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Geography and Dialects of Old Saxon

River basin communication networks and the distributional patterns of North Sea Germanic features in Old Saxon

Versloot, A.; Adamczyk, E.

Publication date

2017

Document Version

Final published version

Published in

Frisians and their North Sea Neighbours

[Link to publication](#)

Citation for published version (APA):

Versloot, A., & Adamczyk, E. (2017). Geography and Dialects of Old Saxon: River basin communication networks and the distributional patterns of North Sea Germanic features in Old Saxon. In J. Hines, & N. IJssennagger (Eds.), *Frisians and their North Sea Neighbours: from the Fifth Century to the Viking Age* (pp. 125-148). The Boydell Press.

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FRISIANS AND THEIR NORTH SEA NEIGHBOURS

FRISIANS AND THEIR NORTH SEA NEIGHBOURS

From the Fifth Century to the Viking Age

edited by

John Hines and Nelleke IJssennagger

THE BOYDELL PRESS

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First published 2017

The Boydell Press, Woodbridge

ISBN 978 1 78327 179 5

The Boydell Press is an imprint of Boydell & Brewer Ltd
PO Box 9, Woodbridge, Suffolk IP12 3DF, UK
and of Boydell & Brewer Inc.
668 Mt Hope Avenue, Rochester, NY 14620–2731, USA

website: www.boydellandbrewer.com

A CIP catalogue record for this book is available
from the British Library

The publisher has no responsibility for the continued existence or accuracy of URLs for external or third-party internet websites referred to in this book, and does not guarantee that any content on such websites is, or will remain, accurate or appropriate

This publication is printed on acid-free paper

Typeset by Word and Page, Chester, UK

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LINGUISTIC CONVENTIONS AND ABBREVIATIONS

Every natural language has its own specific and defined inventory of sounds, amongst which both ‘phonemic’ (structural) and ‘phonetic’ (actual) distinctions may be identified. Sounds may be represented by the graphs of the International Phonetic Alphabet (IPA), with phonemes presented between square brackets [...] and phonetic forms between slashes /.../. The presence of a colon after a graphic symbol represents the ‘long’ articulation of the sound in question. Angled brackets are used to represent spelt forms <...>.

It is also common practice to represent the typical sounds of early languages with italicized lettering. An asterisk before such a sound or word represents a form that is reconstructed rather than actually observed. In these circumstances long vowels are typically represented with either a macron (a horizontal line) or a circumflex accent above the graph. A single arrow < or > represents the direction of a sound-change: e.g. *u* > *y* means ‘*u* changes to *y*’.

Transliterations of runic inscriptions into the roman alphabet use **bold** type, where each letter in the transliteration should unambiguously represent a particular runic graph. Bind-runes, composed of two runic graphs ligatured, are represented by transliterations of the graphs concerned beneath a curved line bracketing them.

The following abbreviations are regularly used in this text:

acc.	accusative	neut.	neuter
fem.	feminine	nom.	nominative
gen.	genitive	pl.	plural
instr.	instrumental	sg.	singular
masc.	masculine	wk.	weak
Gmc	Germanic	OLF	Old Low Franconian
IE	Indo-European	ON	Old Norse
NSGmc	North Sea Germanic	OS	Old Saxon
NWGmc	North-West Germanic	PGmc	Proto-Germanic
ODu	Old Dutch	PIE	Proto-Indo-European
OE	Old English	Pre-OE	Pre-Old English
OFris	Old Frisian	Pre-OFris	Pre-Old Frisian
OHG	Old High German	WGmc	West Germanic

ABSTRACTS

Palaeogeography and People: Historical Frisians in an archaeological light

Egge Knol and Nelleke IJssennagger

Taking as its starting point the palaeogeography of the Frisian coastal landscape, the history and archaeology of Frisia and Frisians up to the Viking Age are set out in this introductory paper. We follow the historic Frisians from the first *terp* settlers into the Middle Ages, addressing the key questions of migration and repopulation after the Roman Era, the Frisians in a North Sea context, Frisian identity and Frisian culture, in light of the relevant archaeological and historical sources on Frisia. Chronologically the latest sources addressed are the Old Frisian law texts. Together, this provides an introduction to Frisia and an overall historical and archaeological framework for the volume.

The Anglo-Frisian Question

John Hines

‘Anglo-Frisian’ has long been a familiar concept in Early Medieval studies. Its use to reflect and label particularly close similarities in language, runographic practice, and material culture on two facing sides of the North Sea has become regular. This has not come about without exploration or explicit modelling of what form a special relationship between the Anglo-Saxon and Frisian populations and their cultures may have taken, although the habits of thought of earlier generations of scholars have, not surprisingly and perhaps too easily, tended to focus on the idea of an original stage of ‘Anglo-Frisian unity’. This paper seeks to summarize the principal fields of evidence in relatively non-specialist terms, and emphasizes the extent to which convergence between the two areas can be observed within the Early Middle Ages as much as any divergence from some original common stock. It is argued therefore that the continuing inter-relationship of the populations either side of the North Sea, both in the Early Middle Ages and succeeding periods, requires and repays careful mapping and evaluation.

Frisian between the Roman and the Early Medieval Period: Language contact, Celts and Romans

Peter Schrijver

The way in which languages usually expand their geographical range is at the expense of other languages: a community acquires a second language and in the course of time the second language may become the first and only language in the community. This language shift is usually driven by socio-political change. Language shift may leave distinct linguistic traces in the form of an ‘accent’: features of the language that has disappeared survive in the language that replaced it (e.g. a Welsh accent in the English of Wales). This paper addresses the question of whether the Frisian language contains traces of an accent that can be ascribed to a language that preceded it. It turns out that there is some evidence in favour of the hypothesis that the Frisian language arose when

a population that spoke a Celtic language switched to speaking Germanic. That evidence is mainly based on changes in the vowel system which occurred at the earliest stages of the Frisian language.

'All quiet on the Western Front?'

The Western Netherlands and the 'North Sea Culture' in the Migration Period

Menno Dijkstra and Jan de Koning

Based on the latest historical, palaeogeographical and archaeological evidence, this study clearly demonstrates that the Dutch western coastal area was not occupied by Anglo-Saxon groups during the 5th-century *adventus Saxonum* as the *terp* region of Friesland and Groningen was. It had become a periphery of no international interest. The few Anglo-Saxon-style pots and brooch present are datable to the 6th century, and were the result of growing contacts between the western and the surrounding *terp* region, the Dutch central river area, and England too. Only from the 7th, or even the late 6th century onwards, with political interest from the Frankish and Frisian kings, did the region find its way back on the international stage. Some lines of thought of how the 'North Sea Germanic' dialect fits into these developments are also briefly discussed.

Power and Identity in the Southern North Sea Area:

The Migration and Merovingian Periods

Johan Nicolay

In early-medieval times, the southern North Sea area found itself in between the Late Roman Empire and Frankish kingdom to the south, and the Scandinavian kingdoms to the north-east. Throughout the 5th to 7th centuries AD, its coastal areas saw the formation of regional and larger kingdoms – following the migration of the 'Anglo-Saxons'. After the identity of elite networks was first expressed by imitating 'Saxon' and Scandinavian status symbols, the 6th and early decades of the 7th centuries alternatively saw the expression of regional identities. Within Kent, the northern Netherlands and later also East Anglia and the western Netherlands, a mixture of Scandinavian and Frankish influences resulted in the production of regional-style ornaments, each making the extent of individual networks or kingdoms visible. After the incorporation of these networks into even larger networks under Carolingian, Mercian and Danish rule, the former kingdoms became invisible – remaining only as archaeological finds of gold and silver.

How 'English' is the Early Frisian Runic Corpus? The evidence of sounds and forms

Gaby Waxenberger

This paper deals with the earliest runic inscriptions in Frisia and England, in light of the earliest sound changes which effected the long vowels of the languages used there in their Pre-Old English and Pre-Old Frisian stages. The sound-changes of Pre-Old English (c. AD 400–600) are used as a framework in order to reveal how the Frisian runes and the sound values they represent may be correlated. Certain rune-forms are examined in addition, in order to shed more light on the characteristics of the Frisian corpus. The early runic inscriptions of the Frisian Corpus can thus be demonstrated to be congruent with the Pre-Old English Corpus both in the underlying sound changes involving long vowels and the runic forms employed.

