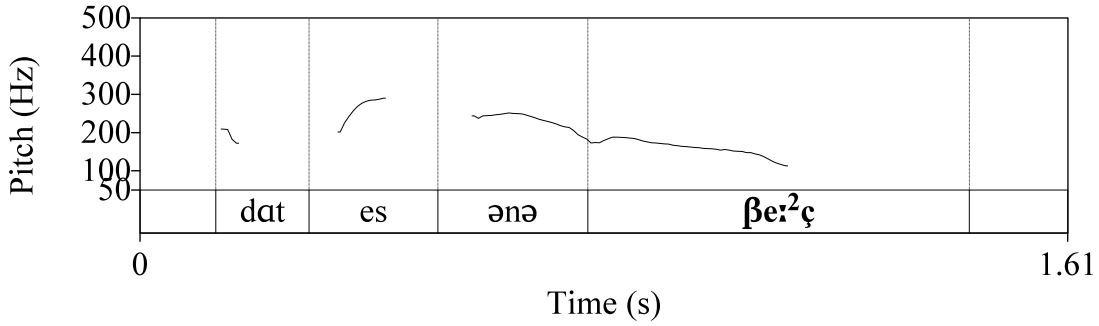


fig. 4: declarative sentence pitch contour with final focus

Dat	is	inge	*weech*.
That	is	a	road.

'That's a road.'

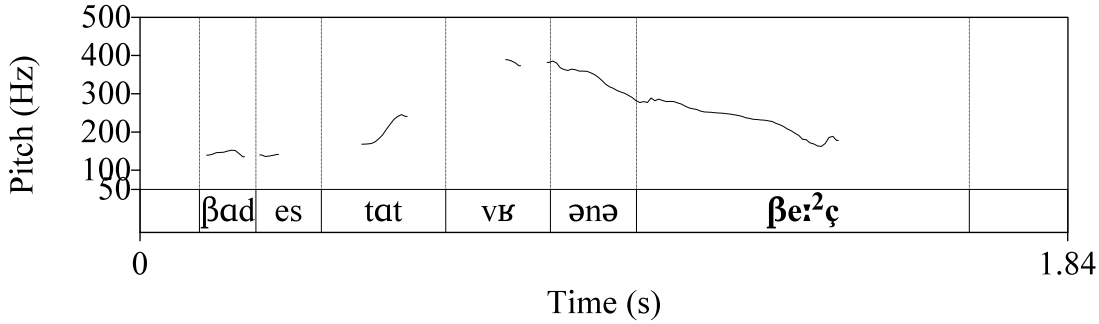


fig. 5: wh-interrogative sentence pitch contour with final focus

Wat	is	dat	vur	inge	*weech*?
What	is	that	for	a	road?

'What kind of road is that?'

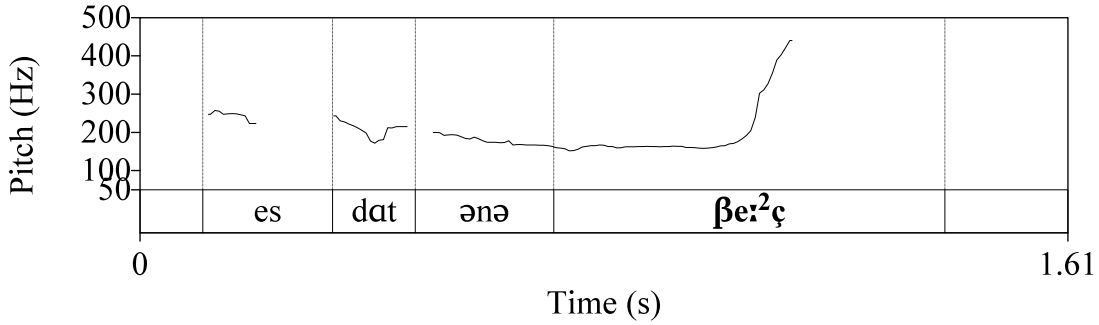


fig. 6: polar interrogative sentence pitch contour with final focus

Is	dat	inge	*weech*?
Is	that	a	road?

'Is that a road?'

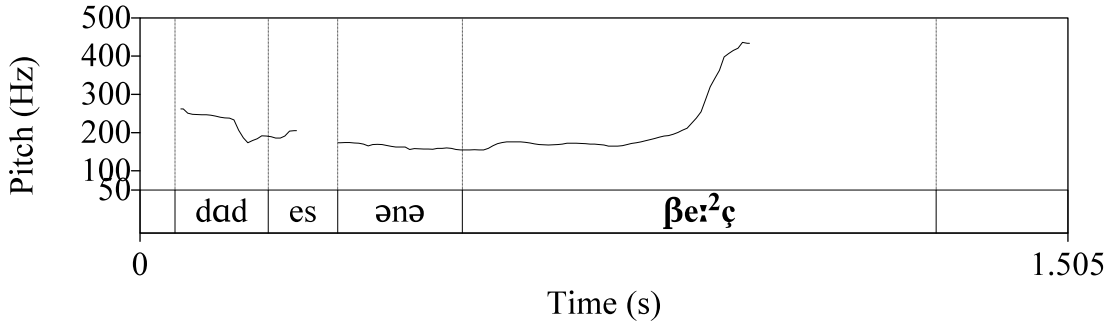


fig. 7: continuation sentence pitch contour with final focus

Dat	is	inge	*weech*,	dat	is	e	vospad,	dat	is	inge	boom
That	is	a	road,	that	is	a	pavement,	that	is	a	tree

'This is a road, that's a pavement, that's a tree…'

(Note, only the first part is shown, the rest served as a continuation intonation inducing context)

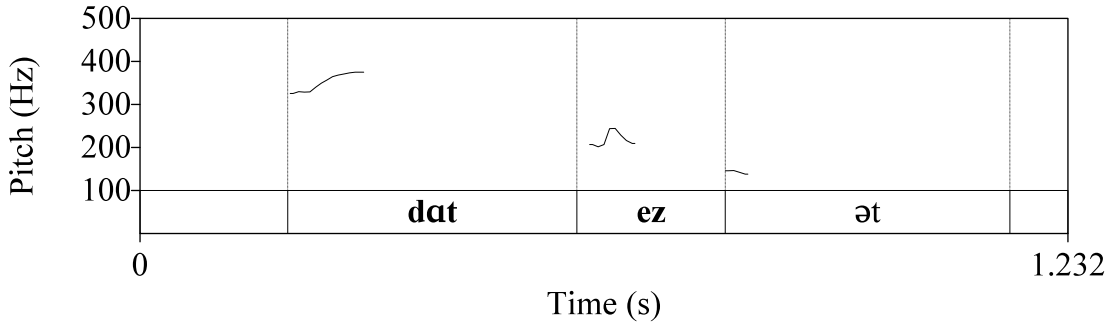


fig. 8: declarative sentence pitch contour with non-final focus

Dat	**is**	ut.
That	is	it

'That *is* it.'

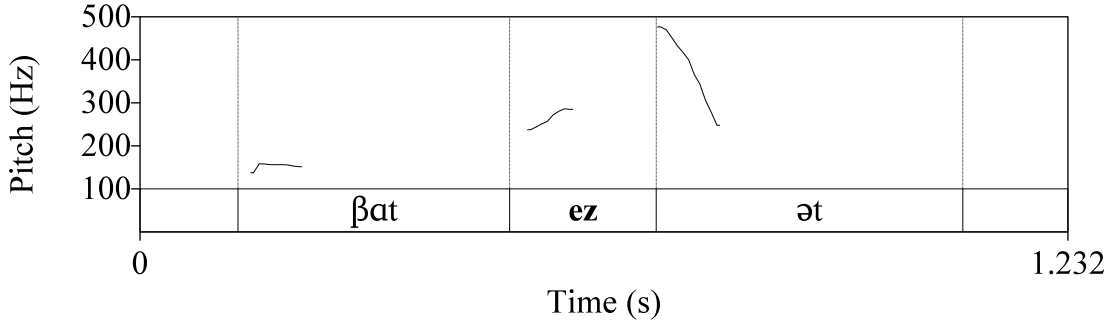


fig. 9: wh-interrogative sentence pitch contour with non-final focus

Wat	**is**	ut?
What	is	it

‘What *is* it?’

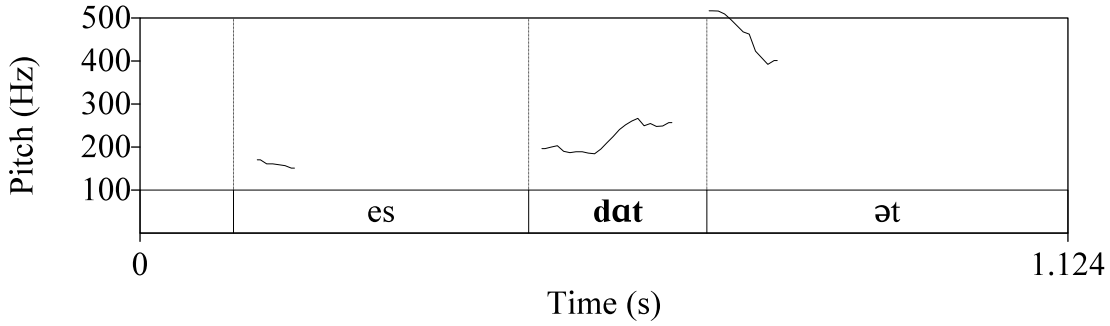


fig. 10: polar interrogative sentence pitch contour with non-final focus

Is **dat** ut?

Is that it

‘Is *that* it?’

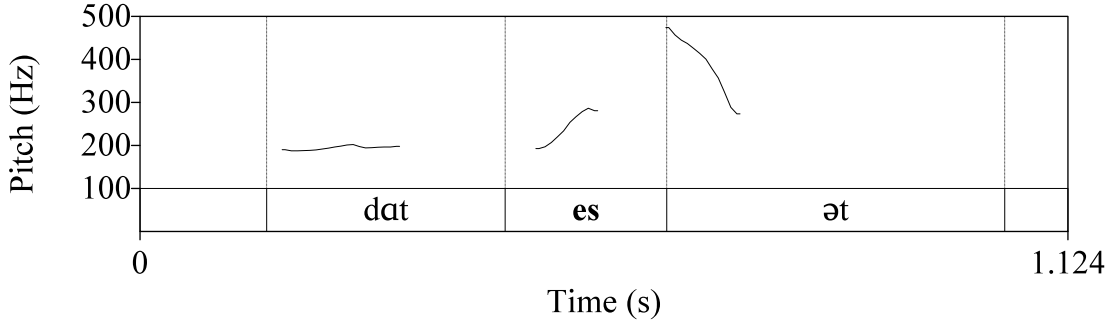


fig. 11: continuation sentence pitch contour with non-final focus

Dat **is** ut, dat **woar** ut.

That is it, that was it

(Note, only the first part is shown, the rest served as a continuation intonation inducing context)

Comparing the patterns used in these sentences, it becomes clear that the yes/no-question (polar interrogative) pitch contour is, apart from differences due to the words used, identical to that used in the list (continuation), and that the declarative pitch contour is different from these. The situation for the wh-questions (wh-interrogative) intonation is a little more complicated; when the focus is non-final (as in fig. 8-11) the wh-interrogative contour is like that of polar interrogative/continuation sentences, but when the focus is sentence-final (as in fig. 4-7) the wh-interrogative contour behaves like the contour for declarative sentences.

If, tentatively, we would like to pose a phonological analysis of these intonation patterns, we should probably include a low start tone (as all sentences apart from fig. 8, which accidentally includes initial focus, start low) for all types. The boundary tone at the end would then be low for declarative sentences (and wh-interrogative sentences with final

focus), because the sentences concerned (fig. 4, 5, 8) show a low pitch on the final syllable, and it would be high followed by low for polar interrogative sentences (and wh-interrogative sentences with non-final focus), as is evidenced by the steep fall in fig. 9, 10 and 11. Since fig. 6 and 7 include an accent 2 word in final focus, we see that the steep fall is not replicated here, but we can probably ascribe this to the interaction between accent 1 and the boundary tones (i.e. the interaction between tone and intonation), and will look at this in more detail in the conclusion.

Elements with tone contrast

From the history of Franconian we can (usually) reliably predict which syllables receive which accent. In some current-day Franconian dialects such as Moresnet (Jongen, 1973) and Hasselt (Peters, 2006), not only bimoriac but also monomoraic elements (short vowels) can express a tone contrast. We will investigate whether Lemierser monomoraic elements carry tone by comparing minimal pairs which should theoretically receive different accents. Firstly, *bruk* [bʁøk] 'bridge' was compared to *sjtuk* [ʃtøk] 'piece' in sentences. Historically, [bʁøk] ended in a voiced consonant followed by a schwa and [ʃtøk] did not, which would mean that following the A rule (see under *Tonogenesis and the history of Franconian tone*, pg. 7), if these words have tone, [bʁøk] would have accent 2 and [ʃtøk] would have accent 1.

Whether a word with a short vowel which receives tone occurs in a voiced or unvoiced context can make a difference to whether the contrast can be perceived or not. Therefore, sentences were constructed where the target word was followed by a word starting with a voiced phoneme. This means that a word like [bʁøk] or [ʃtøk] followed by a word like [es] 'is' should be pronounced [bʁøges] or [ʃtøges], respectively. For contrast, sentences where the target word was followed by a word starting with a voiceless phoneme (meaning the coda of the target word does not become voiced) were also recorded.

In a non-focused position, no difference between the two words was found. In focus the findings were complicated by the fact that the target word was not pronounced with a voiceless coda. Whilst one might assume that this was due to the nature of the reading task (where the word was represented ending in a letter 'k' and therefore a voiceless consonant) the participant objected that it was simply not 'natural' for her to pronounce this word in focus ending in a voiced consonant, and that she would only use a voiced consonant in non-focus positions.

However, it could be observed that, in focus position, the pitch on the vowel in [bʁøk] was raised earlier, and it was unclear whether this constituted a proper tone contrast or whether it was caused by the difference between the voiced onset in [bʁøk] and the voiceless onset in [ʃtøk]. If caused by the difference in onset the contrast would not be one of tone and would also not be phonological. Therefore, [bʁøk] was then compared to another voiced-onset word which should receive accent 2; [bʁɔk] 'chunk'. Whilst the vowel is different, this should not affect the pitch.

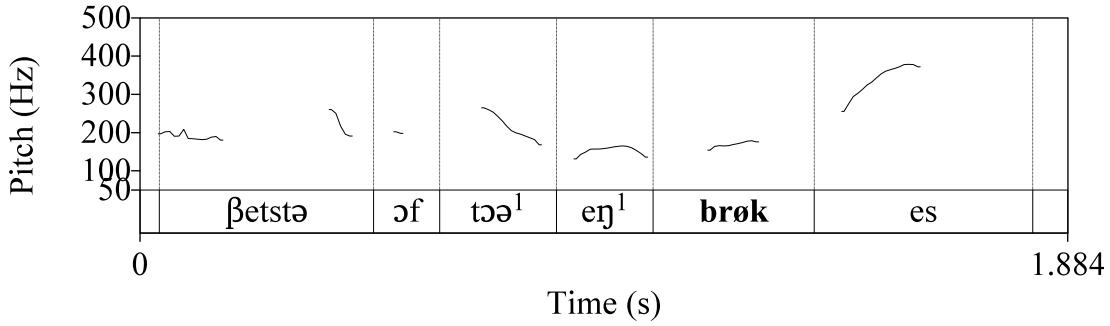


fig.12: 'bruk is' in interrogative focus non-final position.

Witste	of	doa	ing	**bruk**	is?
Know.you	if	there	a	bridge	is?

'Do you know whether there's a bridge there?

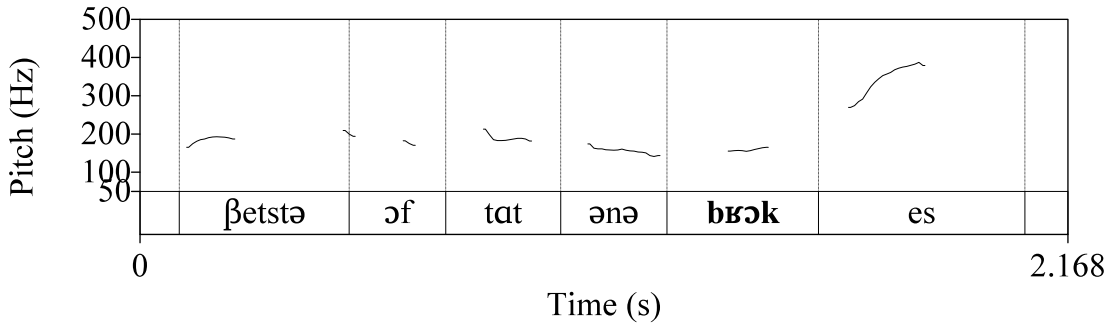


fig. 13: 'brok is' in interrogative focus non-final position.

