

## ILLUSTRATION OF THE IPA

### Saterland Frisian

#### Jörg Peters

Carl von Ossietzky University Oldenburg  
*joerg.peters@uni-oldenburg.de*

Saterland Frisian (sfrs. *Seeltersk*<sup>1</sup>, ['se:l.tɛsk]) is the only living remnant of Old East Frisian. It is spoken in the municipality of the Saterland (sfrs. *Seelterlound*, ['se:l.tɛ.lɔʊnt]), which is located in the federal state of Lower Saxony in northwestern Germany.

The municipality of the Saterland consists of the four communities Ramsloh (sfrs. *Romelse*, ['ro:.mɛl.sə]), Strücklingen (sfrs. *Strukelje*, ['ʃtru.kəl.jə]), Scharrel (sfrs. *Skäddel*, ['skɛdɫ]), and Sedelsberg (sfrs. *Sedelsbierich*, ['se:.dɫs.bi:.rɪç]). Saterland Frisian comprises three local dialects spoken in Ramsloh, Strücklingen, and Scharrel/Sedelsberg (Sjölin 1969, Fort 2015). There is no standard variety although the dialect of Ramsloh is the most conservative of the three dialects and has maintained several features of Old East Frisian which are lacking in the dialects of Strücklingen and Scharrel. Most, if not all, older native speakers of Saterland Frisian are trilingual, with a hybrid mixture of Münsterland and Emsland Low German as their second and Northern Standard German as their third language (Fort 2004). Younger speakers of Saterland Frisian are mostly bilingual, with Northern Standard German as their second language. There was until recently little social contact with East Frisian Low German because the great majority of the Frisian population of the Saterland is Roman Catholic. The East Frisians belong to the Lutheran or Dutch Reformed churches.

Saterland Frisian is an endangered language, with an estimated number of 2250 speakers (Stellmacher 1998: 27). General descriptions of the language are available from Siebs (1889, 1901), Sjölin (1969), Kramer (1982), and Fort (2015) (for an overview of older contributions see Fort 1980: 16ff.). Comprehensive dictionaries are Kramer (1961) and Fort (2015).

The present description is based on the speech of three middle-class trilingual speakers aged between 70 and 80, two female speakers from Ramsloh and Scharrel, and one male speaker from Strücklingen. The description of the vowels is enhanced by acoustical analyses

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<sup>1</sup> Orthographic conventions are adopted from Fort (2015).

of 35 male middle-class trilingual speakers aged between 50 and 75 (13 from Ramsloh, 11 from Strücklingen, and 11 from Scharrel; cf. Schoormann et al. (2015, 2015a.)). The recording of the narrative as well as the recordings of the examples in the tables and in the running text are taken from the female speaker from Ramsloh.

## Consonants

	Bilabial	Labiodental	Alveolar	Postalveolar	Palatal	Velar	Glottal
Plosive	p b		t d			k g	(ʔ)
Nasal	m		n			(ŋ)	
Trill			r				
Fricative		f v	s z	(ʃ)		x (χ)	h
Approximant	(β)				j		
Lateral Approximant			l				

Symbols in brackets indicate allophonic variants.

/p/	'puk.jə	'to knock'	/b/	'buk.jə	'to bow'
/t/	'taʊ.jə	'to rush'	/d/	'daʊ.jə	'to dew'
/k/	'kɔ:ɣ.tə	'card'	/g/	'gɔ:ɣ.tə	'groats'
/m/	'mɛi.də	'meadow'	/n/	'nɛi.də	'grace'
			/r/	'rɔ:ɣə	'rye'
/f/	'fi.lə	'rasp'	/v/	'vi.lə	'while-NOM.SG'
/s/	'sɔ:ɣə	'saw'	/z/	'zɔ:ɣə	'myth'
/x/	'ʔɔ:x.tə	'eight'	/h/	'hɔ:ɣə	'dunghill'
/j/	'jok.jə	'to itch'	/l/	'luk.jə	'to succeed'

Younger speakers tend to devoice voiced (lenis) obstruents in syllable-final position and before voiceless obstruents. Some older speakers realize /g/ as a velar fricative [χ], which is likewise devoiced in syllable-final position and before voiceless consonants. [ʔ] is restricted to the beginning of word-initial stressed syllables and often missing from connected speech.