The Geography and Dialects of Old Saxon: River-basin communication networks and the distributional patterns of North Sea Germanic features in Old Saxon

Arjen Versloot and Elżbieta Adamczyk

The West Germanic language group is traditionally divided into North Sea Germanic (Old English and Old Frisian) and Continental Germanic (Old Low Franconian and Old High German). The position of Old Saxon within this West Germanic language continuum is ambiguous: on the one hand, it shares various innovations with Old English and Old Frisian; on the other, it has many traits in common with Old High German. The North Sea Germanic characteristics are more abundant in the minor Old Saxon texts, especially those associated with Eastphalia than in *Heliand*, *Genesis* and other sources from the region of Essen and Werden. This implies that the 'coastal' features were more widespread in the Old Saxon dialects of the deep south-east inland than in the dialects of the south-western regions, closer to the coast. This rather unexpected distribution of linguistic characteristics is the focus of the present paper, which offers a detailed mapping of a range of North Sea Germanic features in the Old Saxon material. The patterns resulting from the mapping confirm the assumed dialectal contrasts in Old Saxon. The aim of the paper is to account for the attested distribution of linguistic features. The explanation is sought in the ancient traffic networks which, given the poor overland traffic conditions, overlapped with river basin networks. More specifically, the central and south-eastern regions stayed in direct contact with the Frisian-speaking region on the North Sea littoral through the rivers Ems, Weser and Elbe, while the south-western regions were in close contact with the continentally oriented Franconians in the Rhine Valley. The inland extension of the North Sea Germanic linguistic features can therefore be interpreted as a reflection of communication networks, which developed along the lines of economic and political contacts, and was directed by the travel networks of those days.

Between Sievern and Gudendorf: Enclosed sites in the north-western Elbe–Weser triangle and their significance in respect of society, communication and migration during the Roman Iron Age and Migration Period

Iris Aufderhaar

Waterways provided the most favourable conditions for communication and transport of goods in the 1st millennium AD. Research focusing on archaeologically identifiable structures indicates that these waterways were firmly controlled during this period. In the Elbe–Weser triangle this is most clearly evident in the area of Sievern. The topography and infrastructure of the settlement cluster suggest that during the first half of the 1st millennium AD its residents controlled and protected both overland routes and especially waterways along the estuary of the River Weser. The centre of this region seems to have been located in the hinterland represented by two sets of rampart systems. Between 2013 and 2015 the Lower Saxony Institute for Historical Coastal Research investigated on further fortified sites in this area from the first half of the 1st millennium AD. The article provides an overview of the premises and initial results of the project.

Cultural Convergence in a Maritime Context: Language and material culture as parallel phenomena in the early-medieval southern North Sea region

Pieterjan Deckers

This contribution draws the parallel between developments in linguistic and material-cultural expressions (notably, domestic architecture and pottery) of the communities around the southern North Sea between the 6th and 8th centuries AD. It is argued that a proposed process of linguistic koineization forms a fitting model for a broader 'North Sea Culture' that gradually emerged from the demographic and cultural reconfiguration of the Late Roman Period; a process of convergence that was cut short (if not entirely halted) by the growing political centralization from several cores around the North Sea in the 8th century. The differing rates at which the cultural traditions studied here converged can be explained by referring to the properties of these traditions and their transmission from one generation to another.

The Kingdom of East Anglia, Frisia and Continental Connections c. AD 600–900

Tim Pestell

As the nearest political entity across the North Sea from Frisia, it was inevitable that the kingdom of the East Angles should share with it cultural and economic links. While our understanding of any diplomatic connections is hampered by a lack of documentary evidence for both Frisia and East Anglia, it is clear that the latter enjoyed widespread relationships with the Continent. This paper summarizes the available historical evidence for East Anglia's continental connections and then investigates and analyses the contribution material culture studies can play in developing this picture, especially through the study of jewellery, coinage and pottery. The conclusion is that strong links can be seen between East Anglia and the Low Countries, but that these shifted over time, doubtless relating to vicissitudes in the political and economic fortunes of both areas.

A Comparison of the Injury Tariffs in the Early Kentish and the Frisian Law Codes

Han Nijdam

Since the turn of the millennium, the antiquity of Germanic law has enjoyed renewed attention from scholars such as Patrick Wormald and Lisi Oliver. A special role is assigned to so-called compensation tariffs as encountered in the early-medieval *Leges Barbarorum*. This paper addresses the question of whether it is possible to reconstruct a Proto-Anglo-Frisian tariff, given the close linguistic and cultural affinity between Anglo-Saxon and Frisian law. To this end, the Anglo-Saxon Law of Aethelberht (c. AD 600) has been compared with the Frisian *Lex Frisionum* (8th-century) and the younger Old Frisian compensation tariffs (13th-century). Although the two tariff traditions show a degree of closeness to one another when compared with the other Germanic traditions, it is impossible to reconstruct a common ancestor to these two tariff traditions. It is suspected that a compensation tariff was seen as an identity marker, so that each society endeavoured to have its own set of regulations.

**Cultural Contacts between the Western Baltic, the North Sea Region and Scandinavia:
Attributing runic finds to runic traditions and corpora of the Early Viking Age**

Christiane Zimmermann and Hauke Jöns

Early-medieval trading centres in the North Sea region and the western Baltic can be conceived of as meeting places of people from different cultures, and as places of language contact. This is of particular significance when it comes to reading and interpreting runic inscriptions from these places. Against this background, the paper discusses a runic inscription on the fragment of a comb from the Early Viking Age trading centre at Groß Stömkendorf which has been identified with the emporium *Reric* that is mentioned in the Frankish Annals under the year AD 808. Manufacturing details point to the fact that the comb was either produced in the North Sea area or manufactured by a craftsman who was familiar with the traditions of comb-making in that area. By discussing and evaluating the extant data for the reading and interpretation of the new runic find more general questions of attributing inscriptions to runic corpora are addressed and the methods applied reconsidered.

The Geography and Dialects of Old Saxon

River-basin communication networks and the distributional patterns of North Sea Germanic features in Old Saxon

Arjen Versloot and Elżbieta Adamczyk

North-West and North Sea Germanic: fluid perceptions

The Germanic languages witnessed a rapid series of changes between the 4th century and the 7th: from the fairly homogeneous North-West Germanic ‘Gallehus’ idiom of the 4th century, the language split into a number of dialects, which had developed fairly well recognizable linguistic identities by the time of their first attestations, dated approximately to the late 7th century (Nielsen 2000, 288–93). An important focal point of linguistic innovations (phonological and morphological) lies in the region around the North Sea, and their spread affected the adjacent dialects of Old English, Old Frisian and, to some extent, Old Saxon, which are, therefore, commonly referred to as the North Sea Germanic languages.¹ In particular, the similarities between Old English and Old Frisian are so striking that they led earlier researchers to assume a common Anglo-Frisian unity on the Continent, which later, after the migration of the Angles and some of the Saxons to Britain, split into two languages (e.g. Siebs 1889). The perception of the affinity between North Sea Germanic languages changed entirely with Kuhn’s (1955) ground-breaking paper, in which a new grouping of Germanic dialects was postulated and the concept of North-West Germanic linguistic unity – lasting approximately until the Migration Period – was introduced. A few years later, in line with Kuhn’s hypothesis, DeCamp (1958) revised the understanding of the emergence of Old English dialects, showing that the bulk of the dialectal variants in Old English post-date the colonization of Britain and therefore do not reflect earlier continental dialect or tribal configurations (see also Nielsen 1998). Consequently, the new interpretation of the mutual relations

¹ For an extensive catalogue of these linguistic features see Nielsen (1985, 103–54).

between these dialects evolved into the modern perception of North Sea Germanic as a group of language varieties, participating to a lesser or greater extent in a series of linguistic innovations that have their geographical origin in the North Sea area (cf. Stiles 1995). These innovations can be dated to the period during and after the migration of the Germanic tribes to Britain.² The familiar division into English, Frisian and Saxon is the result of a gradual geographical reorganization of linguistic features, which led to the enhancement of linguistic boundaries and eventually to the emergence of distinct linguistic identities (Århammar 1990; Versloot 2014a).