Witste	of	dat	ing**e**	**brok**	is?
Know.you	if	that	a	chunk	is?

'Do you know whether that's a chunk?

As we can see, in focus position there was no difference between [bʁøk] (fig. 12) and [bʁɔk] (fig. 13), which leads us to the conclusion that there is no tone contrast on short vowels in Lemierser before obstruents.

Vowel and consonant inventory

In order to transcribe sentences and words in this thesis, an attempt is made to classify vowels and consonants used in Lemierser phonologically as well as phonetically (phonetic variants or allophones of the same phoneme are shown in brackets), using the data from the previously described pilot studies as well as a test run of the experiment done with the same pilot participant. The resulting description presented here also serves as the legend for the transcriptions throughout this thesis (although it should be noted that the transcriptions are phonetic rather than phonological).

Vowels

	front		*central*	*back*	
close	i iə	y yi			u uə
close-mid	e ei	ø øi			o
			ə *in unaccented syllables only*		
open-mid	ɛ				ɔ
open	a			ɑ ɑu	

The distinction between long and short vowels is not the same as the distinction between the shorter accent 1 and the longer accent 2; this contrast occurs on two moras, meaning that, where long vowels (with a length of two moras) are concerned, even though accent 2 vowels are longer than accent 1 vowels, accent 1 vowels still cannot be classified as short. Some long open-mid and close-mid vowels sometimes diphthongise, particularly to a schwa or [ɑ] sound. Whether a vowel diphthongises can vary even on the same word with the same word accent, as we will see in the transcriptions of sentences in the experiment.

Consonants

Syllable-intially, intervocally and syllable-finally

β		[βɔɑ^{1}, ʃβɔɑ^{1}ʁ] ‘where, heavy’
p (b)		[op, ob ət] ‘on, on the’
b (p)		[bɛʁ^{1}ç] ‘hill/mountain’
f (v)		[loː^{2}fə, loː^{2}v əns] ‘to walk; come on, walk!’
m		[mɔn^{1}t] ‘moon/month’
t (d)		[dɑt, dɑd es] ‘that, that is’
d (t)		[deŋ^{2}k, ət teŋ^{2}k] ‘thing, the thing’
s (z)		[es, ez ət] ‘is, is it’
n		[bʁun^{2}] ‘brown’
l		[laː^{2}χ] ‘laugh’
ʃ		[ʃwei^{1}əʃə] ‘sister-in-law’
ʒ	*in loanwords*	[tɑtuaːʒ^{1}ə] ‘tattoo’
k (g)		[kop, zɑk, zɑk es] ‘head, bag, bag is’
ʁ (χ)	*only one instance of* [ʀ] *in our data*	[ʁɔː^{2}s, ɦɑt χɔː^{2}s] ‘rust, has rust’

Syllable-initially and intervocally only

v (f)		[viʁ^{1}, ət syn^{2}t fiʁ^{1}] ‘four, they are four’
ts		[tsɑŋ^{2}k] ‘tooth’
z (s)		[zuː^{1}, es suː^{1}] ‘like that, is like that’
j	*sometimes* [ɣ] *in complex clusters*	[jot, jʁɔt, ɣʁɔt] ‘good, cave’
ɦ (h)		[ɦiyi^{1}, es hyi^{1}] ‘today, is today’

Syllable-finally and intervocally only

ŋ (n)	*alternates with* [n] *in function words*	[eŋ, ən] 'a-FEM, a-FEM (unemphasised)'
χ	*after front vowels* ç (j̟, j)	[iç, ij̟ ɛvəl, ij ɛvəl] 'I, I however'
	after back vowels χ (ʁ)	[oχ, oʁ ɑl] 'too, already too'

For consonants which can be devoiced or voiced, the devoiced or voiced variant is shown in brackets, as well as an example of a devoiced or voiced context.

Experiment

In this experiment, the interaction between tone and intonation in Lemierser is investigated, using information about Lemierser intonation patterns gathered in the pilot studies.

Method

Lemierser sentences were constructed and these were produced by a native speaker. This section focuses on how and why the sentences were constructed the way they were, and the way they were analysed after recording. Before recording a naïve native speaker, a pilot of the experiment was done with a native speaker who was not entirely naïve on the subject, in order to be sure that sentences were nativelike, readable (spelling-wise, as we are dealing with a largely unwritten language) and that focus was realised in the right place. Obviously, a reading task does not tell us everything about how people speak in day-to-day life. It would therefore be preferable to work with data from 'natural' speech such as conversations. Since, however, there are so many conditions we want to investigate, it would require huge amounts of data and would be a mammoth task to analyse. Compromises would also need to be made, as it is unlikely that it would be possible to find suitable sentences of every kind required (i.e. words of every type needed in every type of context needed) in any amount of natural speech data, and it is therefore the better option to work with a reading task, however imperfect from a 'natural speech' point of view this may be.

Sentence construction

In order to investigate the interaction between tone and intonation words with either accent 1 or 2 have to be placed within a sentence. In experiment 1, three sentence intonation patterns were identified for Lemierser: *declarative*, combined *wh-interrogative* (questions starting with who, what, where, how, why) and *continuation* (used e.g. in lists), and *interrogative*. As previously mentioned, when dealing with intonation we also have to deal with focus: the emphasis can be in different places in the sentence within the same intonation pattern ('Did you do that?' could be e.g. '*Did* you do that?', 'Did *you* do that?' or 'Did you do *that*?'). This, coupled with the fact that sentence-final words are always more

salient than pre-final words means that for each intonation pattern, five different focus conditions have been established: the target word can have a pre-focal, focal final, focal non-final, post-focal final, or post-focal non-final position in the sentence. In the pilot version of the experiment it became clear that sentence-initial target words differed from other non-final target words in that they showed what could probably be analysed as an initial boundary tone, which means that in order to keep data consistent in the final experiment, non-final target words were not put in sentence-initial position but were preceded by at least one other content word.

Eight target words were used for the sentences; each part of a minimal or near-minimal tone pair. Both words in a minimal pair were written in the same spelling. All target words are shown below.

Target words, presented in minimal (or near-minimal) pairs

roos [rɔː^{1}s] ‘pink’	*roos* [rɔː^{2}s] ‘rust’
weech [βɛː^{1}ç] ‘roads’	*weech* [βɛː^{2}ç] ‘road’
erm [ɛʀ^{1}m] ‘arms’	*erm* [eʀ^{2}m] ‘arm’
jans [jɑn^{1}s] ‘goose (sg.)’	*jans* [jɑn^{2}s] ‘whole’/‘very’

Finding minimal pairs was made difficult by several factors. In testing sentences for readability with a participant not included in the final experiment, singular-plural pairs, of which there are several, were easily mixed up and so participants frequently had to be corrected and sentences re-recorded. Whilst number pairs are, in theory, easily made into a sentence (sentences can stay virtually the same for both, only number needs to be changed), the participant often seemed to miss the number indication in the determiner (e.g. *d’r weech* [dʀ wɛː^{2}ç] ‘the road’ vs. *de weech* [də wɛː^{1}ç] ‘the roads’) meaning the sentence had to be rerecorded. Another problem was that few minimal pairs of the vowel plus sonorant consonant variety could be found.

Therefore, the actual experiment presented is a compromise which contains only two minimal pairs that differ in number ([wɛː^{1}ç / wɛː^{2}ç] and [ɛʀ^{1}m / eʀ^{2}m]), one of which is a near-minimal pair ([ɛʀ^{1}m / **e**ʀ^{2}m]) due to the lack of vowel plus sonorant consonant minimal pairs. The use of the [rɔː^{1}s / rɔː^{2}s] pair was less problematic than number pairs; the target word was simply printed in the colour it denotes in cases where confusion could arise: they were then printed roos (in pink) for [rɔː^{1}s] ‘pink’ and roos (in brown) for [rɔː^{2}s] ‘rust’, and this worked well in the readability pilot. The [jɑn^{1}s / jɑn^{2}s] pair was least problematic to distinguish, due to one ([jɑn^{1}s] ‘goose (sg.)’) being a noun and the other ([jɑn^{2}s] ‘whole’ / ‘very’) an adverb, although for the very same reason this minimal pair made for the oddest sentences, which were often not syntactically the same.

For each of the eight words, five focus condition sentences were made per intonation type, resulting in fifteen sentences per word and 120 sentences in total. In order to elicit the wh-

interrogative/continuation pattern, either wh-questions or continuing strings such as lists could in theory be used. Here, wh-questions were used, rather than e.g. lists, as questions can be shorter.

The focus word or words in any given sentence were printed in italic type. In order to make the target focus more natural in sentences where the focus would naturally fall elsewhere, emphatic words were used, as in **(example).** This increased the chances of the participant reading the sentence with the right focus, as even with the focus printed in italics it cannot be assumed that a naïve participant will read a sentence with an 'odd' focus correctly. Another way to make sentences more natural was to add context as in (example), where the first sentence (which was not analysed) was read out by the researcher, and the second sentence was the target sentence, produced by the participant. All sentences and their English transcription and translation can be found in the appendix.

The sentences were presented to the participant in writing, and although there is no established writing system for Ripuarian as it is not as such a written language, the spelling used to represent Lemierser here was designed to create as little confusion as possible for the participant, rather than to be consistent with the spoken language or to create a one-to-one correspondence between grapheme and phoneme. This means that sometimes, different phonemes are represented using the same symbol, and the same phoneme may be represented in different ways. The spelling approximates a mixture of German and Dutch spelling and *Veldeke* spelling (Bakkes et al., 2003) which is often used to represent dialects in the area. The *Veldeke* spelling was not used in its original form because some of the letters and diacritics used to represent phonemes might at first sight seem odd for those not familiar with this spelling.

Participant recording

The participant was a native speaker aged 64, who had lived in the village of Lemiers all of his life. Although the participant had been informed that the experiment had been designed to investigate Lemierser, he was unaware of the specific research goal. As with the pilot studies, the sentences were read out by the participant and recorded using a CAD U37 microphone in a quiet (but not soundproof) room.

Analysis

Individual sentences were cut from the recordings. The pitch contour of each sentence was analysed using automatic pitch detection in Praat (version 5.2.14, Boersma & Weenink, 2011). As this pitch detection is sometimes erroneous (showing blips in the pitch contour which are not there in the data) variable analysis settings were used (the pitch range used by the participant differed in different sentences, therefore different analysis ranges were used). Pitch contours were also smoothed out in the case of blips. A phonetic transcription as well as an indication of word boundaries were put in TextGrids (Praat's annotation

structure) accompanying the pitch contour. Durations of target words were measured and mean durations of accent 1 words and of accent 2 words were calculated for every context. Praat's intensity contour function was also used.

Results

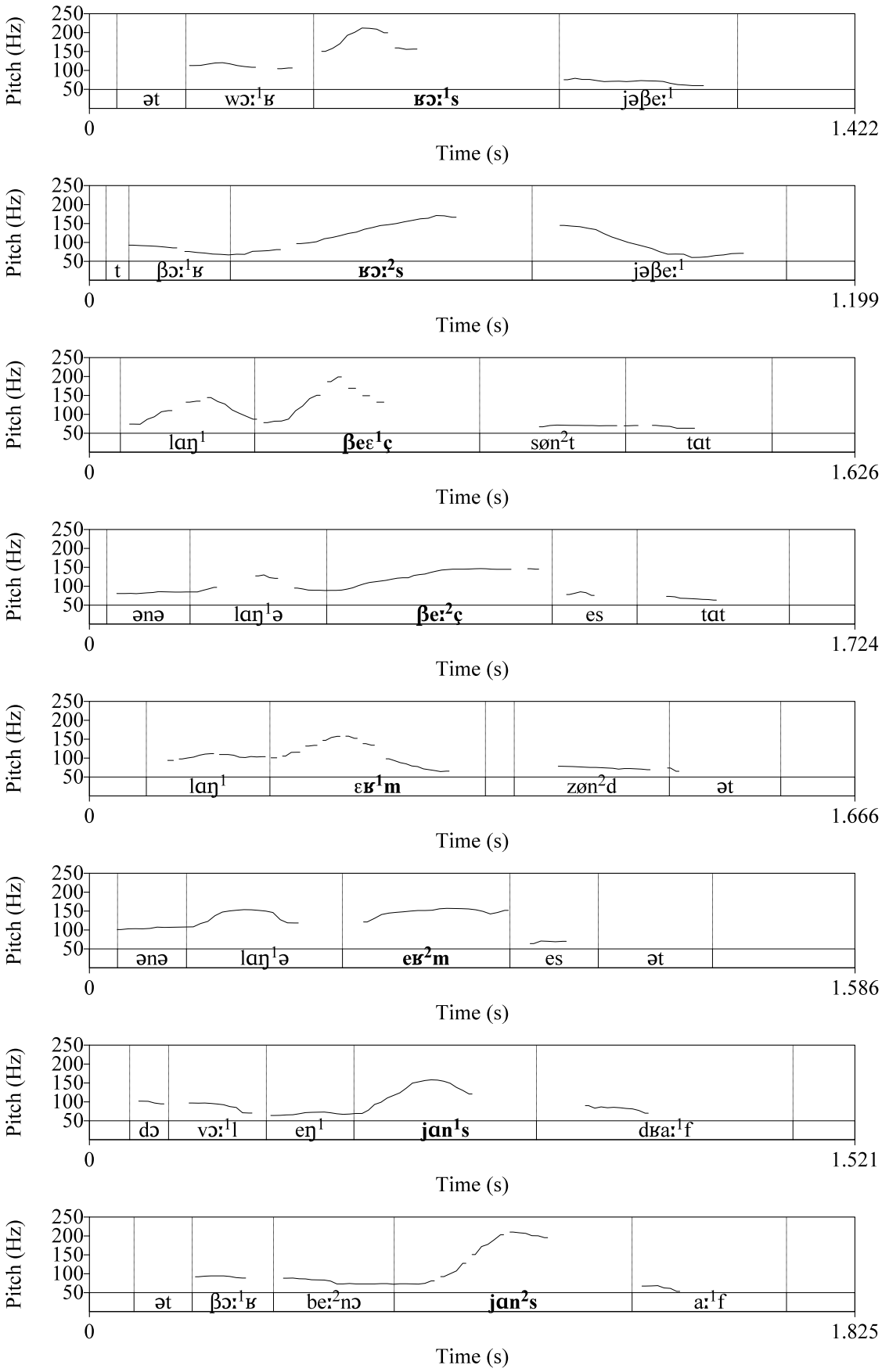
For each condition there were three variables: intonation pattern, focus type and finality. For every condition, there were four relevant target words with the same accent (one half of each of the four minimal pairs). We will show all the pitch contours (accompanied by their transcription and word boundaries, and focus words in **bold**) of every condition individually, as well the original text as it was read out by the participant with a translation on the next page. A stylised contour for all conditions (without the durational difference) was also made, in which the black line signifies accent 1 and the dotted line signifies accent 2. The sentence translations can be found in the appendix.

Some notes on the transcription: this transcription is phonetic rather than phonological. The reader may notice that sometimes the same word can have a short vowel or a long vowel or diphthong, as in, for example *wo/woa* ('where') which can be either [βɔ] or [βɔə^{1}], even in a similar context. The alternation is apparently random. Although not found in the data presented here, it is also possible for some words to receive either accent 1 or 2 as in *heij* ('here') which can be either [ɦei^{1}] or [ɦei^{2}]; exactly when or why this is the case is unclear.