Postvocalic /n/ is velarized before tautomorphic /g/ and /k/ (compare monomorphemic ['sɪŋəl] *Singel* 'fencing' and ['slɛŋ.kə] *Slänke* 'rut' with bimorphemic ['mɛn.kən] *Mänken* 'man-DIM'). [ŋ] may occur after long vowels, as in [slɔ:ŋk] *sloank* 'slim'.

/r/ in onset position is an alveolar trill. Younger speakers tend to replace [r] by [ʀ]. Prevocalic /r/ may be preceded by /p/, /b/, /t/, /d/, /k/, /g/, /f/, and /v/. After a vowel in word-final position and before a consonant it is [ʀ] ([bɔ:ʀ] ‘cash-ADJ’, [bɔ:ʀst] ‘fissure’).

/v/ tends to become devoiced in word-final position and before voiceless consonants. /v/ may be preceded by /d/, /t/, /k/, and /s/ in the onset ([dvo:] ‘to do’, [tvo:] ‘two’, [kvo:t] ‘bad’, [ʰsvo:.də] ‘crust’). [β] is an allophonic variant of /v/, which occurs in intervocalic position after [u] (see sec. *Diphthongs*).

/s/ becomes voiced word-medially after a long vowel, before /j/, and after /l/ and /r/. Before /p/, /m/, /n/, /j/, /l/, /t/, and /v/, /s/ tends to become palatalized in younger speakers, resulting in [ʃ], or [sʲ] (e.g. [ʰsʲpi:.tə] ‘spade-PL’, [ʰʃmi:.də] ‘smithy’, [ʰʃni:.də] ‘to cut’, [ʰʃli:.tə] ‘wear out’, [ʰʃte:.tə] ‘to push’, [ʰʃvɪtə] ‘to sweat’). /sj/ is often reduced to [ʃ], [sʲ], or [s] (e.g. [ʰʃɔŋə] ‘to sing’, [ʰsʲo:.də] ‘to boil’). Word-initially, /sk/ is realized as [sk], [sx], [ʃk], [ʃx], or [ʃ] (cf. Tröster 1997: 17). Word-finally, [sk] is at variance with [ʃk].

/z/ is rare and tends to become devoiced in word-final position. Some speakers do not use the voiced alveolar fricative in any position. /x/ is usually a velar fricative but in some speakers palatal variants can be observed after front vowels and uvular variants after low back vowels, as in Northern Standard German (cf. Kohler 1990). /h/ is restricted to morpheme-initial prevocalic position.

/j/ is restricted to prevocalic position, where it may be preceded intra-morphemically by /b/, /t/, /d/, /k/, /g/, /f/, /s/, /m/, /n/, and /l/ (e.g., [ʰbjɔ:.də] ‘to offer’, [tjɔ:] ‘to pull’, [ʰdju:.vəl] ‘devil’, [ʰkjo:.zə] ‘to choose’, [ʰgjoχ.tə] ‘direction’, [ʰfju:ʀ] ‘fire’, [mjɔks] ‘dung’, [ʰnju:.gŋ] ‘nine’, [ʰlju:.də] ‘people’; for /sj/ see the previous comments on /s/). Prevocalic /l/ may be preceded by /p/, /b/, /k/, /g/, /f/, and /s/ (e.g., [ʰplɔ:.tə] ‘disk’, [blɔxt] ‘blood’, [klo:t] ‘dress’, [glik] ‘equal’, [flɔks] ‘instantly’, [slɔt] ‘lock’).