While Old English and Old Frisian are clearly in the centre of these North Sea Germanic innovations, Old Saxon is often characterized as a West Germanic hybrid, a mixed language, which combines influences from North Sea Germanic and Continental West Germanic, more specifically Franconian. Nielsen (1985, 255) concludes that Old Saxon ‘has basically no specific features of its own’. This issue has been the subject of extensive dispute between Krogh (1996; 2002; 2013) and Klein (2000; 2004), undertaken in a series of publications. While Klein conceives of Old Saxon as a *Mischsprache* (‘mixed language’), Krogh postulates a prehistoric *Alleingang* (‘separate path’) of Saxon, dating it long before the Migration Period (Krogh 2002, 12). Krogh’s point of view was strongly contested in Klein’s papers, who postulates a much later chronology for the emergence of Old Saxon, with the decisive stages of the development dated not earlier than the 4th/5th century AD (Klein 2004, 21). In our view, however, the term ‘mixed language’ does not seem entirely adequate either, as it implies a mixture of two originally discrete units, presupposing their independent existence, which goes against the idea of a North West Germanic dialect continuum. Likewise, Nielsen’s (1985, 255) observation that Old Saxon shows very few independent innovations runs counter to the definition of Old Saxon as a discrete member of the Germanic language family. This matches Stiles’s (2013, 20) description of Old Saxon as showing ‘no early unique innovations’ and being ‘most easily defined negatively as that continental West Germanic that is not High German, nor Frisian, nor Dutch’. The lack of early unique innovations implies inherent linguistic stability. In general, linguistic stability is expected to correlate with demographic stability. The Old Saxon region was demographically the most stable part of the West Germanic language territory: Old Saxon was spoken in a region with continuous Germanic settlement. High German, Dutch and English are largely founded on a Celtic-Romance substratum, and Frisian is the result of a renewed settlement of an earlier (largely) abandoned region. This linguistic archaism is manifested in a range of phonological and morphological features of Old Saxon, including the limited reduction of unstressed vowels (when compared to Old Norse, Old Low Franconian, Old Frisian and Old English), limited application of *i*-mutation and no post-Proto-Germanic *a*- or *u*-mutations or breaking processes (cf. Old Norse, Old Frisian, Old English), no large-scale consonant shifts (cf. Old High German), and very limited analogical levelling of endings from major (productive) to minor noun-classes (see also Klein 1977, 537).

² Despite the abundant evidence from studies following Kuhn’s hypothesis, which has established itself as a majority view, the idea of a pre-migration Ingvaeonic ‘Sprachgemeinschaft’ on the Continent still occasionally reemerges (e.g. Stiles 1995, 207; Van Bree 1997, 11–15; and Kortlandt 2008).

The phonological and morphological shape of Old Saxon reflects very well the intermediate position it occupies among the West Germanic languages. With respect to morphology, Old Saxon appears to share many features with Old High German and Old Low Franconian (Klein 2004, 14). In terms of phonology, in particular when it comes to the developments in unaccented syllables, Old Saxon goes together with Old English and Old Frisian (Nielsen 2001, 79–84, 93). Such a distribution of shared and similar features, i.e. with the inclination towards Franconian (Low and Middle) on the one hand, and towards Old Frisian and Old English on the other, is exactly what can be expected from a group of dialects that are geographically situated between the North Sea and the Middle Rhine region (Stiles 1995, 201–5): geographical proximity is in general the best predictor of linguistic nearness (Nerbonne 2010).

A fact that so far has not been explicitly addressed in the existing literature on Old Saxon and seems to be taken for granted is the distribution of the individual linguistic features ascribable to the influence of the mentioned languages. The Old Saxon sources with the highest density of North Sea Germanic features are found in a region which geographically cannot exactly be referred to as ‘coastal’, concentrating in Eastphalia, including places such as Merseburg and Magdeburg. Such a geographical distribution remains inconsistent with the observation, quoted earlier, that geographical vicinity is the best predictor of linguistic similarity. This apparent anomaly becomes even more conspicuous when Old Dutch is included in the comparison. While some North Sea Germanic developments (such as the uniform verbal indicative present plural ending *-að*) indisputably covered the entire Old Saxon linguistic area, the Dutch linguistic territory shows (historical traces of) North Sea Germanic developments only in a narrow strip along the coast (Van Bree 1997; De Vaan 2012). This is remarkable given the fact that the distance from, for instance, ‘s-Hertogenbosch to the coast (c. 100 km) is very much shorter than that from, say, Osnabrück (c. 200 km) (belonging to the Saxon area). In fact, the North Sea Germanic linguistic traces in the coastal regions of Belgium and Holland do not extend more than 50 km inland. The extension of the coastal North Sea Germanic innovations in Old Saxon, therefore, forms a bulge, protruding deep into the Continent and reaching as far as Merseburg.

In order to gain more insight into the distribution of linguistic features in the Saxon territory, the concept of North Sea Germanic, and in particular, how it is interpreted in the present study, needs to be more precisely specified. Following the views of Stiles (1995, 211) and Århammar (1990, 13), we consider North Sea Germanic to be a *Sprachbund* of language varieties, whose boundaries are the result of a combination of expansion and partial retreat of linguistic innovations. The typical North Sea Germanic features are innovations that had once been expansive, but were later pushed back – a process that for many features stopped at a line that became the Frisian language boundary. Other innovations from the south, such as the High German Consonant Shift, did not expand further north than the line that was later interpreted as the southern limit of Low German and Dutch. When examining the dissemination of North Sea Germanic features, one should realize that the attested distribution is the result of both developments: the expansion and partial rollback of northern features, and the expansion of southern features. Significantly, the concepts of ‘southern’ and ‘northern’, relevant on a macro-scale, turn out to denote rather ‘west’ and ‘east’ on a regional scale: the North

Sea Germanic features are more abundantly represented in (eastern) Old Saxon than in (western) Old Dutch (apart from the narrow littoral zone), and within the Old Saxon territory they turn out to be more common in Eastphalia than in Westphalia.

The present paper offers a tentative mapping of the spread of a range of North Sea Germanic features in Old Saxon. The patterns resulting from the mapping confirm the assumed dialectal contrasts in Old Saxon. The aim of the paper is to account for the attested distribution of linguistic features by recourse to the geo-morphological substratum of the linguistic area of present-day Low German, Frisian and Dutch. In the discussion of the geographical dissemination of the North Sea Germanic features, the question of the (reconstructed) diachronic order of their emergence will also be addressed.

The dialectal distribution of North Sea Germanic features in Old Saxon

Given the existing textual evidence for Old Saxon, the conditions for a fruitful dialect geography of this language are not very auspicious. The bulk of the textual material comes from two sources: *Heliand* and *Genesis*, both dated to the 9th century. The former text is preserved in three manuscripts (M, C and S), originating in different scriptoria and characterized by fairly diversified linguistic profiles. They seem to form a continuum with respect to the Ingvaemonic nature of the text, with MS C being the least Ingvaemonic, MS S showing the Ingvaemonic features most extensively, and MS M occupying an intermediate position in this respect. A clear correlation with the dating of the manuscripts emerges, since both M and S, which attest to a more Ingvaemonic character, are dated earlier (9th century) than C (10th century) (Nielsen 1994, 201). While codex M may have originated in the centre of the Old Saxon territory (Corvey) (Krogh 1996, 115), it is still a copy of an earlier version that was probably written outside the Old Saxon area. Two other monasteries, Fulda and Werden, which are also considered to be potential places of origin of this manuscript, are respectively located in the High German-speaking area (Fulda) and close to the Low Franconian-speaking area (Werden) (Cordes and Holthausen 1973, 15–17). The origin of the Straubing fragment (*Heliand*-S), which is characterized by the most explicit North Sea Germanic features, testifying potentially to a large scale dialectal adaptation of the original, is unknown (see Klein 1990). Equally problematic is the origin of the other text, *Genesis*, which cannot be precisely located (the surviving manuscript is dated to the second half of the 9th century). Of the minor sources (including tithing lists, blessings, church calendars, a confession of faith, a renunciation of the devil, tax rolls, glosses, place-names and personal names), a large part comes from Essen and Werden, and clearly there is no textual material that could with certainty be located in the area north of Osnabrück.