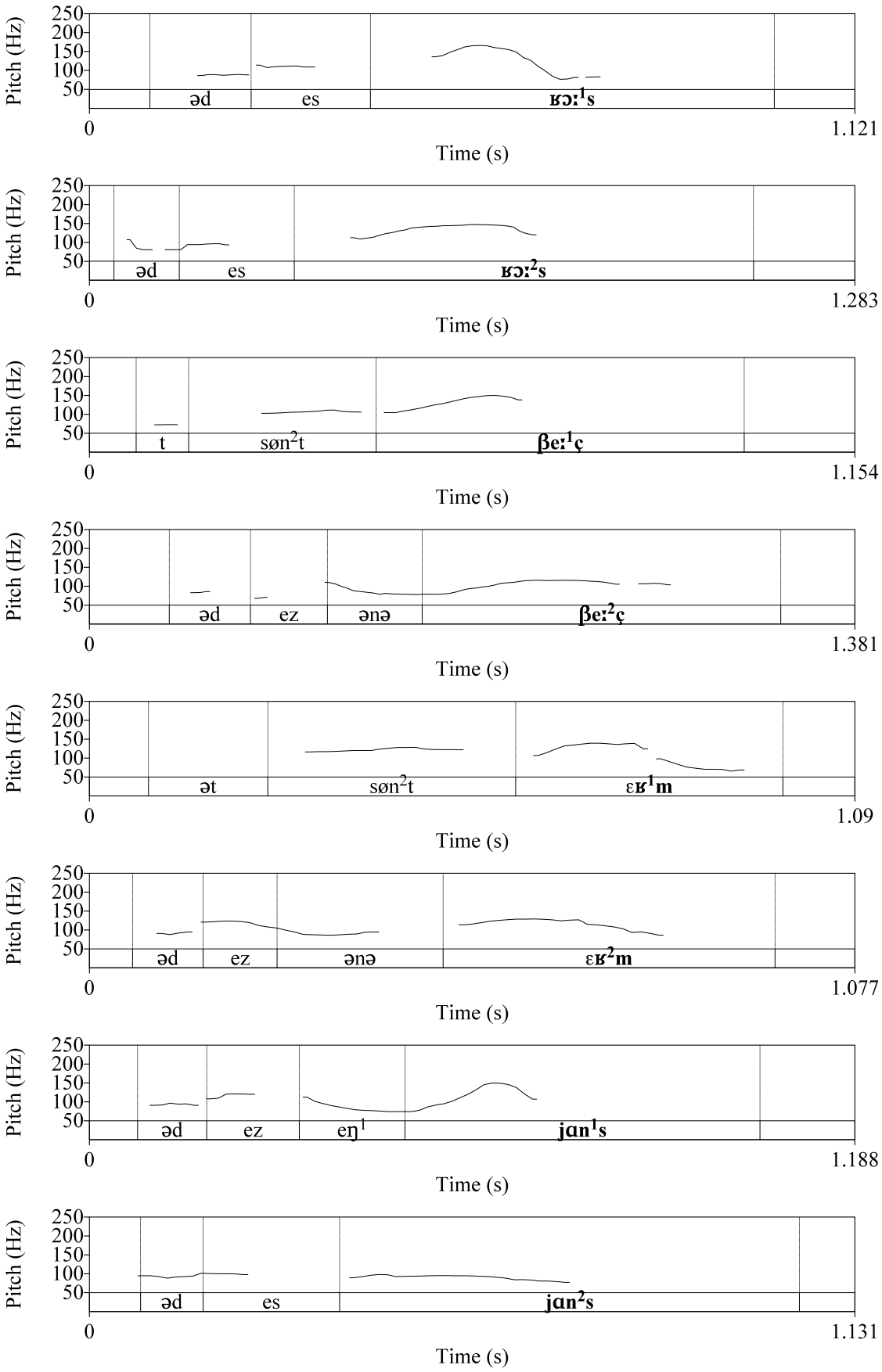
The eight target words are repeated here, in the order in which their pitch contours appear:

roos [rɔː^{1}s] 'pink'
roos [rɔː^{2}s] 'rust'
weech [βɛː^{1}ç] 'roads'
weech [βɛː^{2}ç] 'road'
erm [ɛʀ^{1}m] 'arms'
erm [eʀ^{2}m] 'arm'
jans [jɑn^{1}s] 'goose (sg.)'
jans [jɑn^{2}s] 'whole'/'very'

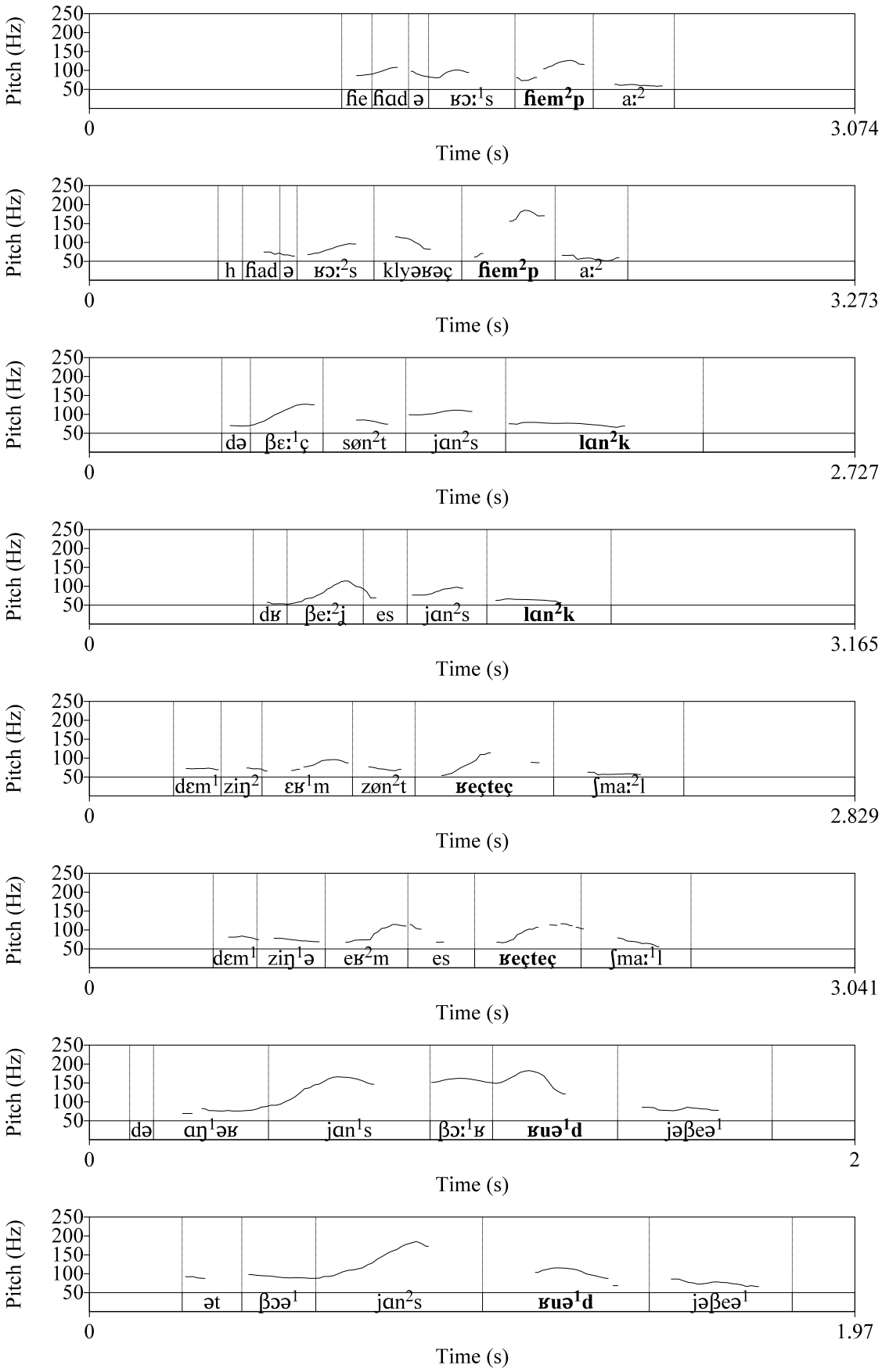
Declarative focus non-final context



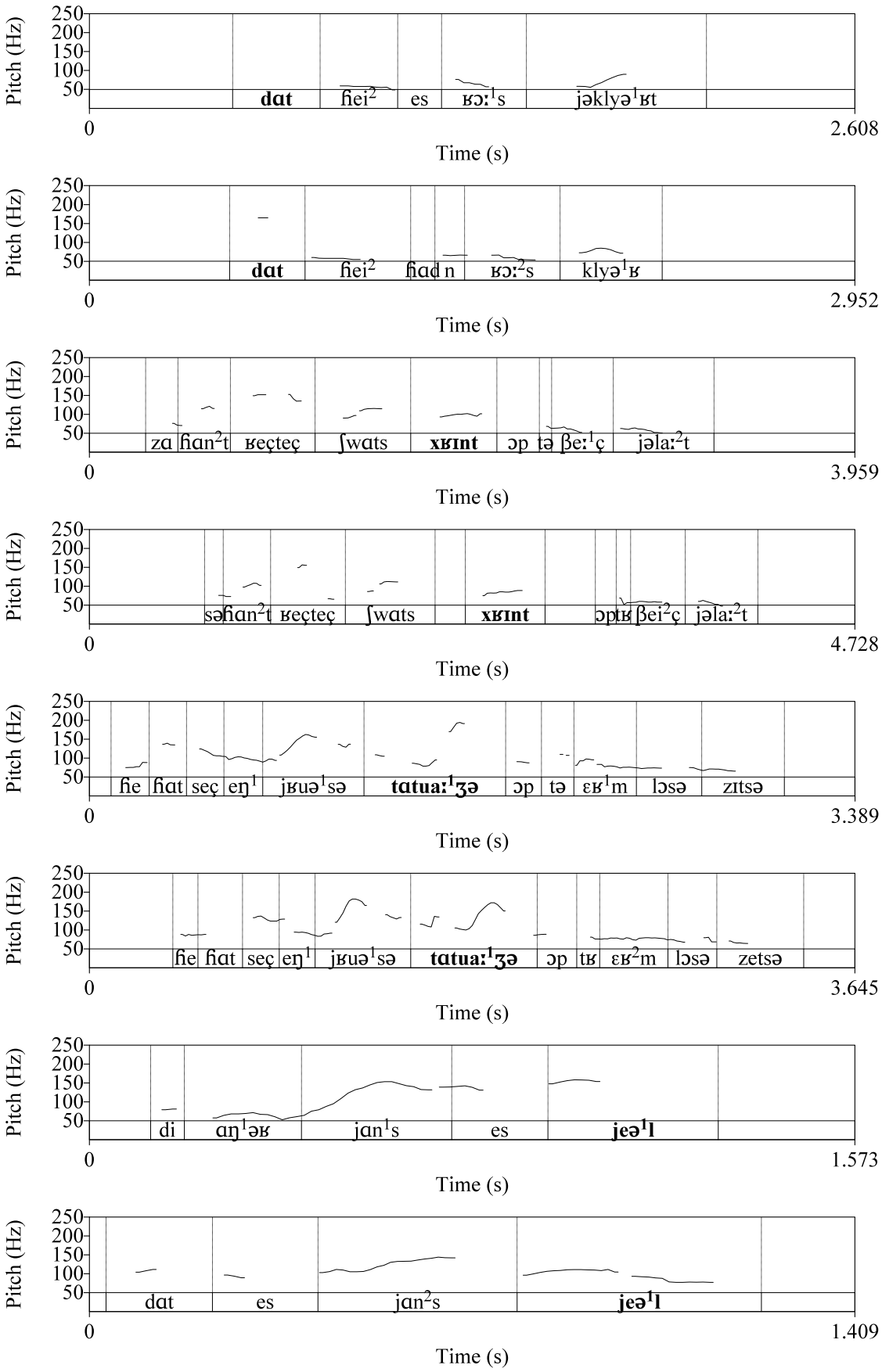
Declarative focus final context



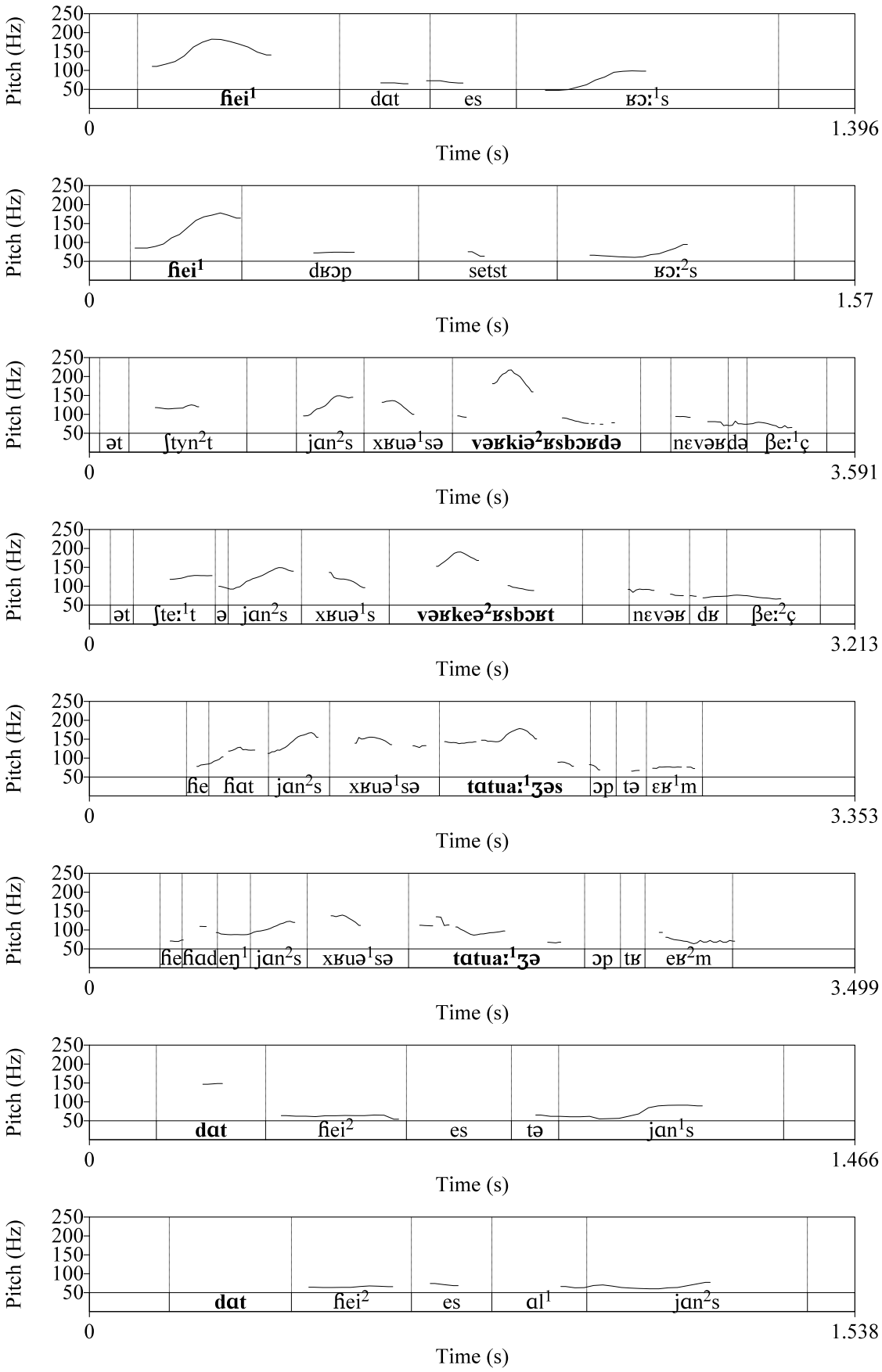
Declarative pre-focus non-final context



Declarative post-focus non-final context



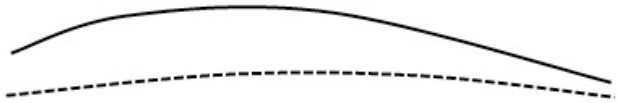
Declarative post-focus final context



Declarative focus non-final

The mean duration for accent 1 words is 0.4425 s and the mean duration for accent 2 words is 0.475 s. In these first pitch contours we can see that accent 1 on target words constitutes a short rise and fall, whereas accent 2 on target words constitutes a rise that is much longer in duration with respect to accent 1, and a drop that is less sharp, if at all present.

Declarative focus final



The mean duration for accent 1 words is 0.5175 s and the mean duration for accent 2 words is 0.645 s. Both accents rise and fall, but the contour for accent 2 stays flatter when compared to the contour for accent 1 and accent 1 shows a sharper drop towards the end.

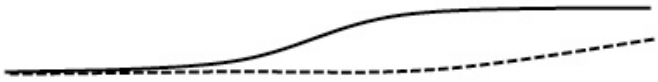
Declarative pre-focus non-final

The mean duration for accent 1 words is 0.34 s and the mean duration for accent 2 words is 0.35 s. For *roos* and *jans* we see an earlier rise for accent 1 and therefore a contrast. The other two pairs, however, do not show a tone contrast but they are distinguished by vowel quality.