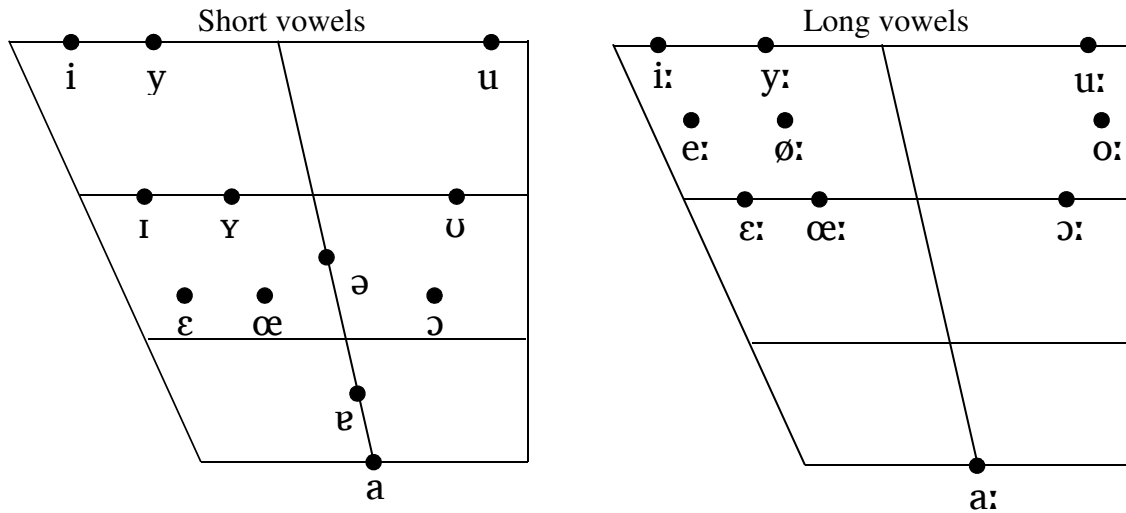
Saterland Frisian allows complex onsets with up to three consonants /klj/, /flj/, /spr/, /spl/, /str/, /stj/, /skr/, /skj/, /skl/, /slj/, e.g. [kljɔχun] ‘clew’, [ʰfljo:.tə] ‘to flow’, [ʰʃprɔ:.kə] ‘language’, [ʰʃpli:.tə] ‘to split’, [ʰʃtrɔ:l.jə] ‘to shine’, [ʰstjɔŋ.kə] ‘to stink’, [ʰskriju.βə] ‘to write’, [ʰskjo:.tə] ‘to shoot’, [ʰsklɔ:.və] ‘slave’, and [ʰljɔxt] ‘bad’.

/trj/ and /krj/ are often realized as [tj] and [kj], respectively (e.g., [ʰtjɔ:x.tə] ‘funnel’, [ʰkjo:.pə] ‘to creep’). There are codas with up to four consonants after a short vowel and after /ɔ:/ (/mpst/, /ndst/, /nkst/, /lpst/, /ldst/, /lkst/, e.g. [vrɪmpst-2SG] ‘wind’, [bɪndst-2SG] ‘bind’, [stjɔ:ŋkst-2SG.IPFV] ‘stink’, [hɛlpst-2SG] ‘help’, [jɛldst-2SG] ‘hold for’, [mɛlkst] ‘milk-2SG’).

## Vowels

### Monophthongs

Saterland Frisian has 9 short and 10 long monophthongs. In addition, there is [ə], which is restricted to unstressed syllables, and the allophonic variant [ɐ] of /r/.<sup>2</sup>



The closed vowels can be divided into three classes: short lax vowels (/ɪ ʏ ʊ/), short tense vowels (/i y u/), and long tense vowels (/i: y: u:/). The mid vowels comprise short lax vowels (/ε œ ɔ/), long lax vowels (/ε: œ: ɔ:/), and long tense vowels (/e: ø: o:/). The open vowels /a/ and /a:/ differ by duration only. Scharrel speakers replace /a:/ with /a/ before tautosyllabic alveolar plosives.