In order to obtain a detailed picture of the geographical spread of North Sea Germanic features in Old Saxon, the inventory of relevant features was compiled, based on the detailed information found in Krogh (1996, 141–288) and Klein (1990, 202). Tiefenbach's comprehensive dictionary (2010) served as the basis for checking the attestations of words explicitly mentioned in these studies as exhibiting the relevant features. The study focused on the attestations from the minor documents, leaving out the data from *Heliand* and *Genesis*, as the manuscripts of these texts cannot be unambiguously located. Table 7.1 presents the inventory of investigated phonological and morpho-

logical features, with commentaries and a set of examples, as well as the number of lemmas and tokens found in the analysed material. The material presented in Table 7.1 served as the basis for mapping the North Sea Germanic linguistic developments (see also Fig. 7.1). A more extensive historical-linguistic account of these phenomena is provided in Appendix 1.

Table 7.1. The inventory of North Sea Germanic features and their attestations in the Old Saxon material

Feature	Lemmas #	Tokens #	Comments
1a. <i>aN</i> ~ <i>oN</i>	7	68	The velarization of PGmc <i>*a</i> to <o> before a nasal in <i>fram</i> > <i>from</i> , <i>mann</i> > <i>monn</i> , <i>gang</i> > <i>gong</i> , <i>namo</i> > <i>noma</i> .
1b. <i>aNp</i> ~ <i>ōp</i>	1	9	The velarization of PGmc <i>*a</i> before a nasal in <i>ōthar</i> ‘other’, with an early loss of the nasal before a voiceless fricative.
2. <i>a</i> > <i>e</i>	3	11	The spontaneous fronting of PGmc <i>*a</i> , attested in <i>deg</i> , <i>gles</i> , <i>therf</i> .
3. <i>*ai</i> > <i>ā</i> , <i>ā</i>	1	1	The vowels <i>ā</i> , <i>ā</i> , resulting from the monophthongization of PGmc <i>*ai</i> , are considered to be a NSGmc feature, in contrast to <i>ē</i> found elsewhere in the OS material.
4. <i>*au</i> > <i>ō</i> ~ <i>ā</i>	3	18	The vowel <i>ā</i> which is a result of the monophthongization of PGmc <i>*au</i> is considered to be a NSGmc feature, in contrast to <i>ō</i> found elsewhere in the OS material.
5. chronology of primary <i>i</i> -mutation and apocope	1	5	The nom./acc. pl. form <i>menn</i> ‘men’ shows an early application of <i>i</i> -mutation < PGmc <i>*manni(z)</i> , prior to the loss of <i>-i</i> after a heavy syllable. The more common nom./acc. pl. form <i>mann</i> shows the reverse order.
6. scope of primary <i>i</i> -mutation	2	10	The <i>i</i> -mutation of short <i>a</i> (‘primary <i>i</i> -mutation’) is consistently reflected in the spelling as <e>.
7. <i>os</i> ~ <i>as</i>	36	40	PGmc <i>ōC</i> appears as <i>o</i> in Old High German but as <i>a</i> in Old English and Old Frisian; OS attests to both forms.
8. metathesis in ‘horse’	1	3	Forms with metathesis, such as <i>hers</i> for <i>hross</i> (cf. Old Frisian <i>hors</i>), are considered to be NSGmc.
9. <i>a</i> + <i>i</i> -mutation > <i>i</i>	2	10	Further raising of the root vowel through vowel harmony with the following vowel: PGmc <i>*stadi-</i> > <i>stid-</i> , once also <i>biki</i> for <i>beki</i> , cf. Riustring Old Frisian <i>stidi</i> .
Total	57	175

Fig. 7.1. The distribution of North Sea Germanic features in the Old Saxon material (presented in Table 7.1) against the background of the main river basins and peat bog areas. River Elbe basin, pale blue; River Weser basin, mid-blue; River Ems basin, dark blue; River Rhine basin, pink. Green: peat bog areas. The pie-charts show the proportion of North Sea Germanic (deep blue) to Continental Germanic (deep pink) tokens, and the size of the pie-charts associated with the named centres represents the overall number of tokens, from 1 at Hardehausen and Osnabrück to 80 at Essen.

The 175 tokens come from 42 sources that are localized in the traditionally Old Saxon linguistic area, which means that glosses from places beyond this territory, e.g. from Cologne, or Fulda, were not included. On the basis of the information found in Tiefenbach (2010, xiii–xxxviii), Klein (1990, 201) and Krogh (1996, 111–38), the sources were assigned to 12 locations. The assignment of individual texts to these locations was fairly unambiguous, except the ‘Strassburg glosses to Isidore’ which, despite Tiefenbach’s reservations, were assigned to Hildesheim (Tiefenbach 2010, xxx). Werden was merged with Essen on purely technical grounds, namely, to avoid symbol overlap on the map. The psalm fragments known as the Lublin (*PsLub*) and Wittenberg (*PsWit*) Psalm Fragments, which show various North Sea Germanic features, were assigned to a cultural centre in the east, Magdeburg, combining linguistic evidence with physical attestation of the fragments in the east. This assignment of the sources to Magdeburg is largely arbitrary, and theoretically other cultural centres, such as Halberstadt or Halle, would have been just as good guesses. What matters here is, however, not the exact location, but the fact that the text must have been affiliated with some cultural centre in the east and not in any other part of the region.

An important aspect of the analysis which must be made explicit on account of its potential bearing on the interpretation of the data is the interference of diachrony and geography. In particular, what has to be excluded is the possibility that geographical contrasts reflect only diachronic contrasts. The investigated material covers the period from the early 9th century until the early 13th century, but approximately two-thirds of the data come from *c.* AD 1000 or earlier. Overall, the linguistic profile of the available texts correlates with their attestation dates and accordingly, the material tends to show less of the North Sea Germanic character at a later date. This tendency can be positively confirmed for the Westphalian locations, but for Eastphalia, sources younger than AD 1100 are missing. The overall geographical and diachronic trends are summarized in Table 7.2, which provides a detailed percentage distribution of North Sea Germanic features in the examined material with respect to their date of attestation and location.

Table 7.2. Geographical and diachronic distribution of North Sea Germanic features in Old Saxon. The notation ‘ ≤ 1000 ’ means that the source is estimated to have originated around the year 1000 or earlier, ‘ >1000 ’ means that the origin is later than the year 1000. ‘*n*’ refers to the absolute number of tokens.

	≤ 1000	<i>n</i>	> 1000	<i>n</i>
Essen/Werden	18%	74	13%	8
Westphalia	73%	15	32%	37
Eastphalia	74%	31	100%	10

The fluctuations in percentages for Essen/Werden and Eastphalia fall within the bounds of chance; only for Westphalia is the contrast between the two periods statistically significant, which means that the texts from this region show a tendency to abandon North Sea Germanic features with time. Overall, it can be concluded that the diachronic bias as attested in the investigated material is limited and therefore all the relevant data could be combined and presented in one map as in Figure 7.1. The map is based on the absolute number of tokens for all features, despite the fact that some features are represented with many more tokens than others.³

The pattern emerging from the distribution of North Sea Germanic features is very transparent and informative. The map shows a clear east-west division of linguistic features: the southwest area with Essen and Werden is predominantly Franconian, the middle zone in north-east Westphalia is mixed, while the east is dominated by North Sea Germanic features. The relevance of the geographical shape of the landscape for the attested distribution of linguistic features, in particular, of the river basins and the peat bogs in the northern coastal region, will be addressed below.

³ An alternative counting where every feature was assigned an equal weight was also performed. The correlation between the proportions based on crude token counting and the weighted counting is 0.98, which means that both results are entirely compatible. We therefore opted for basing the map on token counting, because it more adequately reflects the amount of the attested material from each locality.