Declarative post-focus non-final

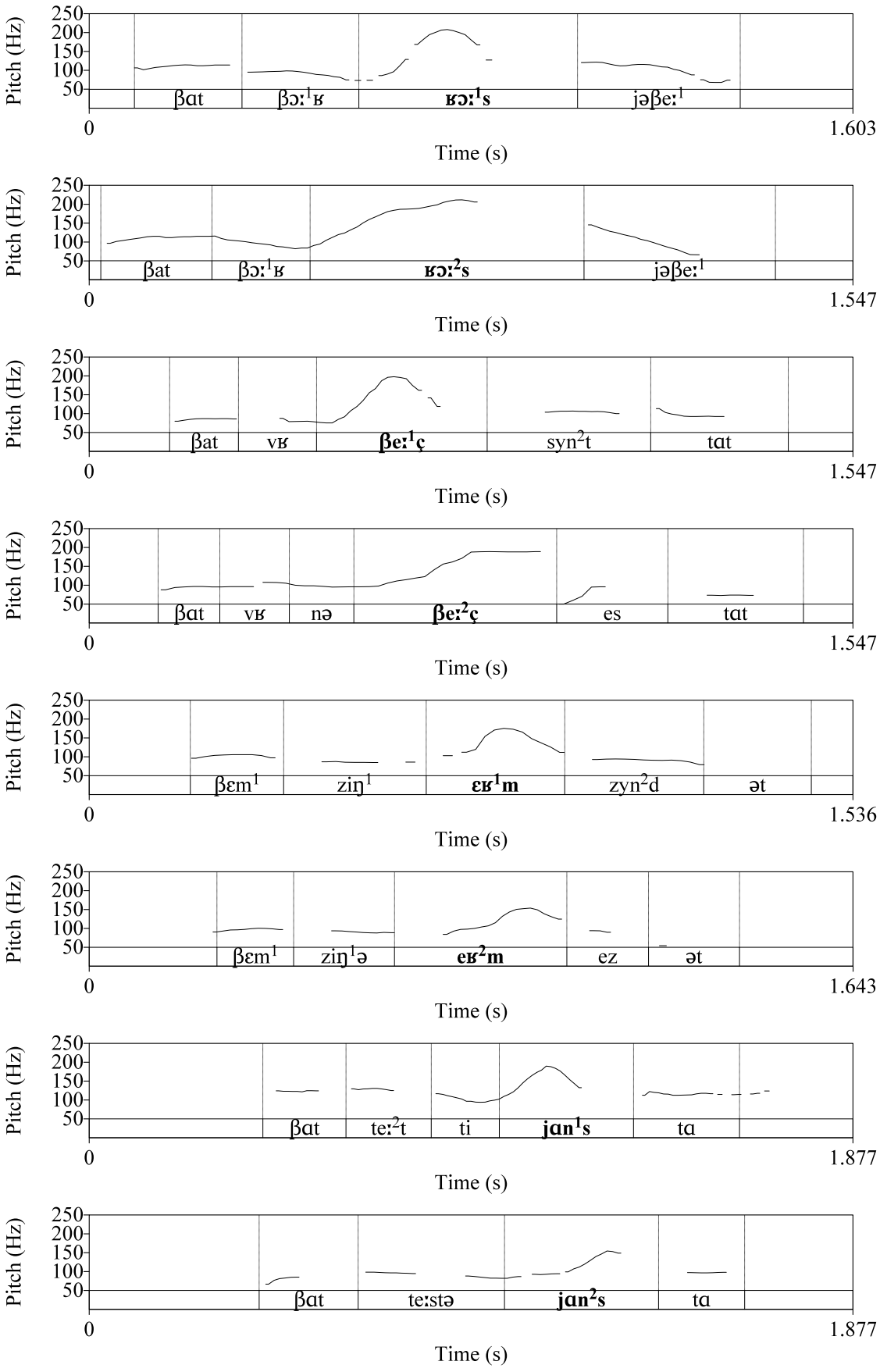
The mean duration for accent 1 words is 0.3 s and the mean duration for accent 2 words: is 0.35 s. The durational difference thus tends to be quite large (0.05 s on average). No contrast can be perceived for *roos*, but there is a contrast for *weech* and *erm* (accent 1 rises slightly and drops, accent 2 stays flat). The data for *jans* are excluded from the analysis because the sentence for [jɑn^{2}s] was read with the wrong intonation. Interestingly, it can be observed that the vowel quality for *erm* is the same in both cases: [ɛʀm], rather than their citation forms [ɛʀ^{1}m] and [eʀ^{2}m].

Declarative post-focus final

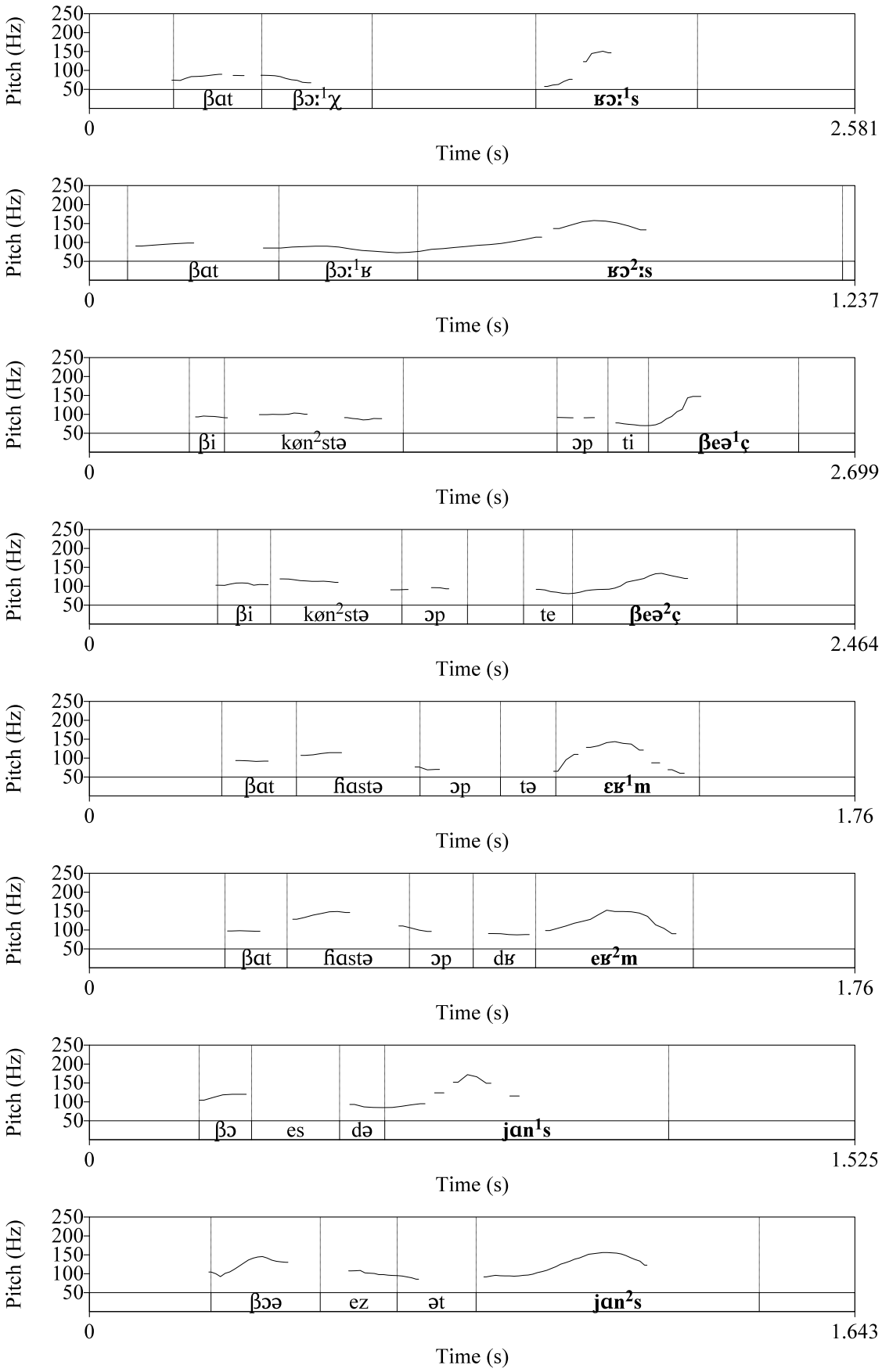


The mean duration for accent 1 words is 0.3825 s. The mean duration for accent 2 words is 0.43 s. The contours for *weech* are virtually identical, however, for all other words a contrast can be observed. For *roos* and *jans* there is a late rise in accent 2 and a somewhat earlier (but still not early) rise and then a plateau for accent 1. In *erm* there is no rise in accent 1, but instead a drop, and an early rise in accent 1.

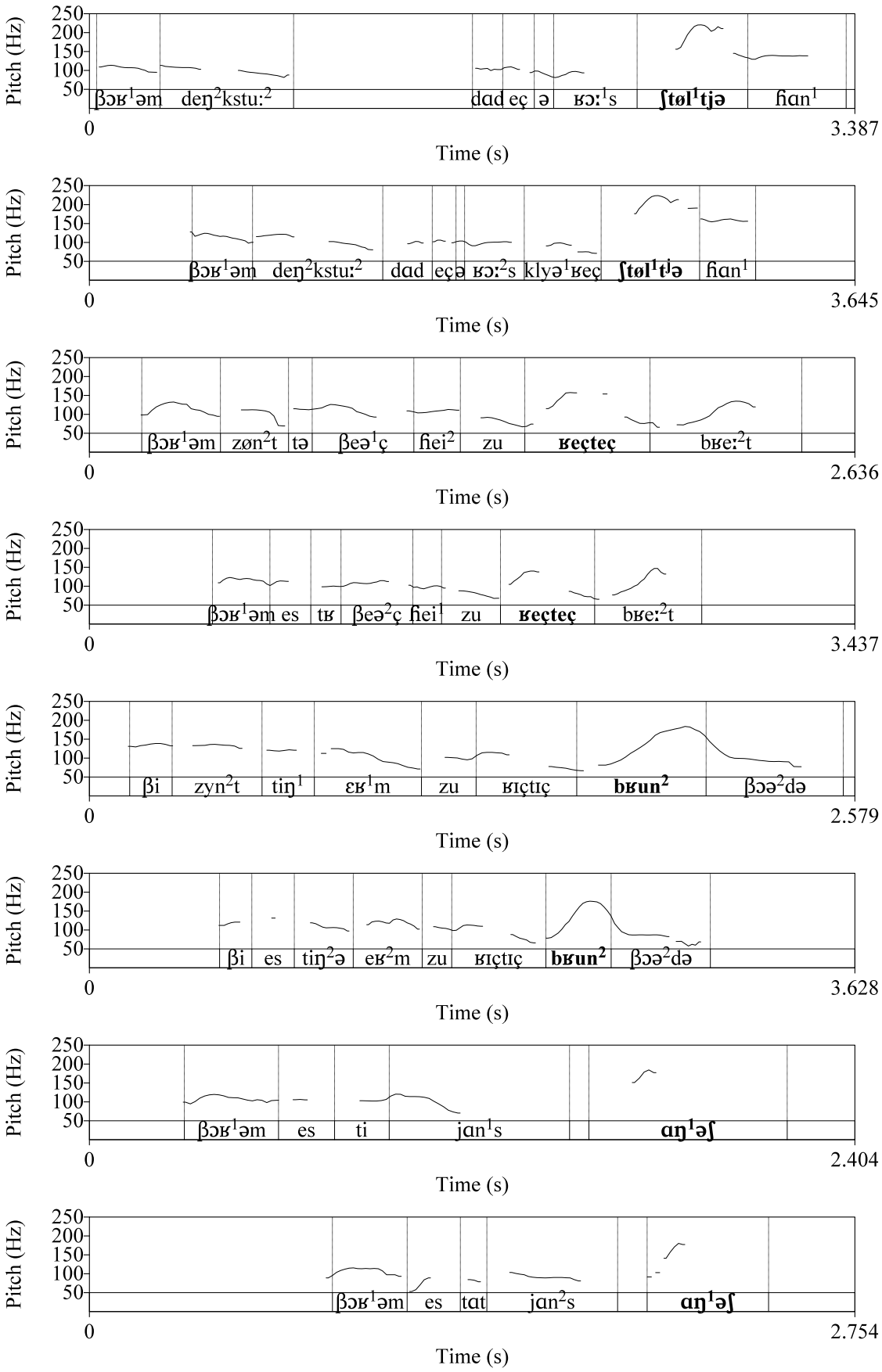
WH-interrogative focus non-final context



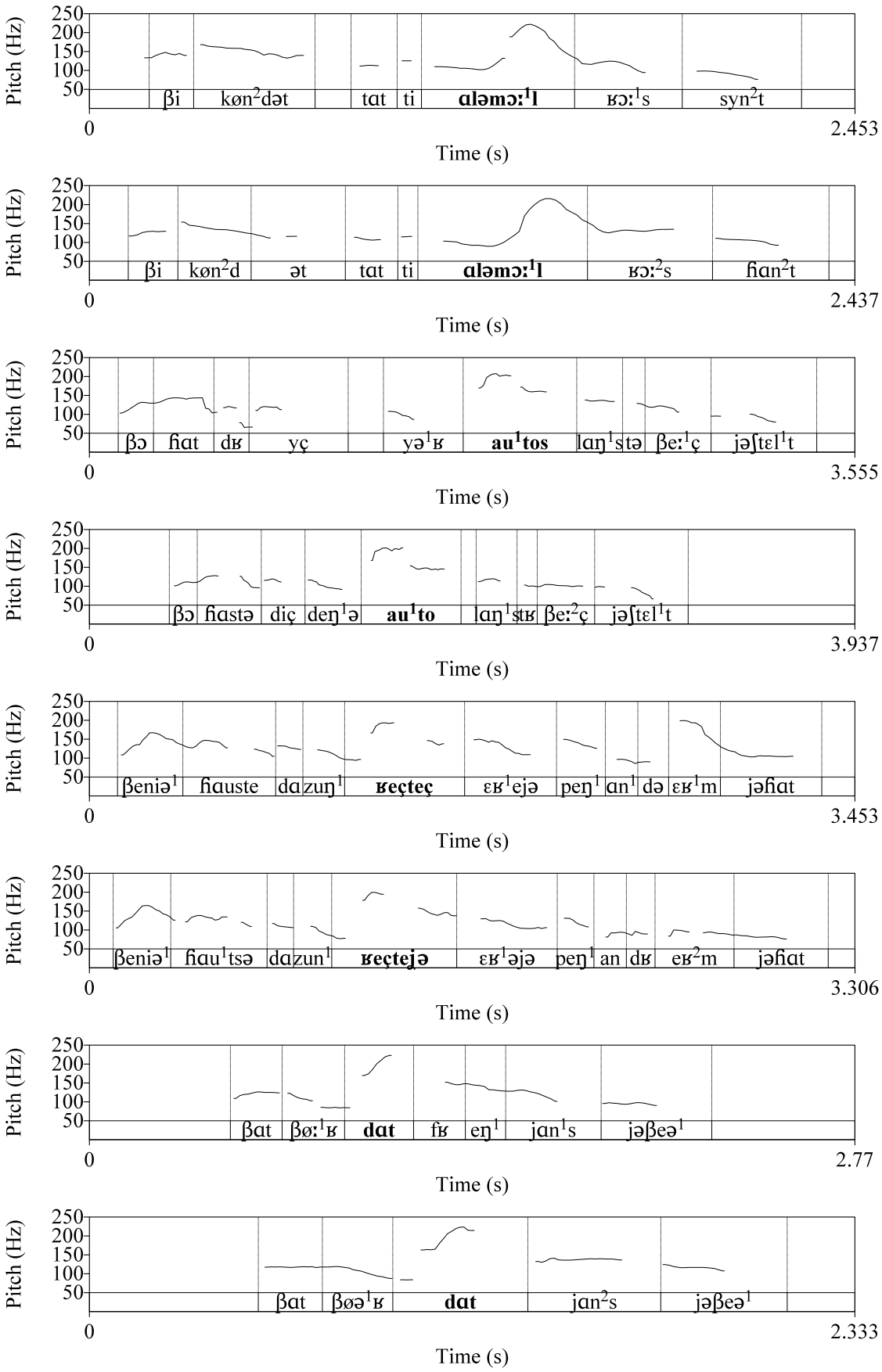
WH-interrogative focus final context



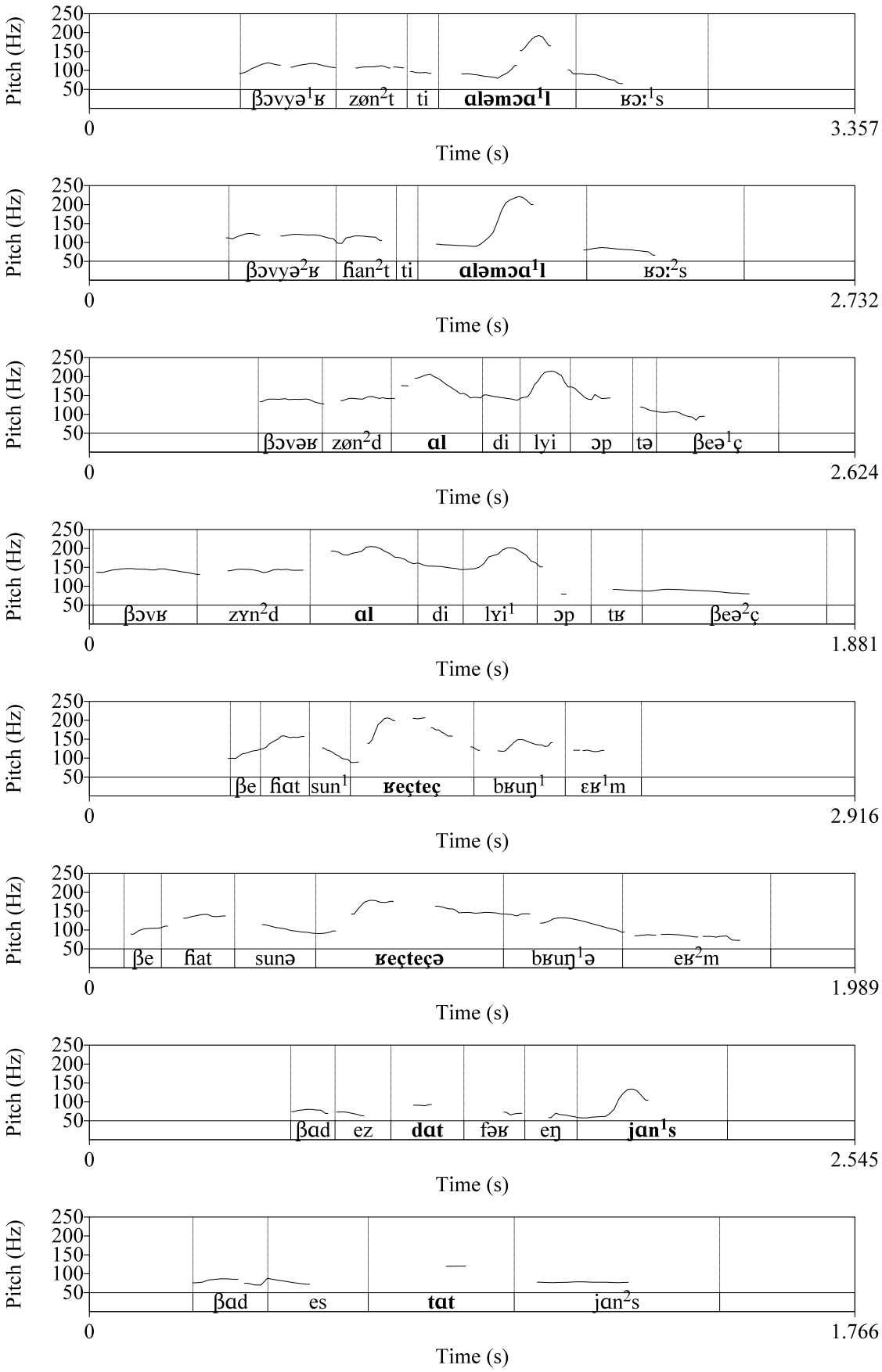
WH-interrogative pre-focus non-final context