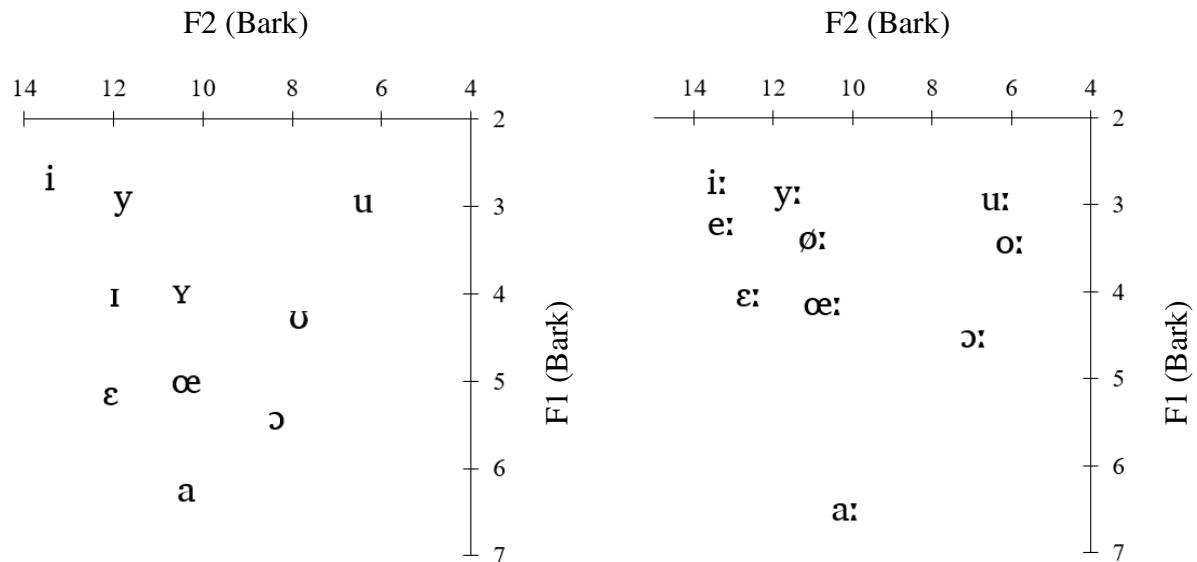
/ɪ/	'lɪnən	'linen-ADJ'	/i/	'li.nə	'string'	/i:/	'li:.nə	'backrest'
/ʏ/	'jɪp.tə	'depth'	/y/	'py.tə	'bag-PL'	/y:/	'dy:.vəl <sup>2</sup>	'devil'
/ʊ/	fʊl	'full'	/u/	ful	'foul-ADJ'	/u:/	fu:l	'many'
/ε/	'dɛkə	'to cover'	/ε:/	'dɛ:.kə	'cover'	/e:/	'bre:.kə	'break-PL'
/œ/	'mœl.kə	'to milk'	/œ:/	'mœ:.gə	'color'	/ø:/	'sø:.gɟə	'to lactate'
/ɔ/	'lɔdɐ.jə	'to laze'	/ɔ:/	'lɔ:.də	'drawer'	/o:/	'klo:.də	'dress-PL'
/a/	'takə	'branch'	/a:/	'ta:g.jə	'to annoy'	/ə/	zə	'they'

/i y u/ are shorter than /i: y: u:/ but usually a bit longer and more peripheral than /ɪ ʏ ʊ/ (cf. Heeringa et al. 2014). There is some disagreement about the distribution of long and short tense vowels (cf. Fort 1971) and the distinction is on retreat. Most younger and middle-aged speakers replace the short tense with long tense vowels, which results in binary oppositions

<sup>2</sup> Note that in our speakers /y:/ is largely restricted to loans from Low German.

between lax /ɪ ʏ ʊ/ and long tense /i: y: u:/, as in Northern Standard German (see Tröster 1996, 1997, Schoormann et al. 2015).

Figure 1 shows mean values of monophthongs in /hVt/ words recorded from 13 male speakers of Ramsloh Saterland Frisian aged between 50 and 75 years (after Schoormann et al. 2015).