The geo-linguistic nature of the dialectal distribution

Theodor Siebs (1901, 1157, 1166) believed that the North Sea Germanic traces in the Merseburg Glosses were the result of extralinguistic circumstances, namely the Frisian immigration: 'Aus den weserfries. Gegenden scheinen [...] diejenigen Friesen gekommen zu sein, denen wir die fries. Sprachformen der Merseburger Quellen verdanken' ('those Frisians to whom we are indebted for the Frisian linguistic elements of the Merseburg sources appear to have come from the Weser Frisian districts'). His views were underpinned by a somewhat naïve conviction that language change and specific linguistic features could only come with the actual mobility of people: the more features of Language A a given language displayed, the more speakers of Language A were believed to be involved in the language community. Such an approach has long been abandoned and replaced by models of language change, where change is conceived of in terms of expansive waves that result from social events, such as contact between speakers of different dialects and varieties enjoying different prestige.

With reference to the interaction between the early Frisian and Saxon linguistic communities, Klein (1990, 220) describes a dynamic situation where Old Frisian had developed away from Old Saxon through its own innovations already before the 9th century, while Old Saxon lost various North Sea Germanic features after the subjugation of the Saxon territory by Charlemagne. If this assumption is correct, one may expect that the North Sea Germanic features in Old Saxon antedate the 9th century. In this context, it can also be claimed, although not as an imperative, that the oldest features had reached farthest into the Saxon territory by the 9th century, i.e. when North Sea Germanic innovations, according to the development outlined above, no longer stretched beyond the Frisian region on the Continent. The implication of this interpretation is that the oldest North Sea Germanic features covered the entire Old Saxon region, and with time their scope was more and more restricted (namely to Eastphalia).

We have evaluated this hypothesis by identifying the spatial and temporal fluctuations in the spread of North Sea Germanic features in Old Saxon (the details can be found in Appendix I). A synopsis of dating and distribution of the North Sea Germanic features, which are ordered chronologically, is provided in Table 7.3. The geographical and diachronic spread of these features in the Old Saxon area is compared to their distribution (and dating) in the Old Frisian material.

The material presented in Table 7.3 shows that there is no link between the geographical extension of the examined North Sea Germanic features and their chronology, i.e. the dating of individual features does not provide any prediction about their geographical scope. North Sea Germanic features are most consistently applied in the east. Westphalia goes mostly with the south-west, but shows a few instances where a North Sea Germanic innovation was introduced but later reversed (as shown in the figures in Table 7.2). Importantly, it is above all a few later innovations that are fairly prominent also in Westphalia, including the rising of *i*-mutated *a* > *i*, a development that has only limited application in Old Frisian. It means that the scope of the North Sea Germanic innovations was not per definition shrinking with time. The data in Table 7.3 indicate that the North Sea region was the centre of innovations, at least until the 9th century. The massive 'de-Ingvaenization' of Low German took place only after AD 1100: none of

the North Sea Germanic features enumerated in Table 7.3 can be identified in Modern Low German equivalents of lemmata (vocabulary items) which originally contained them. Table 7.4 presents a selection of lemmata which could potentially reflect North Sea Germanic features from two varieties of Old Saxon as compared to the material from 20th-century Low German (Westphalian and Holstein) (Gehle 1977), as well as corresponding examples from Old Frisian and their modern cognates.

Table 7.3. Synopsis of dating and spread of North Sea Germanic (NSGmc) features in Old Saxon compared to Old Frisian. White cells are used to mark the absence of a NSGmc feature, light grey cells to mark partial implementation of a feature, dark grey cells denote full implementation of a NSGmc feature; cells marked by dash lines show changes which occurred during the OS period.

Feature	Dating	South-West (Essen/ Werden)	West- phalian	Eastphalian	Old Frisian
1. <i>aN ~ oN</i> (N = nasal)	One of the oldest NSGmc features; in English and Frisian before AD 500	allophonic	allophonic	phonemicized (after 800)	phonemicized (after 800)
2. <i>a > e</i>	One of the oldest NSGmc features; in English and Frisian before AD 600	no	no	limited	general
3. <i>*ai > æ, ā</i>	7th-century innovation from the north	no	no	widespread	widespread
4. <i>au > ō ~ ā</i>	7th-century innovation (Frisian 6th century, Old High German 8th century)	[o:]	[ɔ:] > [o:]	[ɑ:]	[ɑ:]
5. <i>i-mutation older than i-apocope</i>	7th-/8th-century innovation from the north (including North Germanic)	no	no	yes	yes
6. <i>primary i-mutation</i>	7th-/8th-century innovation from the north (including North Germanic)	restricted	restricted, partly reversed	general	general (plus secondary <i>i-mutation</i>)
7. <i>Nom./acc. pl. a-stem ending -as < -os</i>	7th-/8th-century NSGmc innovation	limited	yes	yes	yes (-ar)
8. <i>metathesis in 'hors'</i>	after AD 800	(lacking attestation)	varied; reversed (?)	yes	yes
9. <i>a + i-mutation > i</i>	Further development of <i>i</i> -mutated PGmc short <i>*a</i> in light syllable stems, which postdates primary <i>i</i> -mutation	no	yes	yes	only Riustringen Old Frisian

The material examined and its interpretation allows one to conclude that the introduction of North Sea Germanic innovations in Old Saxon was anything but a monolithic event. The developments examined in our survey cover more than three centuries, and include the earliest phonological features, such as the allophonic split of Proto-Germanic **a*, down to late phenomena such as vowel harmony in *stidi*, *biki*, with only limited parallels in Old Frisian. Eastphalian is (almost) always involved in the phenomena investigated

and mostly concurs with Old Frisian, but this should not be interpreted as indicative of the fact that Eastphalian was nearly identical with Old Frisian (Klein 1990). The substantial overlap between Eastphalian Old Saxon and Old Frisian in Table 7.3 is a result of the selection of the linguistic features. The selection criterion for the investigation was the presence of North Sea Germanic-like variants in Old Saxon. A random selection of linguistic features would show many differences between Eastphalian Old Saxon and Old Frisian. The fact that any of the variants in Table 7.3 shows a strong similarity to the corresponding Old Frisian forms is thus a result of an *a priori* selection of linguistic features. The fact that it is almost always Eastphalian and to a much lesser extent the other dialects that show such a correspondence, however, cannot be ascribed to a bias in the data selection. It is rather indicative of the fact that *if* a North Sea Germanic feature was present in Old Saxon at all, it would most likely be present in Eastphalia.

Table 7.4. A selection of lemmas potentially containing the NSGmc features in two varieties of Old Saxon, Old Frisian, and their equivalents in modern Low German and Frisian. The forms marked in bold are non-NSGmc.

Feature	OS Essen/ Werden	OS East- phalian	Modern Low German	Old Frisian	Modern West Frisian
aN ~ oN	<i>óthar, fan/fon</i>	<i>óðer, fon</i>	<i>anner(e), van</i>	<i>ōther, fon</i>	<i>oar, fan</i>
a > e	<i>glas</i>	<i>gles</i>	<i>Glas</i>	<i>gles</i>	<i>glês</i>
*au > ð ~ ā	<i>brod</i>	<i>brad</i>	<i>Braut/Brot</i>	<i>brād</i>	<i>brea</i>
primary i-mutation	<i>stedī/stadi</i>	<i>stidi</i>	<i>Stadt</i>	<i>stede/stidi</i>	<i>stêd</i>
metathesis in 'hors'	<i>hros</i>	<i>hars</i>	<i>Ross</i>	<i>hors</i>	<i>hoars</i>

The geographical rationale for the Old Saxon dialectal distribution

The North Sea Germanic character of West Germanic dialects, most clearly applying to Old English and Old Frisian, but just as much to some of the varieties of Old Saxon, is a result of both selective expansion and partial rollback of linguistic features. Of primary interest to the present study is the ways along which these linguistic features and thus the networks of communication could spread.

Given the high density of road networks in the 21st century, especially in the Low Countries and northern Germany, it may be hard to imagine the overland travelling conditions in earlier days. The lowland regions in particular were characterized by poor drainage conditions, including large swamps, peat bogs and muddy roads until relatively recently. The spread of peat bogs in the 18th century in the present-day Lower Saxony region is visible on the map in Figure 7.1. It must be observed that the marked area is only a fraction of the peat bog area reconstructed for the earlier times (Vos and Knol 2014). Such a shape of the landscape, with extensive areas of land hardly accessible to people, was a major factor hindering the communication between neighbouring linguistic communities. Consequently, for transportation of people and goods over larger distances, one had to rely on waterways, i.e. mainly rivers (Siegmüller and Jöns 2011). This significance of waterways is also reflected in the fact that the major inland cities of the region were located likewise on the banks of (small) rivers, e.g. Münster on the Aa,

Osnabrück on the Hase and Hannover on the Leine (the basin areas of the main rivers are marked in the background on Figure 7.1 as well). It can be inferred that the drainage network of a river basin, with the major river in the centre, constituted a natural traffic network along which people travelled in the past.