WH-interrogative post-focus non-final context



WH-interrogative post-focus final context



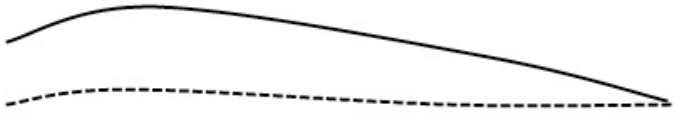
WH-interrogative focus non-final

The mean duration for accent 1 words is 0.335 s and the mean duration for accent 2 words is 0.4275 s. In this context, we can clearly see that in all cases, the rise for accent 1 is earlier than for accent 2. Accent 2 also drops less (if at all) than accent 1.

WH-interrogative focus final

The mean duration for accent 1 words is 0.4925 s and the mean duration for accent 2 words is 0.5475 s. Like the focus non-final context, we can see that the rise for accent 1 is earlier, although in this context accent 2 also always drops.

WH-interrogative pre-focus non-final



The mean duration for accent 1 words is 0.3875 s and the mean duration for accent 2 words is 0.35 s. The contour for accent 1 shows a rise and fall. The contour for accent 2 is more varied; in all cases though the contour for accent 1 makes a longer drop.

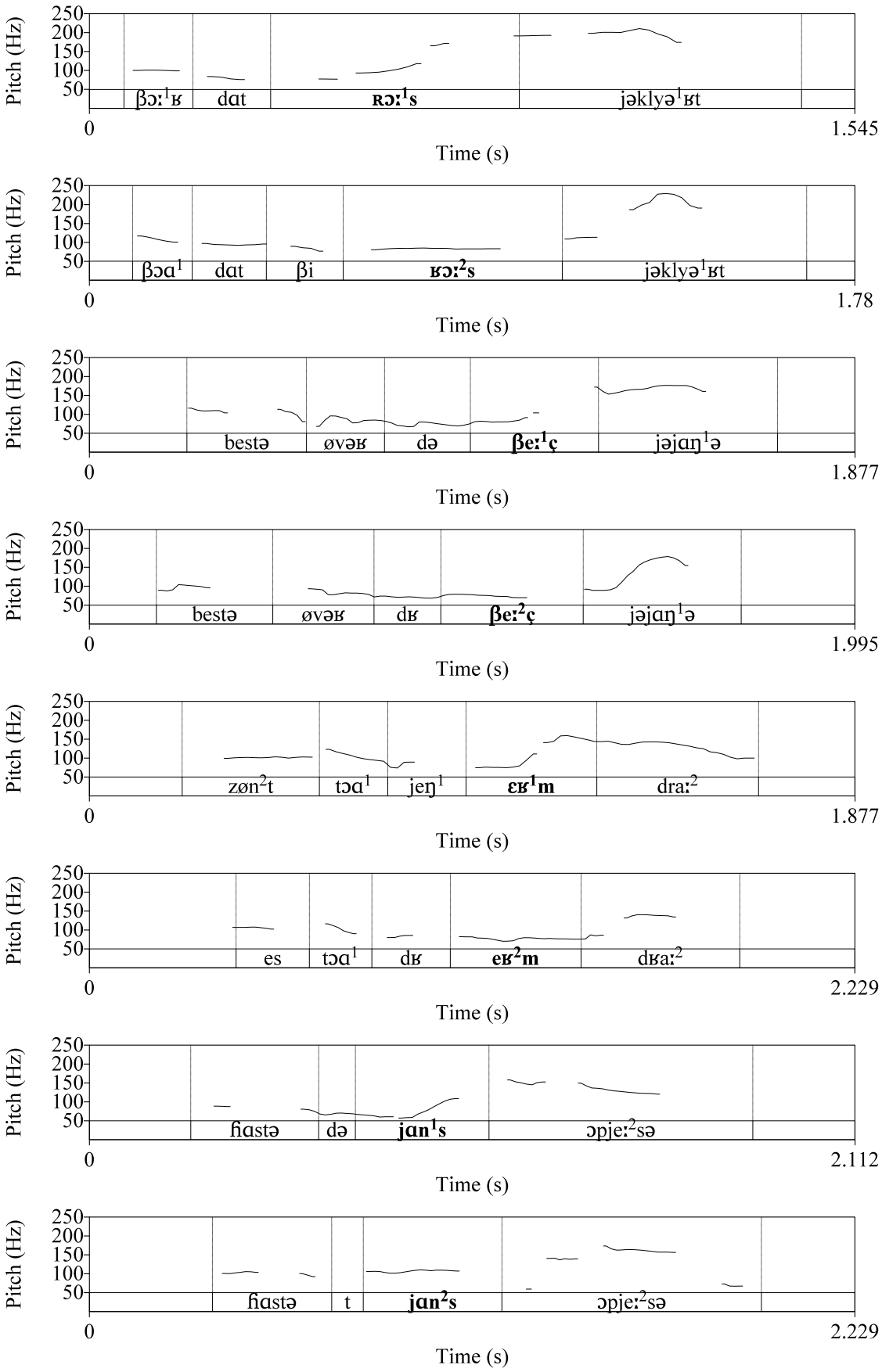
WH-interrogative post-focus non-final

The mean duration for accent 1 words is 0.4475 s and the mean duration for accent 2 words is 0.465 s. In this context, accent 1 always makes a drop whereas accent 2 stays on the same pitch.

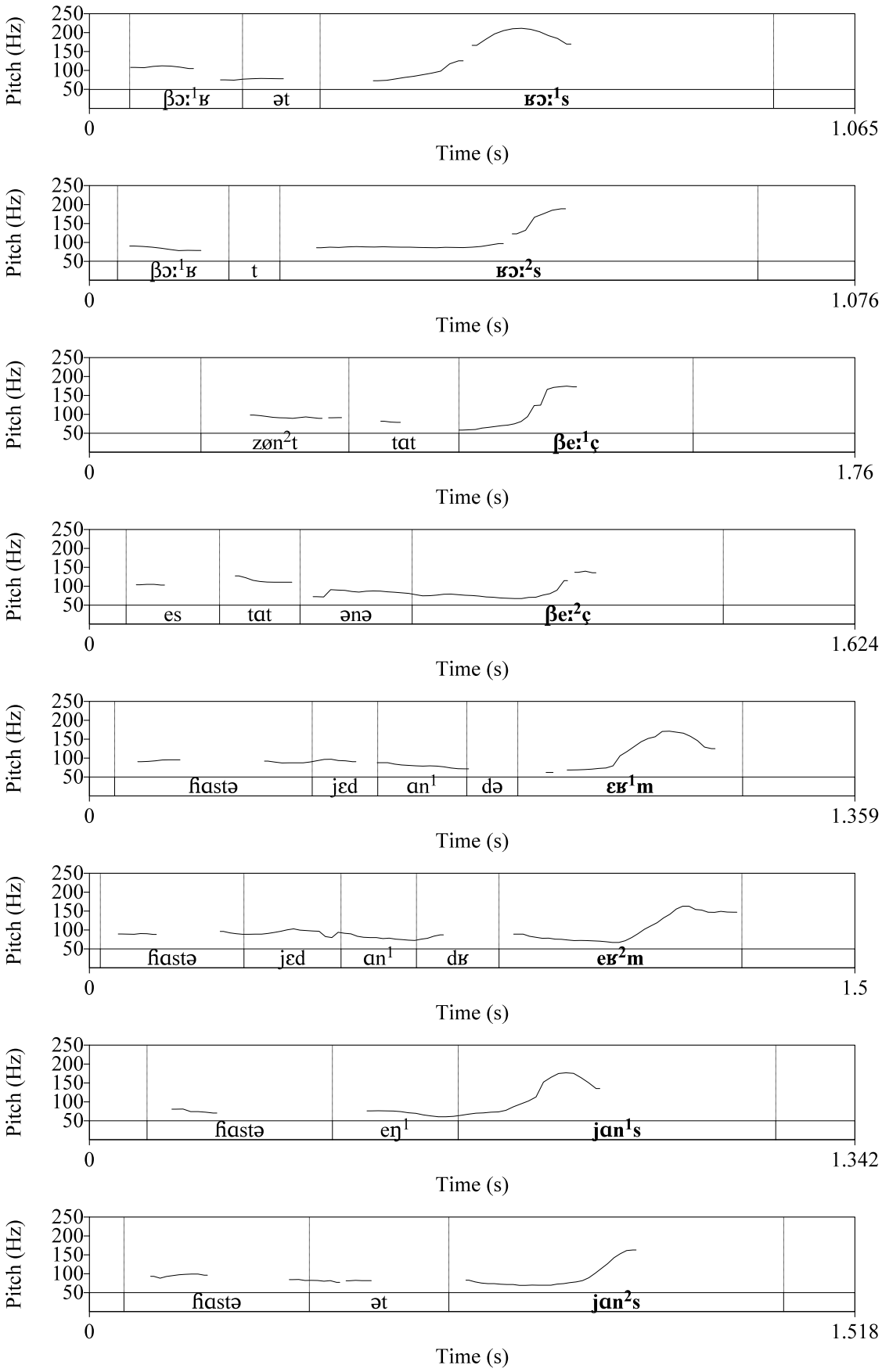
WH-interrogative post-focus final

The mean duration for accent 1 words was 0.3375 s. The mean duration for accent 2 words was 0.3675 s. [jɑn[1]s] was read with the wrong focus (on *jans*) and is therefore excluded from the analysis. There seems to be mainly a durational difference in this context, although accent 1 seems to drop slightly more.

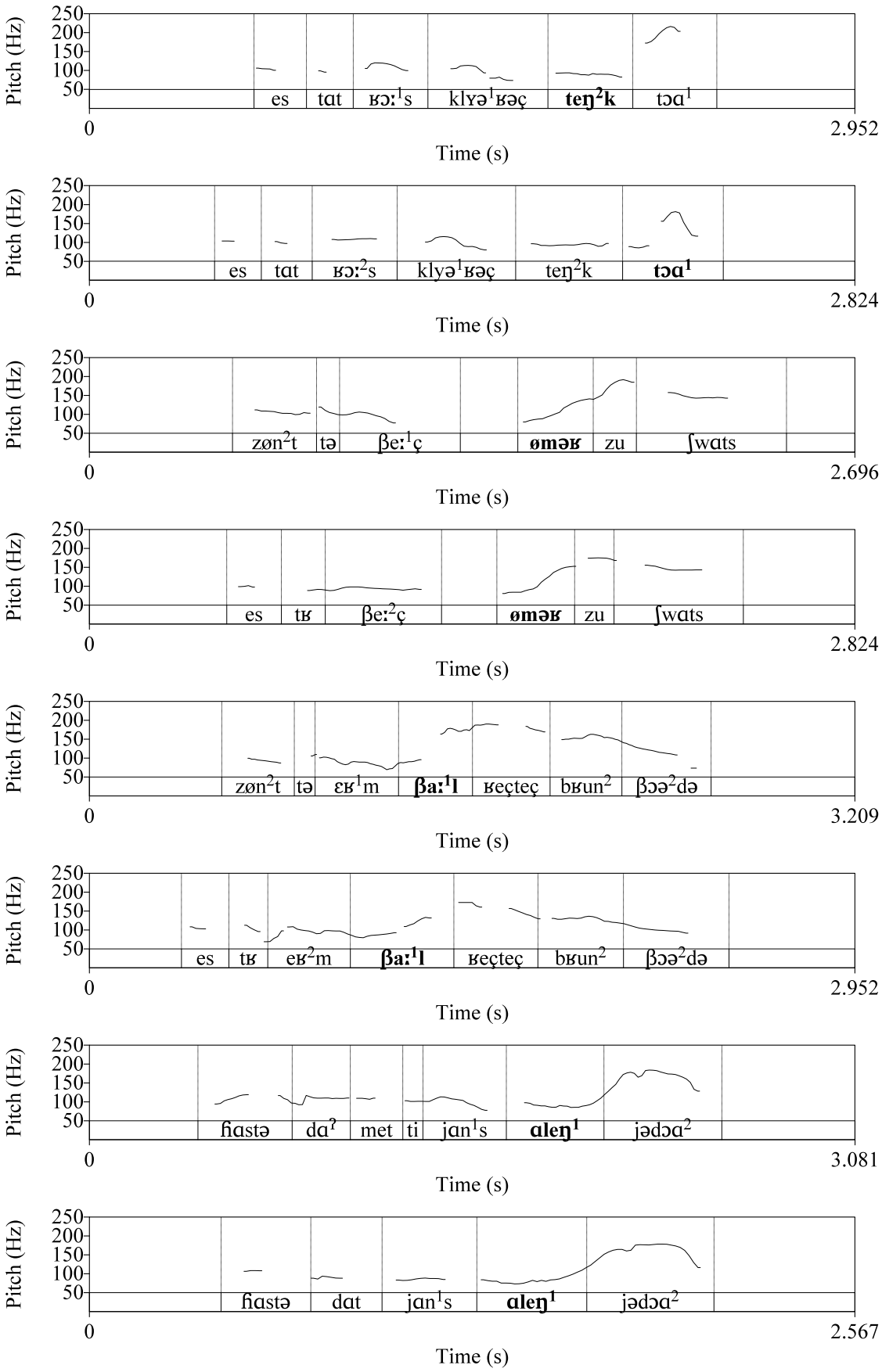
Polar interrogative focus non-final context