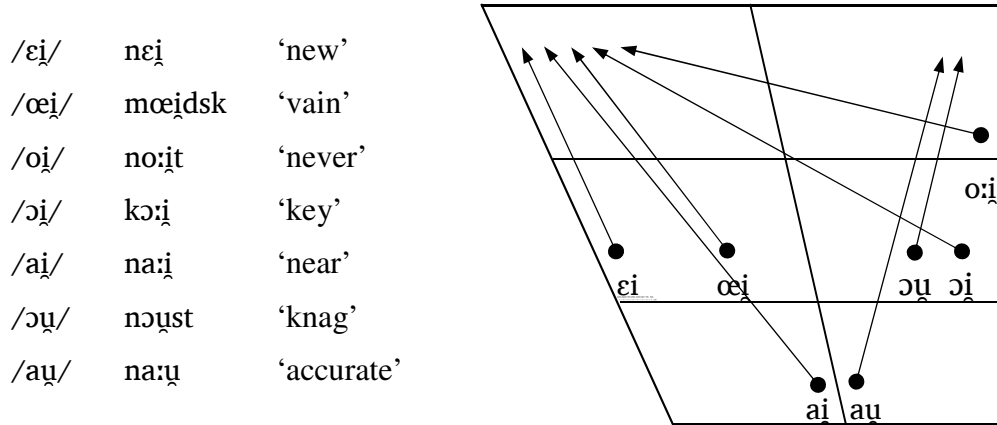


**Figure 1.** Mean formant frequencies at 50% of vowel duration of short (left panel) and long monophthongs (right panel) in isolated /hVt/ words recorded in Ramsloh.

### Diphthongs

Saterland Frisian has seven phonemic diphthongs, all of which are falling and closing: /oi̯/, /ei̯/, /œi̯/, /ɔi̯/, /ai̯/, /ɔʊ̯/, and /aʊ̯<sup>3</sup>. The first part of the diphthongs may be lengthened but there are no durational contrasts between the phonemic diphthongs. /ɔi̯/ is realised as [ɔ:i̯] except before tautomorphic voiceless plosive (compare [brɔ:i̯t] ‘scald-3Sg-Pr’ with heteromorphic /t/ and [ˈflɔ:i̯t.jə] ‘to pipe’ with tautomorphic /t/; cf. Bußmann 2004: 76f., 80f.). The diphthongs may end with a more centralized vowel, as in [ei̯], [ai̯], [ɔʊ̯], [aʊ̯]. The second part of /œi̯/, /oi̯/, and /ɔi̯/ may be both centralized and rounded, resulting in [oɤ̯], [œɤ̯], [ɔɤ̯].

<sup>3</sup> Bußmann (2004: 82) omits /oi̯/. Note that /ɔʊ̯/, which is recognized as phonemic by Bußmann (2004: 80), is missing from her final list of phonemic diphthongs on p. 82.



/oi̯/ and /ɔi̯/ are not distinguished in the data set of Schoorman et al. (2015, 2015a). /yi̯/, which Fort (2015) finds in a single word, [sky:i̯] ‘meat juice’, was unknown to our informants. Fort’s (2015) [u:i̯], which is attested for [tru:i̯.jə] ‘to threaten’, is an allophonic variant of /u:/ before /j/.

Saterland Frisian has four additional diphthongs [ɪu̯], [iu̯], [i:u̯], [e:u̯], and [ɛu̯], which are allophones of /ɪv/, /iv/, /i:v/, /e:v/, and /ɛv/, respectively. When /v/ occurs in intervocalic position, the phoneme sequences are followed by a voiced bilabial approximant [β]. /ɪv/, /i:v/, and /e:v/ are attested with intervocalic /v/ only.