The Saxon region is dominated by four major rivers: the Rhine, Ems, Weser and Elbe. The Rhine constitutes the western extension of the Old Saxon region, the Elbe formed from a point somewhat to the east of Hamburg a boundary to the territory inhabited by the Slavic peoples. The division into river basins corresponds by and large to the major linguistic divisions of the Old Saxon area: Westphalia (Rhine and Ems), Engria (Weser) and Eastphalia (Elbe). Through the Rhine river, the south-western region was closely connected to the Rhineland and Meuse region, which constituted the core of the Frankish realm. This geographical affinity is well manifested in the linguistic nature of the texts originating in the south-west which exhibit the smallest proportion of North Sea Germanic features and the profound influence from Franconian dialects.

The Ems is a relatively minor river and its importance as an axis of transport is impeded by two other geo-morphological features: the Teutoburger Wald (Fig. 7.2), being the northern enclosure of the Westphalian Basin, and the extensive peat bog area that stretched from the northern fringe of the Teutoburger Wald to the coast. The watershed between the Rhine and the Ems does not constitute a major landscape boundary, and hence the Westphalian Basin (*Münsterland*) rather unites than divides the linguistic landscape, with an orientation predominantly towards the south-west. All of these geographical units, relevant from the linguistic point of view, are presented in Figure 7.2.

Fig. 7.2. Northern Germany, with *Münsterland* in the Westphalian Basin, the Teutoburger Wald, and the valley of the Weser-Aller *Urstromtal*.

The Weser river forms the major axis of the remaining part of the Saxon region. The Weser-Aller *Urstromtal*, in fact, continues towards Magdeburg into the upper course of the Elbe (Fig. 7.2). In contrast to the Lippe and Rhine basins, and the *Münsterland* region, the Weser and Elbe basins are oriented towards the north and end exactly in the Frisian-speaking area, which forms the core of North Sea Germanic on the Continent.

The coastal regions of the North Sea, directly draining towards the sea and not to any of the main rivers, i.e. Ems, Weser or Elbe, are shown in white in Figure 7.1. They overlap entirely with the medieval extension of the Frisian-speaking area in the coastal territories of present-day Germany. This geographical correlation reflects the importance of natural habitats for the formation of socio-economical, and consequently, speech communities (cf. Århammar 1990, 6). Just as much as the river basins are important for the travel networks on the Continent, the river estuaries constitute the main organising units of travel, contact and (speech) communities in the coastal areas. It can be very well observed in the Frisian region, with the main dialects grouped around the estuaries of (former) Boorne/Middelsee (Old West Frisian), Ems (Old Ems Frisian) and Weser (Old Weser Frisian).

To summarize, even if the distance from Essen to the North Sea coast (as the crow flies) is much shorter than from Merseburg to the North Sea coast (Essen–Rhine estuary c. 220 km, Merseburg–Bremerhaven c. 370 km), these two regions differ profoundly in their cultural and thus linguistic orientation as determined by geographical circumstances: for the south-west, it is the Franconian Rhine Valley that serves as the orientation point, for the Eastphalian towns such as Merseburg, Halberstadt and Magdeburg, it is the Weser delta, with its Frisian-speaking population. This linguistic orientation of Eastphalia towards the north-west was enhanced by the fact that both towards the south and the east there were barriers of a different nature, i.e. linguistic and geographical. Namely, the region to the east was inhabited by the Slavic peoples, while the area to the south was a zone of hills and medium high mountains which form the southern enclosure of the North German Plain (*Mittelgebirgsschwelle*) (Hänsen, Lentz and Tzschaschel 2010, 146).

Additional evidence from place-names

Some additional support for the assumption about the significance of the river basins in the spread of linguistic features in the Old Saxon territory comes from present-day place-names. For the purpose of the present study, we analysed place-names containing the element *-stad(t)*, which, depending on whether the form was affected by *i*-mutation or not (Proto-Germanic **stadi-*, ‘place, city’), are attested as *-stad(t)/-statt* or *-stedt/-stede*. A clear east–west division, following very much the boundaries of river networks, arises when mapping this particular case of *i*-mutation in present-day place-names. Given the distribution of *i*-mutation in West Germanic languages, the forms with *-e-* could be expected in the North Sea Germanic-oriented varieties, while the forms in *-a-*, lacking *i*-mutation, could be expected in the south-west. Figure 7.3 shows the distribution of present-day place-names ending in *-stad(t)/-statt* versus the names in *-stedt/-stede* in the formerly Old Saxon area. The map includes also place-names attested in the Old Saxon material (based on Tiefenbach 2010).

Fig. 7.3. The distribution of *i*-mutated forms in the word *stad-/sted-* in present-day place-names and in Old Saxon onomastic material. White squares: *stad-*; grey triangles: *sted-*; black: *stid-*. The bounded zone is the Old Saxon language area and the area shaded grey the Weser and Elbe river basins.

The forms in *-sted(e)* are confined to the territory of the present-day western Netherlands, East Friesland and (former) Oldenburg, and to the east and south-east of the (Old) Saxon region. Such a distribution of forms confirms again a south-eastward extension of the North Sea Germanic feature, i.e. the *i*-mutated vowel in *-sted*, which clearly overlaps with the river basins of Weser and Elbe. The form showing the result of *i*-mutation is otherwise (and expectedly) found in the (formerly) Frisian coastal regions, in North

Albingia and further north into the (formerly) Danish-speaking area. The distribution of *sted(e)* vs. *stadt* in present-day place-names makes a perfect match with the reconstructed early spread of *i*-mutation in Germanic in the 7th/8th century (cf. feature 6 in the Appendix). This distribution corresponds largely to that found in the Old Saxon material, although it is, at the same time, not entirely consistent with it.

The circles on the map refer to the evidence from Old Saxon texts, glosses and place-names. The Old Saxon forms with *-stad* come mostly from the younger sources and are found in the west, i.e. the present-day *-stad* area. The instances with *-stid-*, which show the effects of vowel harmony in *i*-mutated forms, are attested predominantly in the centre and east of the Old Saxon region, which corresponds to the pattern of spread of *i*-mutation therein. Despite this general overlap between the modern and old data, some discrepancies are evident. Apart from a single form *Stiddien* (which is believed to originate from **Stedi-hēm*), modern place-name material does not attest to forms in *-stid(e)*, with vowel harmony. At the same time, isolated traces of *i*-mutation and additional vowel harmony are found quite unexpectedly in the old material in the area to the west, in the present-day *-stad(t)*-region (*-stedi* in Essen/Werden area, and *-stidi* in Freckenhorst). Given this evidence of *i*-mutation in the western Old Saxon material, it can be concluded that the sharp geographical division in the modern place-name map is possibly the result of a Franconian-based expansion of the forms with *-stad*, which did not spread further than the Rhine and Ems river basin regions.⁴ In the light of the discrepancy between the evidence from modern place-names and from the Old Saxon material, the present-day place-name evidence should not be too readily interpreted as a direct reflex of the early-medieval spread of linguistic features across West Germanic.

Another phonological feature for which place-names can provide evidence and which can be informative about the extent of the North Sea Germanic influence in the Old Saxon area is the palatalization of Proto-Germanic **k*. Figure 7.4 presents the spread of forms with palatalized *-k-* in present-day place-names, which is supposed to reflect the Old Saxon palatalization of *-k-*. The map shows that all instances of palatalized **k* are found within the Weser and Elbe river basin areas. This distribution indicates that the spread of North Sea Germanic features in Old Saxon was largely determined by the river networks. As far as the Old Saxon material is concerned, this feature is very scantily attested in the Old Saxon place-names. The only two forms which could be identified are *Ekanscetha*, ‘Essen-Steele’ and *(H)ékholta*, ‘Eckholt’, attested in sources from Essen and Freckenhorst (Westphalia) (Tiefenbach 2010, 492). Both testify to a lack of palatalization of **k*, confirming thus the distribution of non-palatalized/palatalized forms based on modern evidence.