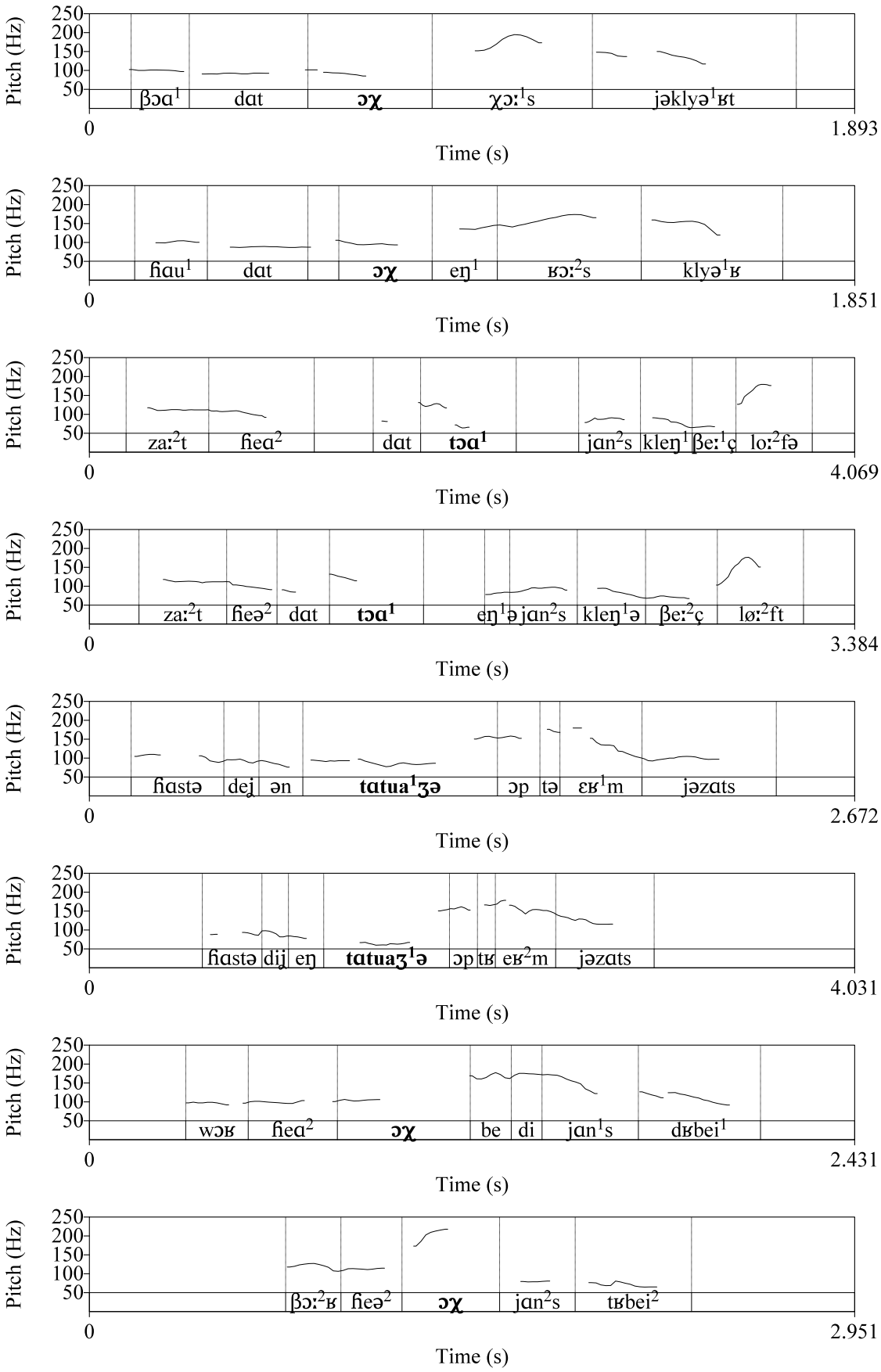
Polar interrogative focal final context



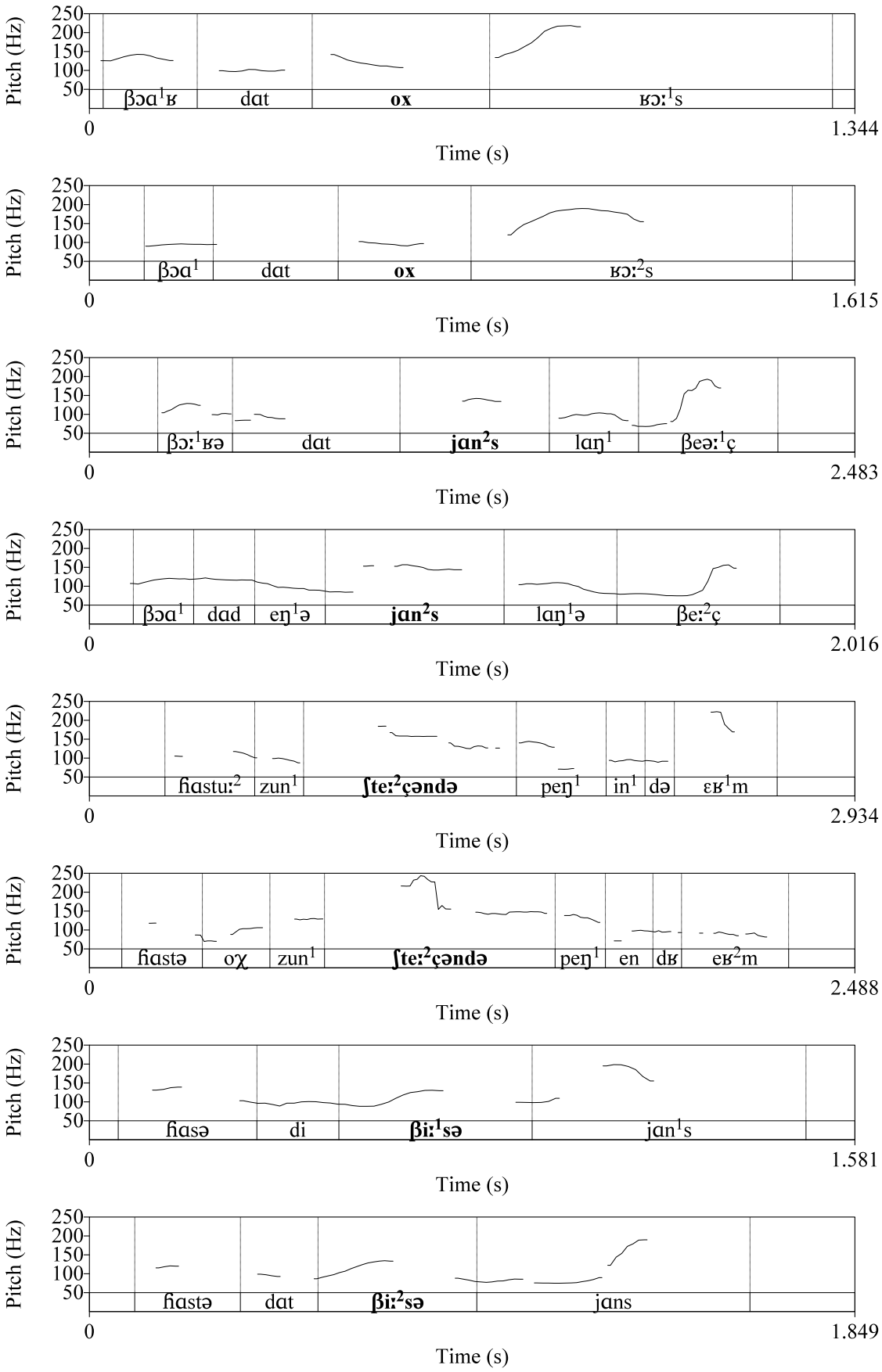
Polar interrogative pre-focus non-final context



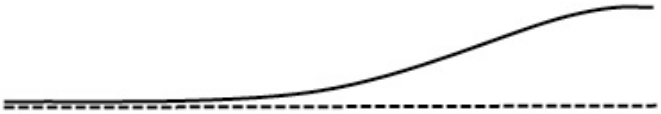
Polar interrogative post-focus non-final context



Polar interrogative post-focus final context

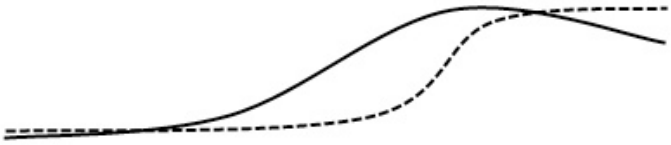


(Polar) interrogative focus non-final



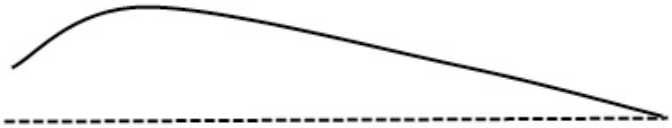
The mean duration for accent 1 words is 0.375 s and the mean duration for accent 2 words: 0.415 s. Here, the pitch in accent 1 words rises near the end, whereas the pitch in accent 2 words stays flat.

(Polar) interrogative focus final



The mean duration for accent 1 words is 0.5325 and the mean duration for accent 2 words is 0.6175. We can see an earlier rise for accent 1 than for accent 2, which is consistent over all the pairs. Accent 1 slowly rises in the beginning and shows a steep rise nearer the end. Accent 2 on the other hand stays flat at the beginning or even drops slightly and then rises late.

(Polar) interrogative pre-focus non-final



The mean duration for accent 1 words is 0.325 s and the mean duration for accent 2 words is 0.345 s. In this context, accent 1 rises early and drops to below the starting level. Accent 2 however stays fairly flat and does not go below its starting level.

(Polar) interrogative post-focus non-final

The mean duration for accent 1 words is 0.3075 s and the mean duration for accent 2 words is 0.32 s. Although the actual production seems to be different across different words, in all cases accent 1 falls towards the end in this context, moreso than accent 2, however, it was impossible to draw a picture for this condition.

Polar interrogative post-focus final

The mean duration for accent 1 words is 0.5025 s and the mean duration for accent 2 words is 0.53 s. Here accent 1 once again rises earlier than accent 2, except for in the case of *erm* where accent 2 does not rise at all.

We can see that the average contour for accent 2 is always longer in duration than that for accent 1 (even if in some individual cases it is the other way around), apart from in WH-interrogative post-focus non-final position where accent 1 is, on average, longer. The fact that there is variation between individual pairs is probably caused by the fact that some sentences did not have the exact same duration due to the number of syllables they contained, and there is of course some fluctuation in pronunciation as well. This mean that individual duration differences may be meaningless, and it was therefore decided to only look at averages over all accent 1 and over all accent 2 words in any condition.

Another interesting feature of the data is the intensity contour. In some words (sometimes both words in a pair, sometimes the accent 1 word, sometimes the accent 2 word) the tone element (i.e. the two moras which receive tone) showed two intensity peaks. There was no way to collapse the data into something meaningful as the appearance of the two peaks seemed completely random in the data. Below some examples are shown (fig. 14, 15, 16).

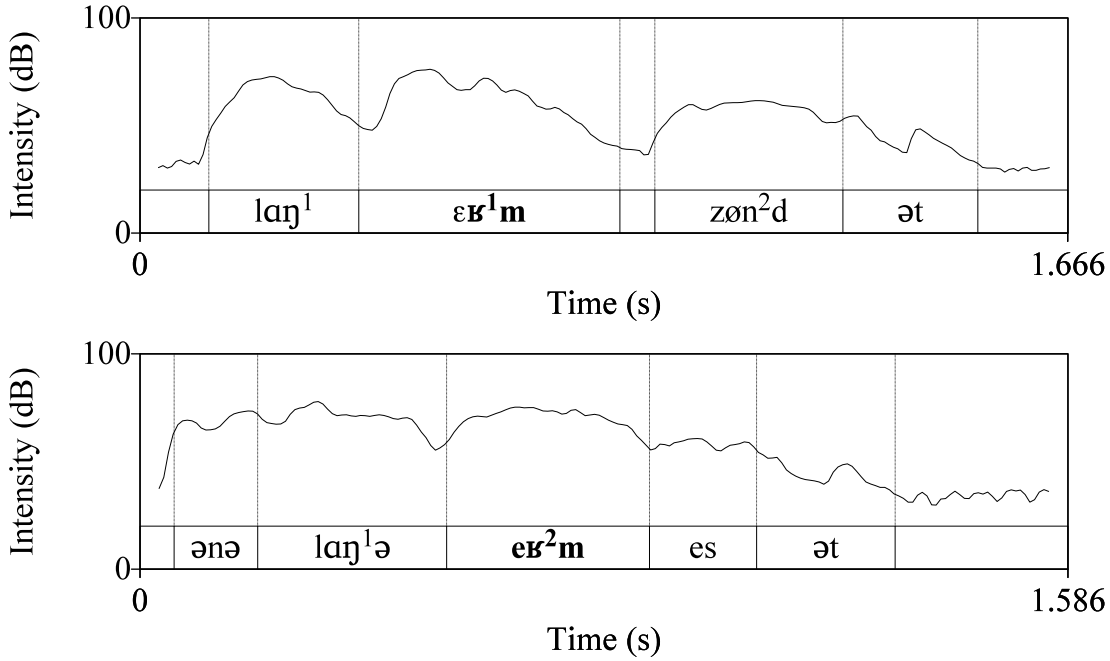


fig. 14: erm *in the declarative focus non-final condition, where the accent 1 word has two peaks on the tone moras (the two smaller peaks at the end are on the* [m]*)*

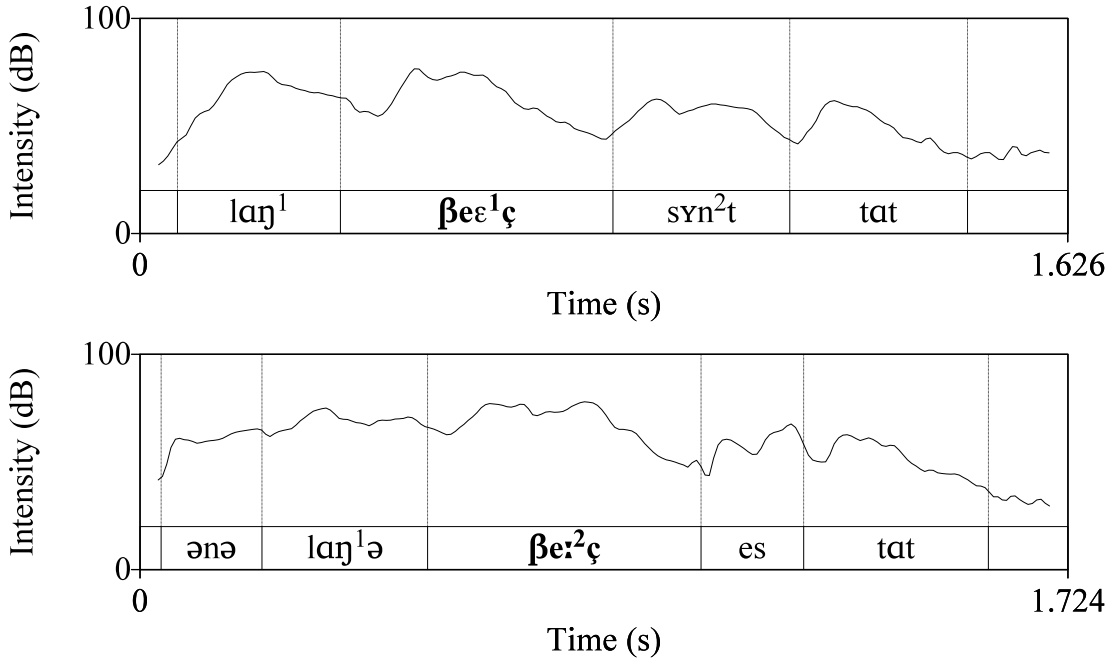


fig. 15: weech *in the declarative focus non-final condition, where both members of the pair show two (perhaps the accent 2 word even three) intensity peaks.*

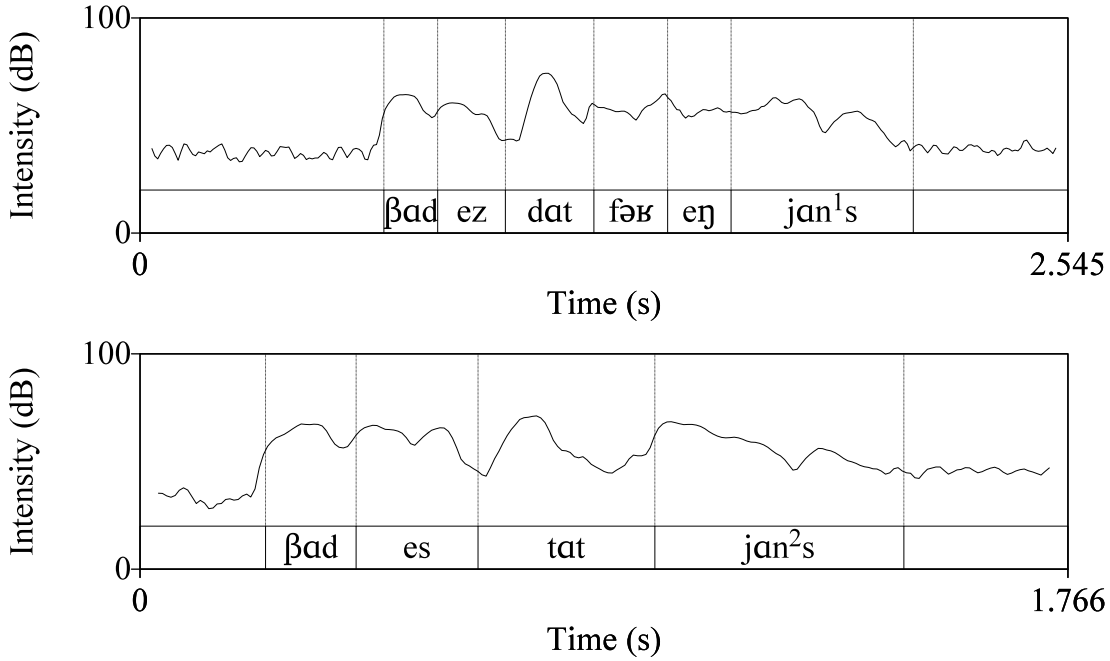


fig. 16: jans *under the interrogative post-focal final condition shows a double peak for accent 1 (note: the last peak for both accents is the peak for* [s]*)*

This is by no means an anomaly of this speaker, as similar two-peak intensity contours could also be found in the speech of the pilot participant. Apart from that, the intensity did not necessarily drop earlier for accent 1 than it did for accent 2 (in fig. 17 it does, but in fig. 18 it does not).