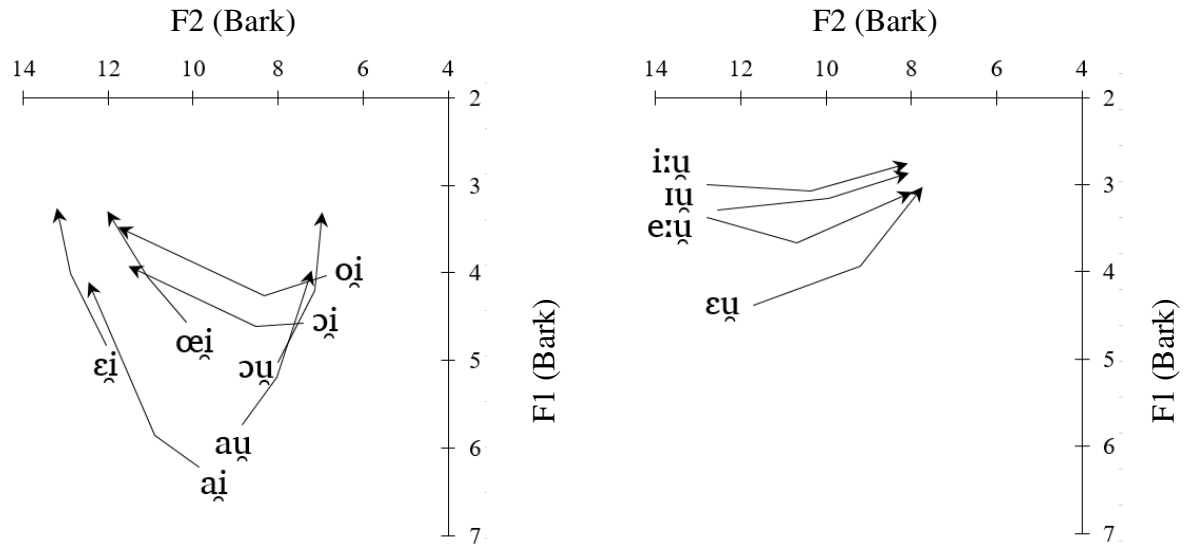
/ɪu̯/			'kɪu̯.β ə	‘chin’
/iu̯/	griu̯	‘advantage’	'gliu̯.βə	‘cleft’
/i:u̯/			'bli:u̯.βən	‘stay-PP’
/e:u̯/			'le:u̯.βə	‘to believe’
/ɛu̯/	hɛu̯	‘hit 3SG PST’	'hɛu̯.βən	‘to hit’

Fort (2015: XV) lists [ɛ:u̯] as an additional diphthong, which is not used by our speakers. Table 2 lists all vowel+/v/ sequences that were found to be merged in the three local dialects by Schoormann et al. (2015, 2015a).

Table 2. Mergers of vowel+/v/ sequences.

/ɪv/-/iv/	Ramsloh, Strücklingen, Scharrel
/iv/-/i:v/	Ramsloh
/ɪv/-/i:v/	Strücklingen
/ɛv/-/ɛ:v/	Ramsloh

Figure 2 shows mean values for the phonemic diphthongs (left panel) and allophonic realizations of un-merged vowel+/v/ sequences in /hVt/ words in Ramsloh recorded from 13 male speakers aged between 50 and 75 years (after Schoormann et al. 2015).



**Figure 2.** Mean formant frequencies (in Hz) of diphthongs in /hVt/ words measured at 20%, 50%, and 80% of vowel duration. Left panel: phonemic diphthongs. Right panel: allophonic variants of un-merged vowel+/v/ sequences.

### Word stress and intonation

Word stress is on the last stressed syllable of the first phonological word, as defined by Wiese (2000) for Standard German. A phonological word is (i) a lexical stem, which may be extended by prefixes with a reduced vowel and the prefix /bi/, and by suffixes that begin with a vowel, (ii) a prefix with a full vowel, and (iii) a suffix that has a full vowel and begins with a consonant.