⁴ It must be observed that light syllable *i*-stems, such as *stedi*, retained the final vowel *-i* in all cases in the singular, where it triggered primary *i*-mutation. The noun is indeed consistently attested as *stedi* in the nom./acc.sg. in *Heliand*. In Old High German, where the final consonant was geminated as a result of the High German Consonant Shift, one expects the form *stat(t)* in the nom./acc.sg., but *stetti* in the genitive and dative singular. Old Saxon and Old Frisian show also occasionally the variant *stid-*, attesting to vowel harmony. The Old Saxon nom./acc.sg. *stad* seems to be a newer form, which probably emerged under the influence of Franconian. Regrettably, the oldest Old Low Franconian source, the *Wachtendonk Psalms*, does not contain any attestation of the nom./acc.sg. of the noun. In *Leidse Willeram* nom.sg. *stad* and dat.sg. *stede* are attested, which stays in line with the Old High German data.

Fig. 7.4. The distribution of forms with palatalized *-k-* in present-day place-names. The black triangles denote names with palatalization of *k > tz*. The triangles without names refer to names starting with *eitz-* (< *ēk-* < PGmc **aik-* 'oak'). The small grey circles denote place-names with *E(e)k-*, *Eik-*, *Eich-* without palatalization.

Conclusions

The present paper has addressed the issue of the anomalous distribution of innovative linguistic North Sea Germanic features on the Continent, which shows a clear southward bulge into the Old Saxon region. Such a deep inland expansion was absent in the (present-day) Dutch area, where historical sources attest only to a limited spread of North Sea Germanic features in a maximally 50 km wide zone along the coast. We reconstructed the geographical configuration of North Sea Germanic features in the Old Saxon linguistic area, as far as they could be deduced from the scarcely attested textual material.

The distribution of features presented in Figure 7.1 parallels the patterns known from the earlier studies, with North Sea Germanic features ascribed to the textual material from Eastphalia. In the present study, however, special attention was paid to the fact that the areas which are farthest away from the North Sea – on the foothills of Harz and Thüringer Wald – show more North Sea Germanic features than the dialects staying in closer geographical vicinity to the North Sea.

An evaluation of a range of distinct linguistic features indicates that the observed dialect contrast in Old Saxon should not be interpreted uniquely in terms of a regionally confined implementation of North Sea Germanic features, neither should Eastphalian be viewed as representing a relic of what was once a uniform, North Sea Germanic Old Saxon. The dialectal contrasts should instead be conceived of as a result of various waves of the spread of areal features, each with their own maximal extension and potential later rollback. It seems therefore neither correct to refer to Old Saxon as ‘originally North Sea Germanic’ (Sanders 2000, 1290–1), nor to consider North Sea Germanic as one coherent linguistic phenomenon with a fixed extension in space or time.

It can be concluded that the factor which determined the pattern of distribution of linguistic features is of a non-linguistic nature and involves travel and communication networks, where river basins and natural corridors play a major role. The network of the Weser, its present-day branches and the corridor of the Weser–Aller *Urstromtal*, ending at the River Elbe near Magdeburg, formed a natural sphere of contact with the Frisian language area along the North Sea. The south-western regions of Münsterland, cut off from the north by the Teutoburger Wald and the Emsland peat bogs, and even more so the region around Essen and Werden, were geographically oriented towards the Rhine Valley, which was dominated by the Franks. The Frankish political dominance in the Rhine and Maas river basins stretched all the way to the north-west, up to the peat belt in Holland, separating the Frankish influence from the seaward oriented populations along the narrow inhabitable coastal zone.

The inland extension of the North Sea Germanic linguistic features should therefore be interpreted as a reflection of communication networks which developed along the lines of economic and political contacts, and were guided by the travel networks of those days. The various natural barriers of that time (which are entirely invisible on modern maps), however, did not allow a regular and gradual inland extension of North Sea Germanic features, but resulted in a concentration of these features along the river networks. The inhabitants of the Rhine and Maas basins, politically dominated by the Frankish kings with their inland orientation, and in contrast to the (so far) independent Frisian nation with its maritime connections and trading interests, turned out to be largely insensitive to the linguistic innovations from the coastal linguistic communities.

Appendix 1

A detailed discussion of the North Sea Germanic features examined

All the abbreviations used in the present study are based on the list of abbreviations found in Tiefenbach's dictionary (2010).

1. *a*N ~ *o*N: Velarization of PGmc **a* before nasals

This is one of the oldest North Sea Germanic features in English and Frisian. It is manifested in the development of an additional rune, known as *ōs* (Fig. 7.5a). This particular rune is already found in the Undley bracteate (East Anglia), which is commonly dated to the late 5th century (Waxenberger 2013, 45–6 and this vol.), a date which can be accordingly considered a *datum ante quem* for the velarization.

The form of OS *ōthar*, 'other' implies that the velarization of *a* before nasals antedated the loss of nasals before voiceless fricatives: **anþar* > **onþar* > **ōnþar* > *ōthar*. Even if the phonetic colouring of the vowel is an early development, the phonemicization of the velarized realization of *a* took place only at a much later date (Boutkan 1997; Versloot 2014b).⁵ The data from Essen and Werden testify to a strong lexical division of this feature. It is common in the word *ōthar*, but in words with a short vowel before a retained nasal, such as *fan*, 'of', *man*, 'man', *namo*, 'name', the spellings with <o> are nearly absent. In Eastphalian the velarized forms such as *from*, 'from', *noman*, 'name (acc.sg.)' and *gongas*, 'walk (acc.pl.)', are commonly found.

In *Heliand*, a few instances of *ōthar* are attested without a velarized *a*, i.e. *athr-/adr-*. These instances with <ath/d> spelling are only found in paradigm forms which regularly show syncope (e.g. gen.sg. *athres*). Apparently, the vowel was shortened before the cluster /ðr/ and subsequently treated as any other short [ɔ] in closed syllables, which appears as <a> in the western sources.

Fig. 7.5. The new runes *ōs* (a) and *āc* (b).

2. Spontaneous fronting of PGmc **a*: *a* > *e* (when not hampered by blocking environments)

This is another early North Sea Germanic phonological feature in English and Frisian, and must be older than the year 600. The introduction of a rune known as *āc* (Fig. 7.5b) to represent [a] attests to the spontaneous fronting of *a* > *e*. This new rune is already

⁵ For a discussion of the phonemic or allophonic interpretation of velarized *a* see Waxenberger (2013, 20–1 and this vol.). Waxenberger adheres to the principle that only phonemic contrasts were rendered in writing.

found on the **skanomodu solidus** (probably Frisian), which is commonly dated to the late 6th century (Waxenberger 2013, 30 and this vol.; Hines, this vol.).

As the spellings <e> for PGmc **a* are not very common in OS, it can be questioned whether the realization of PGmc **a* as [æ] or [ɛ] was ever as widespread in OS as the verlarized pronunciation of PGmc **a* before nasals. Even in the Eastphalian sources, forms with <e> are an exception, e.g. *dage* (PsWit) alongside *dege* (GIMers) ‘day (dat.sg.)’. The Merseburg Glosses seem to be the most consistent in applying the fronting, but they provide very little material. In *Heliand-S*, which in general linguistically concurs with the Eastphalian sources, instances with fronted PGmc **a* are rare (Klein 1990, 205). It seems that this development was never widespread in OS and was confined to Eastphalia.

3. Monophthongization of **ai* > $\bar{a}$, $\bar{a}$

The monophthongization of PGmc **ai* is almost exceptionless in OS. The regular development of **ai* in OS is $\bar{e}$, but some sources, especially the eastern ones, exhibit an incidental development to <a> or <æ> instead of $\bar{e}$. The dataset used in the present study contains only one instance; however, Gallée (1993, 73–4) mentions many more examples from the onomastic material, especially from Corvey and Merseburg. It must be observed that the development to /a:/ or /æ:/ was common in specific phonological environments in Frisian, and the OS instances with <a> or <æ> are found in similar phonological contexts (Versloot 2017). The data do not testify to a large scale shift from $\bar{e}$ to $\bar{a}$, and therefore we conclude that the outcome with <a> or <æ> was confined to the east from the very beginning of the monophthongization process, which can be dated to the 7th century in OS.