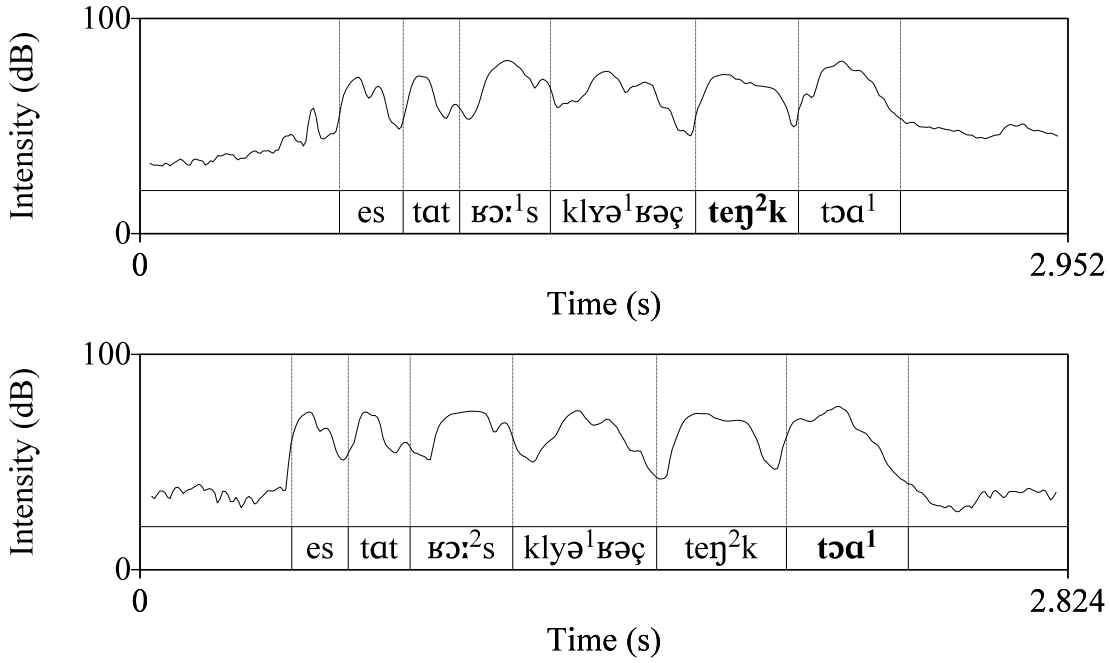


fig.17: the intensity for interrogative pre-focal roos *with accent 1 does drop earlier than for accent 2.*

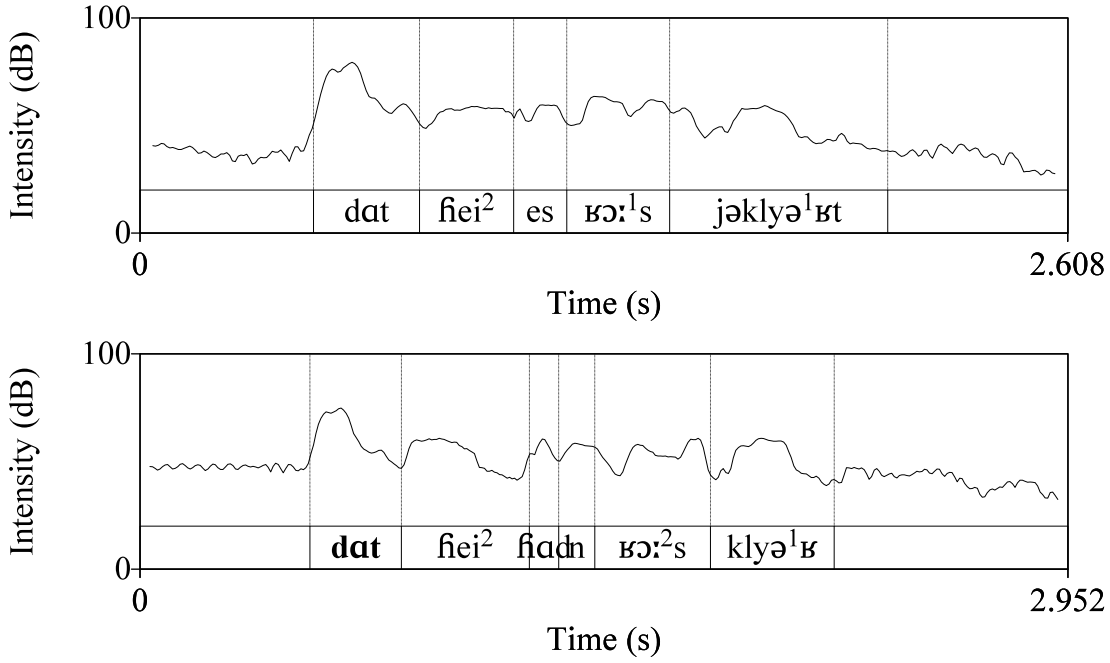


fig. 18: the intensity for declarative post-focal non-final roos *does* not *drop earlier for accent 1 than it does for accent 2.*

Conclusion

From the results presented here we can conclude that there is indeed interaction between tone and intonation in Lemierser. Apart from different pitch contours occurring under different intonational conditions, we can also observe that under non-focused conditions the contrast is less clear. In some cases (WH-interrogative pre-focus non-final, interrogative post-focus non-final and post-focus final) there is variation in the realisation of the same accent, and in other cases (declarative pre-focus non-final, post-focus non-final and post-focus final) the contrast is neutralised for some pairs, but not others. There was, however, no condition under which the contrast was neutralised for all pairs.

Accent 1 words tend to be shorter than accent 2 words. This tendency exists over all but one condition (the wh-interrogative pre-focus final condition). The mean difference in duration between accent 1 words and accent 2 words is largest for focus final conditions in the declarative and interrogative patterns: 0.127 s and 0.085 s respectively. In the wh-interrogative pattern it is largest in the focus non-final position (0.092 s). It should be noted that it is subject to further investigation whether the durational difference is large enough to be perceived as a contrast on its own.

Intensity also plays a very interesting role here. In *some* cases (by no means consistently), the intensity contour shows two peaks in the two sonorant 'tone' moras. This happens both for accent 1 and for accent 2. Sometimes the first peak is higher, sometimes the second, and sometimes they are of equal height. This has not been described for any dialects in the area

so far. What was expected was that the intensity would drop earlier for accent 1 than for accent 2, which was not necessarily the case.

For two of the test words (*weech* and *erm*), it seems as though in some cases vowel quality is used to distinguish between the accent 1 and the accent 2 word. For *erm* this was anticipated to always be the case since the vowel quality difference is present in the citation form of these words, but for *weech* it was not anticipated as it is not. The fact that the vowel quality is variable is interesting because this leads to the idea that it is also used as an optional enhancing feature (much like intensity) rather than a given phonological difference between the words.

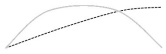
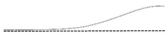
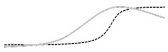
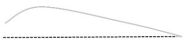
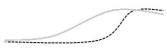
	Focus non-final	Focus final	Pre-focus non-final	Post-focus non-final	Post-focus final
Declarative					
WH-interrogative					
Polar interrogative				variable	

fig. 19: pitch contours for Lemierser: accent 1 (grey) and accent 2 (black) compared

An actual analysis of how tone and intonation interact must first assume something about intonation contours. In the intonation pattern type pilot study it was already proposed that all patterns start on a low tone and that the declarative pattern (and the WH-interrogative pattern with final focus) end low as well, and that the polar interrogative pattern (and the WH-interrogative pattern with non-final focus) ends on a high tone followed by a low tone.

How can we then attempt to make sense of the contours in fig. 19? We must first distinguish between final and non-final conditions, as non-final contexts do not directly deal with the final boundary tones. Under focus final declarative and WH-interrogative conditions we can see that both accent 1 and accent 2 words move towards the low boundary tone, although accent 1 starts to do so earlier on in the syllable. In post-focus final WH-interrogative there is no contrast, and we see accent 1 and accent 2 words both moving lower towards the boundary tone. In declarative post-focus final however we seem to observe a contour that is exactly the opposite to the declarative focus final condition: first the low boundary tone is realised and then a high tone for the accent 1 or 2 word, which is realised earlier for accent 1 than it is for accent 2 (so again we can say that the 'change' occurs earlier for accent 1 than for accent 2). For polar interrogatives the focus final and non-focus final contours show the same behaviour; both accent 1 and 2 start low and rise, where accent 1 rises earlier and drops slightly, and accent 2 rises later and does not drop. We can attribute this again to the earlier movement of accent 1, and we could perhaps explain the similarity of the focus and non-focus contours if we say that focus has a low tone for accent 2 and a low tone followed by a high tone for accent 1 and that, if the focus is in

final position, the low tone is already complied with in the beginning, and the high tone for accent 1 is complied with at the same time as the high tone for the boundary. This means that the final drop to a low tone for the interrogative boundary is not realised in this context.

The fact that, as we have seen, focus is also signified by pitch differences means we must distinguish between focus and non-focus conditions. We can then see that for declarative and WH-interrogative sentences, non-final focus exhibits the high and then the low tone on the focus word if that focus word is accent 1, but shows a later rise if the focus word is accent 2. The lateness of the accent 2 rise means that, whilst there is still a drop, it is actually pushed outside of the tone element and is realised afterwards (see pg. 23 and 30). So it could be argued that the focus tones for declarative and WH-interrogative sentences go from low to high to low and that accent 2 just does this more slowly (as opposed to the interrogative pattern, in which accent 1 focus has a low tone followed by a high tone and accent 2 focus has a low tone throughout). Non-focus conditions on the other hand tend to show something like an early rise and long fall for accent 1 and a low tone throughout for accent 2, which we could probably say are the 'pure' tones for accent 1 and 2 (i.e. without boundary or focus tone interference).

However, this is not always the case in non-focus conditions and lastly, then, we must distinguish between pre-focus and post-focus, as pre-focus conditions can be expected to 'work towards' the focus, and post-focus (non-final) conditions to 'work from' the focus (i.e. they may show signs of focus tones, which in the case of pre-focus will be at the end and in the case of post-focus at the beginning). In post-focus non-final declarative and WH-interrogative we can, however, see the effects of a higher focus tone at the beginning of accent 1, whereas we do not in accent 2 which is low throughout. Exactly why this is the case is unclear as both accent 1 and 2 in focus start with a low tone. In pre-focus non-final WH-interrogative and interrogative conditions we do see an accent 1 move towards a low tone and accent 2 stays low and we could analyse this as a move towards focus, however, this may simply be the realisation of the 'bare' tone accent, as both accent 1 and 2 seem to end on a low tone. In the post-focus final conditions and the WH-interrogative post-focus non-final condition we see no movements that may have to do with focus either. In the declarative post-focus non-final condition we do, however, see a high start for accent 1, whereas accent 2 does not move (however, since accent 2 moves later than accent 1 it is likely that any trailing focus tones have to be realised before the post-focus accent 2 word starts, as they cannot be realised on the beginning of accent 2 words.)

Discussion

In this thesis, the nature of the interaction between tone and intonation in the Ripuarian dialect of Lemiers (*Lemierser*) was investigated. Lemierser is part of a bigger area with

Franconian languages in which a binary tone accent system is in place, meaning that in any one dialect there are two tone accents which contrast with each other. In this system, multiple intonation patterns are often used as well, meaning that tone and intonation are likely to interact in some way, because they are both expressed in pitch: tone on the lexical level, and intonation on the sentence level. However, the exact nature of the intonation system, as well as of the tone system, is not the same across the board, but instead can change from one town's dialect to the next. This means that, ideally, every single town should be investigated. Obviously this is not the case, and a problem encountered in this thesis was that the ability to make hypotheses about the nature of Lemierser tone and Lemierser interaction between tone and intonation was compromised by the fact that there is virtually no previous research in the immediate area, and virtually none for the Ripuarian language at any rate. This meant that hypotheses mainly had to rely on information from research on Limburgian dialects. Nevertheless it was hypothesised that Lemierser would show a binary tone system on bimoraic syllable rhymes (consisting of a long vowel, such as [a:], or a short vowel combined with a sonorant consonant, such as [ɑn]) and perhaps also on monomoraic syllable nuclei (consisting of a short vowel such as [ɔ]) which interact with several intonation patterns as well as focus and finality in sentences. It was also hypothesised that, like the Cologne dialect of Ripuarian but unlike many Limburgian dialects, Lemierser would not show neutralisation of the tone contrast in any context but would show a binary tone system in all contexts.

The intonation system of Lemierser was first investigated in a series of small pilot studies. In one of these pilots the possibility of units to receive tone was also investigated. It was found that units consisting of one mora (short vowels) are not able to receive tone, whereas two mora units (long vowels and short vowels combined with a sonorant consonant) are able to receive tone. In the experiment, sentences with tonal target words were read out by a native speaker unaware of the research goal. The sentences read by the participant differed in intonation as well as in focus and finality (i.e. whether the tonal target word was in or out of focus, and whether it was sentence-final or not). The experiment was designed to find out whether neutralisation would take place in some of these cases, and to describe the phonetic nature of accent 1 and 2 in Lemierser. Looking at each pronunciation of each target word (in each of the focus and finality contexts that have been designed), neutralisation was found in declarative sentences in post-focal pre-final position. Generalising over different words with the same accent by averaging out the pitch contours of different words, the phonetic nature of the accents was described. The hypothesis that Lemierser would be the same as the Cologne dialect, in that the Cologne dialect did not show any neutralisation, has therefore not been corroborated. Instead, Lemierser bears more of a likeness to the Sittard Limburgian dialect, in which partial neutralisation (for some pairs) also takes place in declarative non-focus non-final conditions (Hanssen, 2006). However, since studies discussed here use data from one or two participants, we cannot

simply assume that if and where neutralisation takes place is a feature of the local dialect; it might be a feature of the speaker's idiolect.

When we look at the different pitch contours that were found for Lemierser under different conditions, we can see that the declarative focus non-final and focus final contours bear some resemblance to the Sittard contours from fig. 2 (but not to the Roermond contours from fig. 3) for these conditions. We can also see that the Sittard non-focus non-final contours are similar to the Lemierser post-focus non-final contours (but not pre-focus non-final).

For some dialects it has been noted that accent 1 vowels and accent 2 vowels show differences in vowel pronunciation, supposedly to make them more contrastive. It does not seem to be the case for the target words used here that the vowel quality difference is phonological as yet, but an optional part of the accent 1/accent 2 contrast. Perhaps it is possible that Lemierser shows an inbetween stage, where, for some words at least, a vowel quality difference is sometimes present, but not (yet?) in a phonologically contrastive manner.

The intensity contours are an interesting aspect of Lemierser tone accent elements. The initial idea was that Lemierser, like the Cologne Ripuarian dialect, would show an earlier intensity drop for accent 1 than for accent 2. Although this is sometimes the case in Lemierser, the exact opposite can also be observed. Interestingly, an apparently random selection of accent 1 and accent 2 tone accent elements show two-peak intensity contours. As it is currently unclear under which conditions (if such conditions exist) we can predict the two-peak contour to show up this would be an interesting subject for further research. It seems, from the data gathered in this thesis, that a two-peak contour is only possible (but by no means obligatory) on two sonorant moras, and thus on tone elements. This begs the question in what way the presence or absence of the two-peak intensity contour affects the perception of the tone contrast. It would also be interesting to see if any dialects in the vicinity also exhibit this phenomenon or whether it is solely a feature of Lemierser.

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Fig. 1 (pg. 5)

Appendix

Focus words are in **bold**. Target words have their accent (i.e. (1) or (2)) behind them (N.B.: the participant saw and read these sentences in a somewhat randomised order, and without any translation or indication of accent). Sentences between brackets were used to provide context in order to elicit the right focus, but were themselves not analysed.

Declarative final non-focus

Ut	*woar*	***roos(1)***	*jewea.*
It	was	pink	been

'It had been pink.'

Ut	*woar*	***roos(2)***	*jewea.*
It	was	rust	been

'It had been rust.'

Lang	***weech(1)***	*zunt*	*dat.*
Long	roads	are	they

'Long roads, they are.'

