Vowel quantity and the fortis-lenis distinction in North Low Saxon

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1. Introduction

The West Germanic language Low German as spoken in northern Germany and the north-eastern part of the Netherlands is defined as a regional minority language in the sense of the European Charter. In Germany, it is generally divided into a western and an eastern variety, each containing again subdivisions into regional variants (i.e. North Low German, Westphalian, Eastphalian for the western part, and Mecklenburg-Vorpommernian, Brandenburgian, and Pomeranian for the eastern part).\(^1\) The Low German language in the Netherlands is subdivided from north to south into the varieties Gronings, Stellingwerfs, Drents, Twents, Gelders-Overijssels, and Veluws. Figure 1 provides a map of the Low German area with a focus on the German language territory. The hatchings mark transition areas between the dialects.

Figure 1. Map of Low German

I focus in the following on the North Low German area (also: North Low Saxon), and more specifically on its designated ‘core-area’ as indicated in Figure 1 (see also Figure 5).\(^2\)

A linguistic peculiarity of this area is the assumed presence of a ternary length opposition of short vs. long vs. overlong in the Low German (LG) vowels.\(^3\) Table 1 exemplifies the alleged distinction with two (near) minimal triples.

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\(^1\) Wiesinger (1983a), Lindow et al. (1998).

\(^2\) Termed “Weser-Trave-Raum” by Lindow et al. (1998:19, Abb. 1). The main criterion for this classification is the consistent deletion of schwa in word endings in this area.
The additional lengthening of long vowels to overlong vowels occurred on top of OSL. It changed the old Boersma p.c. (1972).

phonetics (see below FN 5.3.3 phonological analyses, researchers have declared a ternary length contrast (e.g. Ternes 1981);

i) a ternary length contrast (e.g. Ternes 1981);

ii) differentiation of two series of short vowels (plus one series of long tense vowels) by means of tenseness / laxness (e.g. Kohler & Tödter 1984; Kohler et al. 1986; Kohler 2001);

iii) tone to distinguish between long vowels and overlong vowels (e.g. Wyland Grundt 1975; Höder 2003; Ternes 2006; Prehn 2007).

The theoretical point of departure is generally the assumption that the deletion of a word-final schwa [ə] (i.e. apocope) and the co-occurring reduction of the word by one syllable triggered two different developments from post-Middle Low German (MLG) to LG, namely vowel lengthening and the lack of vowel lengthening. If the schwa was preceded by an originally intervocalic voiced consonant, a long nuclear vowel (V) in the preceding syllable lengthened to overlong (Table 1 (c) /ziid/ ‘silk-Nom.Sg.’ < MLG side, /riiz/ ‘giant-Nom.Sg.’ < MLG rese, /steeg/ ‘jetty-Nom.Pl.’ < MLG stege). A number of researchers (e.g. Kohbrok 1901, Bremer 1929, von

A phonetic difference occurs not only with respect to vowel duration but also in vowel quality, as is demonstrated in the examples. Short vowels are lax (i.e. produced more open), long and overlong vowels are tense (i.e. produced more closed). An additional difference in the tonal contours of the long vowels (Stoßton, pushing tone) and the overlong vowels (Schleifton, dragging tone) has been postulated and measured on various occasions.

There exists a long-standing discussion on this matter in LG. In phonological analyses, researchers have declared all three of the following phonetic correlates to be the primary property of the contrast:

Table 1. Low German near minimal triples

<table>
<thead>
<tr>
<th>short</th>
<th>long</th>
<th>overlong</th>
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3 The term Low German where henceforth occurring in the study is used synonymously to North Low German and North Low Saxon.
4 I employ here the notation V for short vowels, V: for long vowels, and the notation VV: for overlong vowels. An artificially lengthened vowel as used for the perception experiment described in chapter 3.1.3 receives an additional half-length sign, i.e. VV (diphthong) or V: (monophthong). Note that the phonological transcription will be revised in the course of the discussion of LG vowel length in section 5.3.3.
5 The phonologically voiced (or lenis) final obstruents are occasionally not fully devoiced in LG phonetics (see below FN 72 page 59, section 5.3.1.1 page 170). I therefore use rather [z] than [s] in the phonetic transcriptions of this thesis. The underlying voiced (or lenis) status of the respective obstruents is not affected.
7 MLG was spoken approximately between 1300 and 1600 A.D. as a lingua franca of the Hanse League.
8 It may be the case that the nuclear vowel of [riiz] ‘giant-Nom.Sg.’ has been borrowed from HG (Paul Boersma p.c.).
9 Note that open syllable lengthening (OSL) occurred in pre-MLG time or in early MLG at the very latest. The additional lengthening of long vowels to overlong vowels occurred on top of OSL. It changed the old
Eschen 1957, Ternes 1981) assumed that the extended duration is accompanied by a certain pitch movement that resembles the contour of the originally bisyllabic configuration. If instead of the voiced consonant a voiceless consonant occurred in intervocalic position, the long V maintained its duration and pitch contour and no change emerged (Table 1 (b) /ste/ ‘pierce-1.Sg.Pres.’ < MLG steke); similarly, short VVs did not change either in this position, independently of whether the intervocalic consonant was voiced or voiceless (Table 1 (a) /suit/ ‘sit-1.Sg.Pres.’ < MLG sitte, /quiz/ ‘guess-1.Sg.Pres.’ < MLG gisse, /stik/ ‘pencil-Nom.Sg.’ < MLG sticke; also LG /mvg/ ‘mosquito’ < MLG mugge). Thus, long vowels differ from the newly developed overlong vowels not only in overall duration, but also in their ‘tonal’ behavior. The most frequent terms used in the literature for these ‘tones’ or ‘tone accents’ are Stoßton or ‘pushing tone’ for the early peaked pitch contour accompanying long vowels (here termed TA1), and Schleifton or ‘dragging tone’ for the pitch contour with a delayed peak accompanying the overlong vowels (here termed TA2), respectively. The contrast is in the majority of cases observable on monosyllables (excluding prefixed items), but also occurs in some bisyllabic words (e.g. /mu'trooz/ ‘sailor-Sg.’, /kan'byyz/ ‘caboose-Sg.’). We can say that the opposition is restricted to word-final, stressed syllables.

Moreover, it has been observed for some dialects that schwa after a sonorant consonant equally leaves a trace after apocope or syncope (i.e. deletion of interconsonantal schwa). The effect here is that we find a lengthened sonorant consonant instead of a lengthened nuclear vowel. The prerequisite is that the nuclear vowel was originally short. A durational difference in sonorant consonants occurs between words such as [kan] ‘can-3.Sg.’ < MLG kan and [kan] ‘jug-Sg.’ < MLG kanne. The latter form probably shows the same pitch contour as the overlong vowel in /ziid/ ‘silk-Nom.Sg.’ < MLG side on the sequence of short vowel and long sonorant consonant (Prehn 2010).

The goal of this investigation is to establish whether LG employs vowel quality, vowel quantity or rather tonal accents as a means of expressing lexical or morphological contrasts. The vowel quality differences of tense vs. lax have been phonetically analyzed exhaustively and rather unanimously for the regional northern variety of Standard German (Weiss 1976) and local varieties of LG (Kohler & Tödter 1984, Kohler et al. 1986) in the past. This leaves us with the question concerning the presence of vowel quantity differences and tonal differences in LG, and their possible functional load. In order to be able to give a significant phonological account of LG suprasegmentals, I recorded speech material and conducted a perception test with informants from three dialect areas. The dialects under investigation are the local varieties of Kirchwerder (eastern outskirts of long vowels and the lengthened vowels alike. Short (lax) vowels were not affected because they only occur in (originally) closed syllables (see section 5.1.1.1).