Words	Morphemes	Phonological words <sup>4</sup>	
<sup>1</sup> tu:mə	tumə	( <u>tumə</u> )	‘thumb’
zə.'lɔ:t	zəlcɔ:t	(zə <u>lcɔ:t</u> )	‘salad’
bi.'prɔ:ljə	bi + prɔ:l + jə	(bi <u>prɔ:l</u> jə)	‘to praise’
<sup>1</sup> ut,drɪŋ.kə	ut + drɪŋk + ə	( <u>ut</u> )( <u>drɪŋk</u> ə)	‘to drink up’
<sup>1</sup> dɪsk.dɔʊk	dɪsk + dɔʊk	( <u>dɪsk</u> )( <u>dɔʊk</u> )	‘tablecloth’
,e.lə.'fant	eləfant	(e <u>ləfant</u> )	‘elephant’

<sup>4</sup> Phonological words are given in parentheses. Stressed syllables are underlined.

Fort (2015) lists a number of compounds with unusual word stress, which apparently are loans from Northern Standard German (ngs.), such as sfrs. , *äärm*. 'zoalig, nsg. 'arm, *selig* 'miserable', sfrs. , *licht*. 'fäidig, nsg. 'leicht, *fertig* 'careless', and sfr. , *stjúur*. 'fräi, nsg. 'steuer, *frei* 'tax-free'. These unusual stress patterns may result from treating the German loans in Saterland Frisian as non-compounds consisting of a single phonological word, whose last stressed syllable attracts the primary word stress.

The domain of intonational phrasing is the intonational phrase (IP). Saterland Frisian shares most if not all intonation contours with Northern Standard German (see Fort 1995: 527, Peters 2008; for Northern Standard German see Grice et al. 2005 and Peters 2014). The tape recordings by Pyt Kramer attest a few instances of tonal configurations that are absent from Northern Standard German, such as a complex initial boundary tone %HL. In addition, variation of the timing of the falling pitch movement on nuclear falling accents was found in older speakers, which is reminiscent of the distinction between *gestossener Ton* and *geschliffener Ton* of Siebs (1889), but no minimal pairs are available (see Peters 2008: 161ff. for discussion).

## Transcription of recorded passage

The passage was recorded from our female speaker from Ramsloh who distinguishes between short and long tense close vowels (cf. Heeringa et al. 2014). We use [ ] to mark boundaries of an intonational phrase (IP) and [ || ] to mark boundaries of an utterance phrase (UP). IPs form the domains of complete intonation contours. UPs are sequence of IPs sharing the same tonal space (cf. Peters 2014, chap. 8).

### Phonemic transcription

di 'nɔ̯.ɔ̯.ɔ̯.vi:nd ɔn ju 'sɔ̯nə || 'in.sən 'stre:.dən sɪk di 'nɔ̯.ɔ̯.ɔ̯.vi:nd | ɔn ju 'sɔ̯nə | vɛl fɔn do  
 be: | vɛɹl di 'stɛ:r.kə.rə va:s || as a:n 'vɔn.dərs.ɔ̯n | di in a:n 'vɔ:r.mən 'mɔ:n.təl 'paʔəd va:s |  
 dən vai lɔ:ɹs kɔ:m || jo 'vu.dən 'e:.nɹɔ̯ | det di fɔr dən 'stɛ:r.kə.rə 'jɛɹl.də skul | di dən  
 'vɔn.dərs.ɔ̯n tvɪɹt | sɪn 'mɔ:n.təl ,ut.tɔ̯.lu.kən || di 'nɔ̯.ɔ̯.ɔ̯.vi:nd 'blɔ:.zə.də mɛt 'aɹə  
 'krɔ:.zjə | 'ɔ:.vər 'um.so mɔ:r hi 'blɔ:.zə.də | 'um.so 'fɛ:s.tər 'paʔə.də sɪk di 'vɔn.dərs.ɔ̯n in  
 sɪn 'mɔ:n.təl in || 'ɛntɔ̯lk 'rɔ:.tə di 'nɔ̯.ɔ̯.ɔ̯.vi:nd dən kamp ap || nu 'mɔ:.kə.də ju 'sɔ̯nə mɛd  
 'hi.rə 'fryn.təl.kə 'strɔ:.lən | ju luft vɔ:rm || ɔn al 'ɛtər mɪn 'ɔ:.gən.ɔ̯ɹɪkə | lɔ:k di 'vɔn.dərs.ɔ̯n  
 | sɪn 'mɔ:n.təl ut || do 'mɔ:s.tə di 'nɔ̯.ɔ̯.ɔ̯.vi:nd 'tɔ̯.ɹe.kə | det ju 'sɔ̯nə fɔn hɪm be: | di  
 'stɛ:r.kə.rə va:s ||