Inge	*lange*	***weech(2)***	*is*	*dat.*
A	long	road	is	that

'A long road, that is.'

Lang	***erm(1)***	*zunt*	*dat.*
Long	arms	are	they

'Long arms, they are.'

Inge	*lange*	***erm(2)***	*is*	*dat.*
A	long	arm	is	that

'A long arm, that is.'

Do	*vool*	*ing*	***jans(1)***	*draaf.*
There	fell	a	goose	off it

'A goose fell off it.'

Ut	*woar*	*beinoa*	***jans(2)***	*aaf.*
It	was	almost wholly		off

'It was almost completely off.'

Declarative final focus

Ut *is* ***roos(1).***
It is pink.
'It's pink.'

Ut is ***roos(2).***
It is pink.
'It's pink.'

Ut zunt ***weech(1)***.
It are roads
'They're roads.'

Ut is unne ***weech(2)***.
It is a road.
'It's a road.'

Ut zunt ***erm(1).***
It are arms.
'They're arms.'

Ut is inge ***erm(2).***
It are an arm.
'It's an arm.'

Ut is ing ***jans(1).***
It is a goose.
'It's a goose.'

Ut is ***jans(2).***
It is whole.
'It's whole.'

Declarative pre-focus non-final

(Wat hatte veur jet rozes aa?)
(What pink thing is he wearing?)

È	*hat*	*e*	*roos(1)*	***hemp***	*aa.*
He	has	a	pink	shirt	on.

'He is wearing a pink shirt.'

(Wat hatte veur jet roosklueriges aa?)
(What rust coloured thing is he wearing?)

È	*hat*	*e*	*roos(2)kluerig*	***hemp***	*aa.*
He	has	a	rust-coloured	shirt	on.

'He is wearing a rust coloured shirt.'

De	*weech(1)*	*zunt*	*jans*	***lank****.*
The	roads	are	very	long.

'The roads are very long.'

D'r	*weech(2)*	*is*	*jans*	***lank****.*
The	road	is	very	long.

'The road is very long.'

Dem	*zieng*	*erm(1)*	*zunt*	***richtig***	*sjmaal.*
Him	his	arms	are	very	thin.

'His arms are very thin.'

Dem	*zienge*	*erm(2)*	*is*	***richtig***	*sjmaal.*
Him	his	arm	is	very	thin.

'His arm is very thin'

De	*anger*	*jans(1)*	*woar*	***roeëd***	*jewea.*
The	other	goose	was	red	been.

'The other goose had been red.'

Ut	*woar*	*jans(2)*	***roeëd***	*jewea.*
It	was	very	red	been.

'It had been very red.'

Declarative post-focus non-final

(Wat is roos jekluert?)
(What is pink?)
Dat *heij* *is* *roos(1)* *jekluert.*
This here is pink coloured.
'This is pink.'

(Wat hat ing rooskluer?)
(What has a rust colour?)
Dat *heij* *hat* *'n* *roos(2)kluer.*
This here has a rust.colour.
'This has a rust colour.'

Ze *hant* *richtig* *sjwats* ***grind*** *op* *de* *weech(1)* *jelaat.*
They have very black grit on the roads laid.
'They've put very black grit on the roads.'

Ze *hant* *richtig* *sjwats* ***grind*** *op* *d'r* *weech(2)* *jelaat.*
They have very black grit on the road laid.
'They've put very black grit on the road.'

Hea *hat* *zich* *ing* *jroeësse* ***tatoeage*** *op* *de* *erm(1)* *losse* *zetse.*
He has him a big tattoo on the arms let put.
'He has had a tattoo put on his arms.'

Hea *hat* *zich* *ing* *jroeësse* ***tatoeage*** *op* *d'r* *erm(2)* *losse* *zetse.*
He has him a big tattoo on the arm let put.
'He's had a very big tattoo put on his arm.'

Die ***anger*** *jans(1)* *is* *jeeël.*
That other goose is yellow.
'The other goose is yellow.'

Dat *is* *jans(2)* *jeeël.*
That is very yellow.
'That's all yellow.'

Declarative post-focus final

(Wat is roos?)
(What's pink?)
Heij *dat* *is* *roos(1).*
Here this is pink.
'This here is pink.'

(Wo drop zitst roos?)
(What has rust on it?)
Heij *drop* *zitst* *roos(2).*
Here on sits rust.
'This has rust on it.'

Ut *sjtunt* *jans* *jroeëse* ***verkiersborde*** *nevver* *de* *weech(1).*
It stand very big traffic.signs next.to the roads
'There are very big traffic signs next to the roads.'

Ut *sjteet* *e* *jans* *jroeës* ***verkiersbord*** *nevver* *d'r* *weech(2).*
It stands a very big traffic.sign next.to the road.
'There's a very big traffic sign next to the road.'

Hea *hat* *jans* *groeësse* ***tatoeages*** *op* *de* *erm(1).*
He has very big tattoos on the arms.
'He has a very big tattoos on his arms.'

Hea *hat* *ing* *janse* *groeësse* ***tatoeage*** *op* *d'r* *erm(2).*
He has a very big tattoo on the arm.
'He has a very big tattoo on his arm.'

Dat *heij* *is* *de* *jans(1).*
That here is the goose.
'This is the goose.'

Dat *heij* *is* *al* *jans(2).*
That here is already whole.
'This is already done.'

WH-interrogative focus non-final

Wat woar ***roos(1)*** *jewea?*
What was pink been?
'What had been pink?'

Wo woar ***roos(2)*** *jewea?*
Where was rust been?
'Where is it that rust had been?'

Wat vur ***weech(1)*** *zunt ut?*
What for roads are it?
'What kind of roads are they?'

Wat vur unne ***weech(2)*** *is ut?*
What for a road is it?
'What kind of road is it?'

Wem zieng ***erm(1)*** *zunt ut?*
Whom his arms are it?
'Whose arms are they?'

Wem zienge ***erm(2)*** *is ut?*
Whom his arm is it?
'Whose arm is it?'

Wat deet die ***jans(1)*** *da?*
What does that goose then?
'What's that goose doing then?

Wat deeste ***jans(2)*** *da?*
What do.you whole then?
'So, what will you finish?'

WH-interrogative focus final

Wat woar ***roos(1)?***
What was pink?
'What was pink?'

Wo woar ***roos(2)?***
Where was rust?
'Where was the rust?'

Wie kunste op die ***weech(1)?***
How come.you on that road?
'How do you get on that road?'

Wie kunste op dea ***weech(2)?***
How come.you on that road?
'How do you get to that road?'

Wat haste op de ***erm(1)?***
What have.you on the arms?
'What have you got on your arms?'

Wat haste op d'r ***erm(2)?***
What have.you on the arm?
'What have you got on your arm?'

Wo is de ***jans(1)?***
Where is the goose?
'Where's the goose?'

Wo is ut ***jans(2)?***
Where is it whole?
'In which place is it whole?

WH-interrogative pre-focus non-final

(*Hastoe è roos sjteultje?*)
(Do you have a little pink chair?)

Worum	*dinkstoe*	*dat*	*iech*	*è*	*roos(1)*	***sjteultje***	*han?*
Why	think.you	that	I	a	pink	little.chair	have?

'Why do you think I have a little pink chair?'

(Hastoe è rooskluerig sjteultje?)
(Do you have a little rust coloured chair?)

Worum	*dinkstoe*	*dat*	*iech*	*è*	*roos(2)kluerig*	***sjteultje***	*han?*
Why	think.you	that	I	a	rust.coloured	little.chair	have?

'Why do you think I have a little rust coloured chair?'

Worum	*zunt*	*de*	*weech(1)*	*heij*	*zoe*	***richtig***	*breed?*
What.for	are	the	roads	here	so	very	wide?

'Why are the roads here so very wide?'

Worum	*is*	*d'r*	*weech(2)*	*heij*	*zoe*	***richtig***	*breed?*
Why	is	the	road	here	so	very	wide?

'Why is the road here so very wide?'

Wie	*zunt*	*dieng*	*erm(1)*	*zoe*	*richtig*	***broen***	*woade?*
How	are	your	arms	so	properly	brown	become?

'How did your arms get so very tanned?'

Wie	*is*	*dienge*	*erm(2)*	*zoe*	*richtig*	***broen***	*woade?*
How	is	your	arm	so	properly	brown	become?

'How did your arm get so tanned?'

Worum	*is*	*die*	*jans(1)*	***angesj?***
Why	is	that	goose	different?

'Why is that goose different?'

Worum	*is*	*dat*	*jans(2)*	***angesj?***
Why	is	that	really	different?

'Why is that really different?

WH-interrogative post-focus non-final

Wie	*kunt*	*ut*	*dat*	*die*	***allemoal***	*roos(1)*	*zunt?*
How	comes	it	that	they	all	pink	are?

'How come they're *all* pink?'

Wie	*kunt*	*ut*	*dat*	*die*	***allemoal***	*roos(2)*	*hant?*
How	comes	it	that	those	all	rust	have?

'How come they all have rust?'

Wo	*had*	*d'r*	*uer*	***autos***	*langs*	*de*	*weech(1)*	*jesjtelt?*
Where	have	you	your	cars	alongside	the	roads	placed?

'Where alongside the road have you parked your cars?'

Wo	*haste*	*diech*	*dienge*	***auto***	*langs*	*d'r*	*weech(2)*	*jesjtelt?*
Where	have.you	you	your	car	alongside	the	road	placed?

'Where alongside the road have you parked your car?'

Wienieë	*hauwtste*	*da*	*zoeng*	***richtig***	*erreje*	*pieng*	*an*	*de*	*erm(1)*	*jehat?*
When	had.you	then	such	really	bad	pain	at	the	arms	had?

'When did you have such bad pain in your arms?'

Wienieë	*hauwtste*	*da*	*zoeng*	***richtig***	*erreje*	*pieng*	*an*	*d'r*	*erm(2)*	*jehat?*
When	had.you	then	such	properly	bad	pain	at	the	arm	had?

'When did you have such bad pain in your arm?'

Wat	*wöör*	***dat***	*vur*	*ing*	*jans(1)*	*jewea?*
What	were	that	for	a	goose	been?

'What kind of goose had that been?'

Wat	*wöör*	***dat***	*jans(2)*	*jewea?*
What	be.IRR	that	whole	been?

'What would all of that have been?'

WH-interrogative post-focus final

Woveur	*zunt*	*die*	***allemoal***	*roos(1)?*
What.for	are	they	all	pink?

'What are all these pink for?

Woveur	*hant*	*die*	***allemoal***	*roos(2)?*
What.for	have	they	all	rust?

'Why do they all have rust?'

Woveur	*zunt*	***al***	*die*	*luj*	*op*	*de*	*weech(1)?*
What.for	are	all	those	people	on	the	roads?

'What are all those people on the roads for?'

Woveur	*zunt*	***al***	*die*	*luj*	*op*	*d'r*	*weech(2)?*
What.for	are	all	those	people	on	the	road?

'What are all those people on the road for?'

Wea	*hat*	*zoen*	***richtig***	*broenge*	*erm(1)?*
Who	has	such	really	brown	arms?

'Who has really tanned arms?'

Wea	*hat*	*zoene*	***richtige***	*broenge*	*erm(2)?*
Who	has	such	properly	brown	arm?

'Who has a really tanned arm?'

Wat	*is*	***dat***	*vur*	*ing*	*jans(1)?*
What	is	that	for	a	goose?

'What kind of goose is that?'

Wat	*is*	***dat***	*jans(2)?*
What	is	that	whole?

'What's all that about?'

Interrogative focus non-final

Woar ut ***roos(1)*** *jekluert?*
Was it pink coloured?
'Was it pink?'

Woar ut wie ***roos(2)*** *jekluert?*
Was it as rust coloured?
'Was the colour like rust?'

Biste uvver de ***weech(1)*** *jejange?*
Are.you over the roads gone?
'Did you go over the roads?'

Biste uvver d'r ***weech(2)*** *jejange?*
Are.you over the road went?
'Did you go over the road?'

Zunt do de ***erm(1)*** *draa?*
Are there the arms on.it?
'Are the arms attached to that?'

Is d'r ***erm(2)*** *draa?*
Is the arm at.it?
'Is the arm attached to it?'

Haste de ***jans(1)*** *opjèèse?*
Have.you the goose eaten?
'Have you eaten the goose?'

Haste ut ***jans(2)*** *opjèèse?*
Have.you it whole eaten?
'Did you eat it all?'

Interrogative focus final

Woar *ut* ***roos(1)?***
Was it pink?
'Was it pink?'

Woar *ut* ***roos(2)?***
Was it rust?
'Was it rust?'

Zunt *ut* ***weech(1)?***
Are it roads?
'Are they roads?'

Is *ut* *unne* ***weech(2)?***
Is it a road?
'Is it a road?'

Haste *jet* *an* *de* ***erm(1)?***
Have.you something on the arms?
'Is there something on your arms?'

Haste *jet* *an* *d'r* ***erm(2)?***
Have.you something at the arm?
'Do you have something on your arm?'

Haste *ing* ***jans(1)?***
Have.you a goose?
'Have you got a goose?'

Haste *ut* ***jans(2)?***
Have.you it whole?
'Have you got it all?'

Interrogative pre-focus non-final

Is dat roos(1)kluerig ***dink*** *doa?*
Is that pink.coloured thing there?
'Is that pink thing there?'

Is dat roos(2)kluerig ***dink*** *doa?*
Is that rust.coloured thing there?
'Is that rust coloured thing there?

Zunt de weech(1) ***ummer*** *zoe sjwats?*
Are the roads always so black?
'Are the roads always this black?'

Is d'r weech(2) ***ummer*** *zoe sjwats?*
Is the road always so black?
'Is the road always this black?'

Zunt de erm(1) ***waal*** *richtig broen woade?*
Are the arms really properly brown become?
'But have your arms tanned properly?'

Is d'r erm(2) ***waal*** *richtig broen woade?*
Is the arm really properly brown become?
'Did the arm tan properly?'

Haste dat mit die jans(1) ***alling*** *jedoa?*
Have.you that with that goose alone done?
'Did you do that thing with the goose on your own?'

Haste dat jans(2) ***alling*** *jedoa?*
Have.you that whole alone done?
'Have you done that all by yourself?'

Interrogative post-focus non-final

Woar	*dat*	***och***	*roos(1)*	*jekluert?*
Was	that	also	pink	coloured?

'Was that pink too?'

Hauw	*dat*	***och***	*ing*	*roos(2)kluer?*
Had	that	also	a	rust.colour?

'Does that also have a rust colour?'

(Die weech die doa loofete woare jans kling.)

(The roads that went along there were very small.)

Zaat	*hea*	*dat*	*doa*	*jans*	***kling***	*weech(1)*	*loofete?*
Said	he	that	there	very	small	roads	walked?

'Did he say that there are very small roads there?'

Zaat	*hea*	*dat*	*doa*	*inge*	*jans*	***klinge***	*weech(2)*	*lööft?*
Said	he	that	there	a	very	small	road	walks?

'Did he say there's a very small road there?'

Haste	*diech*	*ing*	***tatoeage***	*op*	*de*	*erm(1)*	*jezats?*
Have.you	you	a	tattoo	on	the	arms	put?

'Have you put a tattoo on your arms?'

Haste	*diech*	*ing*	***tatoeage***	*op*	*d'r*	*erm(2)*	*jezats?*
Have.you	you	a	tattoo	on	the	arm	put?

'Did you put a tattoo on your arm?'

(Vuur woare no de jans kieke)

(We went to see the goose)

Woar	*hea*	***och***	*bei*	*die*	*jans(1)*	*d'rbei?*
Was	he	also	by	that	goose	with.it?

'Was he there as well at that thing with the goose?'

Woar	*hea*	***och***	*jans(2)*	*d'rbei?*
Was	he	also	whole	at.it?

'Was he there all the time too?'

Interrogative post-focus final

Woar dat ***och*** *roos(1)?*
Was that also pink?
'Was that pink too?'

(Dat heij hat roos.)
(This has rust.)
Hat dat ***och*** *roos(2)?*
Has that also rust?
'Does that have rust as well?'

Woare dat ***jans*** *lang weech(1)?*
Were that very long roads?
'Were they very long roads?'

Woar dat unne ***jans*** *lange weech(2)?*
Was that a very long road?
'Was that a very long road?'

Hastoe och zoen ***sjtèèchende*** *pieng in de erm(1)?*
Have.you also such stabbing pain in the arms?
'Do you have such a stabbing pain in your arms as well?'

Hastoe och zoen ***sjtèèchende*** *pieng in d'r erm(2)?*
Have.you also such stabbing pain in your arm?
'Do you have such a stabbing pain in your arm as well?'

Haste die ***wiesse*** *jans(2)?*
Have.you that white goose?

Haste dat ***wiesse*** *jans(2)?*
Have.you that white whole?
'Have you got the white one completely?'