Wiesinger (1983b:1063f.). Note that /zit/ ‘side-Nom.Sg.’ < OSax. sida did not have a schwa in MLG time. Standard German Ege, LG ‘teec’ ‘harrow-Sg.’ with overlong V appears to be an exception at first sight. Note, however, that the MLG form is eyede with long V in initial position. It is therefore no exception, but it is compliant to the expected development.

Also: circumflex or circumflexed intonation (e.g. Zahrenhusen 1901; Rabeler 1911; Sievers 1914).
Hamburg), Altenwerder (western outskirts of Hamburg), and Alfstedt (close to Bremervörde / Niedersachsen).

I develop the phonological analysis based on the insights of the phonetic investigations, and the grammatical properties of LG (in particular: word stress). Since the durational differences between the long vowels and the supposedly overlong vowels are interrelated with the quality of the following consonant (C), we need to consider the post-vocalic Cs in the analysis as well.\(^\text{12}\)

The tests demonstrate that the alleged difference between a second and a third degree of length (i.e. long vs. overlong) is indeed present in the phonetic data. The informants employ duration as the main cue for distinguishing between certain minimally different pairs of words. This is true for the production as well as the perception. A tonal phenomenon (i.e. a dragging tone on the overlong vowels) is not consistently produced and perceived. I treat this matter more elaborately in the descriptive part of the study in chapter 3. We could assume at this point of the investigation that the length contrast is phonological.

Yet, another rather prominent opposition needs to be considered as well: the quality contrast between lax vowels and tense vowels. While lax vowels are always short, tense vowels may only be long or overlong. In order to clear the picture, I present in chapter 4 more data, this time focusing on the stress system of LG. Stress has some interesting implications for the specific weight of vowels and succeeding Cs. The stress system shows that short lax Vs and long tense Vs count as identical weight-wise, whereas the tense overlong Vs are heavier. This suggests a phonological relevance of the durational difference.

Chapter 5 contains my synchronic analysis of the LG vowel system. The lax vs. tense quality we find in LG vowels distinguishes between the monomoraic short and long vowels. The lax Vs (like all lax vowels in Germanic languages) behave rather special, requiring an additional tense vowel in the nucleus or a consonant in the coda. I argue that, since the tense long and overlong Vs are distinguishable only by means of duration, a binary contrast of moraic weight is sufficient to explain the phonetic facts. The vowel length system can therefore be established as being twofold binary: lax vs. tense distinguishes the short and long Vs, whereas monomoraic vs. bimoraic distinguishes the long and overlong Vs.

The (synchronic) interaction of the overlong vowel length with a following lenis C, and the blocking of overlength in pre-fortis and pre-sonorant context is discussed in chapter 6. I provide an OT analysis of the matter, relating the different behavior with respect to compensatory lengthening to the structural complexity of the segment. While fortis Cs are laryngeally specified and sonorant Cs employ a feature [sonorant voicing], meaning that both categories have a structurally enriched root node, lenis Cs are laryngeally unspecified. They are structurally simplex. It is this status that ultimately allows for the lengthening of a tense long vowel to tense overlong after (diachronic) apocope of schwa in the succeeding syllable.

\(^{12}\) Socio-linguistic or lexical aspects that are the focus of most of the recent scientific investigations (Appel 1994:16) are not what I am aiming at.
To accommodate LG in a broader linguistic context, I give a typological overview of the languages of the world that show three possibly phonological degrees of length in chapter 7. The outcome of this short venture is that there are at least ten languages that can best be analyzed as being ternary. Although this number is cross-linguistically particularly low, it evinces that a threefold length contrast is by no means impossible.

Chapter 8. contains the conclusion.

Before I start with the descriptive part and the presentation of the data, I would like to give first an overview of the phonological background setting, the dialect area, and the linguistic studies on the length and tone phenomena in LG that have been brought forward until now. Section 2.1 defines the phonological frame that is assumed for the current survey. Section 2.2 contains a brief overview on the three dialect areas investigated here. The relevant literature is presented in section 2.3.