### Allophonic transcription

di 'nɔ̥.də.vi:nd<sup>h</sup> ?ʊn ju 'sʊŋə || 'ʔm.sɪ 'ʃtre:.dɪ sik<sup>ɔ</sup> di 'nɔ̥.də.vi:nd<sup>h</sup> | ?ʊn ju 'sʊŋə | vɛl fɔn  
do be: | vɛl di 'ʃtɛɣ.krə vɑ:s || ?as ?a:n 'vɔn.dɛs.,mɔn | di ?m a:n 'vɔ:ɣm.v̥mɔ:n.rɪ pakət<sup>ɔ</sup> vɑ:s |  
dɛn vɑ:i lɔ:ŋs kɔ:m || ju 'vu.dɪ 'ʔe:.niç | dʊt<sup>ɔ</sup> d̥i: fɔ dɛn 'ʃtɛ:ɣ.krə 'jɛɪl.də sku:l | d̥i dɛn  
'vɔn.dɛs.,mɔn t<sup>h</sup>vɪŋt | sɪn 'mɔ:n.rɪ 'ʔut<sup>ɔ</sup>.tɔ.'lu.ʔɪ || di 'nɔ̥.də.vi:n 'blɔ:.zə.də mɛ 'ʔalə 'krɔ:.zə |  
'ʔa:.vɔ 'ʔum.so mɔ:vɛ hi 'blɔ:.zə.də | 'ʔum.so 'fɛ:s.tɛ 'pakə.də sik<sup>ɔ</sup> di 'ʔan.dɛs.,mɔn ?m sɪn  
'mɔ:n.ʔɪ ?in || 'ɛn.tɔlk.'rɔ:.tə di 'nɔ̥.də.vi:nd<sup>ɔ</sup> dɛn kamp ?ap || nu 'mɔ:.kə.də ju 'sʊŋə mɛ:.'iə.rə  
'fry:n.təl.kə 'ʃtrɔ:.lən || ju luft vɔ:ɣm | ?ʊn al 'ʔɛtɛ mɪn 'ɔ:.ŋɪ.'blɪkə | lɔ:k di 'vɔn.dɛs.,mɔn | sɪn  
'mɔ:n.rɪ 'ʔut<sup>h</sup> || do 'mɔ:vɛ.tə di 'nɔ̥.də.vi:nd<sup>ɔ</sup> 't<sup>h</sup>ɔ̥.rɛ:kə | dɛt ju' sʊŋə fɔn him be: | di  
'ʃtɛɣ.kə.rə vɑ:s ||

### Orthographic version<sup>5</sup>

Die Noudewiend un ju Sunne

Insen streden sik die Noudewiend un ju Sunne, wäl fon do bee wäil die Stäärkere waas, as 'n Wondersmon, die in 'n woormen Moantel pakked waas, dän Wai loangs koom. Jo wuden enig, dät die foar dän Stäärkere jäilde skuul, die dän Wondersmon twingt, sin Moantel uuttouluuken. Die Noudewiend bloazede määd alle Kroazje, oaver jee moor hie bloazede, uumso fääster pakkede sik die Wondersmon in sin Moantel ien. Äntelk roate die Noudewiend dän Kamp ap. Nu moakede ju Sunne määd hier früüntelke Stroale ju Luft woorm, un al ätter min Oogenblikke look die Wondersmon sin Moantel uut. Do moaste die Noudewiend toureke, dät ju Sunne fon him bee die Stäärkere waas.

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<sup>5</sup> The orthographic version adopts the conventions of Fort (2015).

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