4. Monophthongization of *au* > $\bar{o}$ ~ $\bar{a}$

The monophthongization of PGmc **au* is limited to Frisian, Low German and Dutch, affecting High German only partly. The spelling <a> is the default form in OFris, while <o> is common in OHG and OLF. OS witnesses an alternation between <a> and <o>, with the latter form being dominant in *Heliand* and *Genesis*, and the former in *Heliand-S*. Likewise, considerable vacillation between the two alternative forms is attested in the material from Westphalia, whereas the sources from Essen/Werden attest predominantly to <o> spellings, which matches the common practice in *Heliand*. The spellings may reflect a gradual phonetic realization, ranging from [a:] in the north to [o:] in the south. No extensive geographical or diachronic shifts were detectable in the investigated material. The monophthongization can be dated to the 7th century (in Frisian to the 6th century, in OHG to the 8th century).

5. The dating of *i*-mutation

i-mutation was an innovation that spread into OS from the north in the 7th and 8th centuries and was confined here only to short *a* (primary *i*-mutation).⁶ One of the triggers

⁶ The subsequent developments in Middle Low and High German show that *i*-mutation was still an active process that could affect many more vowels until a relatively late date. The fact that the

of *i*-mutation was PGmc short **-i*, which disappeared after heavy syllables prior to the earliest attestations of OS. In the intersecting waves of (primary) *i*-mutation and apocope of word-final short PGmc **-i*, the North Sea Germanic dialects developed morphological *i*-mutation (among others) in the plural of root nouns, while most OS dialects, OLF and OHG had lost the final *-i* before the application of *i*-mutation, and hence they show an identical form in the nom./acc.sg. and nom./acc.pl. in this group of nouns. The presence of this feature is most consistently attested in the OS root noun *mann* (cf. E. *man* ~ *men*). The *i*-mutated forms of *mann* are found in Eastphalian (one positive example and no counterexamples) and in *Heliand-S* (9 times). These OS dialects take an intermediate position between Continental and North Sea Germanic: with OE and OFris they share the chronology of the application of *i*-mutation and apocope of short **-i* after heavy syllables, while with OHG and OLF they share the limited scope of *i*-mutation which applies only to short *a*. *Heliand-S* contains some more examples of the application of primary *i*-mutation before *i*-apocope, as illustrated by the acc.sg. *creht* against *craft* found in the other sources (for a further discussion of incidental traces of *i*-mutation triggered by short **-i*, see Klein 1990, 206–8; Krogh 1996, 175–82).

6. The scope of primary *i*-mutation

Another trigger for *i*-mutation in OS was the synchronic presence of *-i* that escaped apocope in pre-OS (when derived from PGmc long **-ī* or when following a light syllable). The effect of the presence of *-i* was also confined to *i*-mutation of the root vowel *a* (primary *i*-mutation). The light syllable noun *stedi*, ‘city’ (< PGmc **stadiz*) shows consistent application of *i*-mutation in *Heliand* and *Genesis*. In south-western sources, however, *i*-mutation is not always attested in *stedi/stad*. The scarce data suggest that the form *stad* spread from the south-west, ultimately even from the Franconian linguistic area. However, the attestation of *-stadi* in the nom./acc.pl. in late-9th-century sources from Werden suggests that the application of primary *i*-mutation was more limited in the south-west, irrespective of any potential Franconian impact (cf. feature 9 and section 5).

7. *-os* ~ *-as*

The development of *-os* > *-as* was a North Sea Germanic innovation, implemented in Frisian in the 6th century (Versloot 2016b; cf. Boutkan 1995, 436). While the south-west dialects of OS attest to *-os* with continental vowel quality, the other OS sources (after 900), including the material from Eastphalia, show predominantly *-as*. In *Heliand* (including *Heliand-S*) the form *-as* is only a minority form (Boutkan 1995, 190). On account of many similarities

triggers of *i*-mutation are still present in most contexts in OS and OHG fuels theories about an early pan-Germanic application of *phonetic i*-mutation and a later date of *phonemicization* in the south (for a discussion with further references see Buccini 1995, 34). However, this theory cannot explain the lack of *i*-mutation in forms such as nom./acc.pl. *man*, which can only be reasonably explained if we assume that *i*-mutation (also as an allophonic feature) occurred later than the apocope of short word-final *-i*. Also the fact that particularly farther to the south, in various High German dialects, *i*-mutation does not apply at all in quite a few environments (Salmons 2012, 125–7) attests to a diminishing impact of the process in the south.

between *Heliand-S* and Eastphalian sources with respect to other features, the contrast in the distribution of *-as* and *-os* in these sources may be interpreted as a chronological one. This implies that the transition of *-os* > *-as* was on its way in the east not earlier than in the 9th century. The only fact which runs counter to this interpretation is the form *bergas* from Werden (*GlWerdC*), dated to the early 9th century.⁷

A case where the south-western form is an innovation, and the northern and eastern dialects attest to the retention of an original OS form is the alternation of *-os/-as* with *-a*. The latter ending is interpreted here as a Franconian borrowing from the south-west contact zone, which can be dated to the 9th century, and which subsequently spread through the rest of Low Saxon in the later centuries (Quak 1989).

8. Metathesis in ‘hors’

This development is not particularly restricted to the North Sea Germanic region, as evinced by the place-names in *-born*, ‘source’ in the Middle German region which is linguistically Franconian (cf. German *Brunen*, Dutch *bron*). Metathesis is frequently found in OFris in words such as *hors*, *berna*, *gers* (cf. High German *Roß*, *brennen*, *Gras*, English *horse*, *burn* but *grass*). In Frisian, the process must post-date the apocope of *-u* after heavy syllables, which had not been implemented there before the year 800 (Versloot 2016b).⁸

9. PGmc **a* + *i*-mutation > *i*

A number of OS light syllable nouns affiliated with *i*-stem declension, with PGmc root vowel **a* and *i*-mutation, seem to show the effects of vowel harmony, e.g. *biki*, ‘brook’, *stidiu*, ‘place, spot’.⁹ Evidence from *Heliand-S* is missing, whereas the other *Heliand* manuscripts attest only to *sted-*. The development of PGmc **stadi-* and **baki-* > *stid-* and *bik-*, respectively, has parallels in Old Weser Frisian, but is not a common North Sea Germanic phenomenon. The Weser Frisian dialect shows alternating pairs with vowel harmony, such as *stede* ~ *stidi*. The effect of mutual assimilation of vowels across syllables (through vowel harmony and various mutations) is in general more common in North Germanic and North Sea Germanic than in Continental West Germanic varieties. The development must be younger than the primary *i*-mutation (cf. feature 6). Figure 7.6 presents the geographical distribution of the vowels found in the OS light syllable *i*-stems with PGmc root vowel **a*.

⁷ Three forms in *-as*, found in the source labelled *Indic*, are dated to the late 8th century by Krogh (1996, 126), but to the 12th century by Tiefenbach (2010, xxxiii). The forms in *-as* in the late 8th century in *AbrPal* may have been influenced by OE (just as the forms *halogan gast*, ‘Holy Spirit’).

⁸ Weser OFris attests to a plural form *gerso*, ‘grasses’, with retention of the *-o* < *-u* occurring only after a light syllable. This implies that at the time of the operation of apocope, the form was still **græsu*, with a single coda consonant (cf. Boutkan 1996, 67).

⁹ The dat.sg. form *stida*, attested in *RegFrek*, evinces an intraparadigmatic levelling of *-i-*.

Fig. 7.6. The geographical distribution of forms with different root vowels in *stedi*, 'town' and *beki*, 'creek'. The map includes also Old Saxon place-names containing these two nouns (Tiefenbach 2010, 490–7) (these were not included in the aggregate Figure 7.1). Some nom./acc. sg. forms were excluded because of the lack of the *i*-mutation-triggering vowel (**stedi* > *stad*). White: *stad*-; grey: *sted*-; black: *stid*-.

10. North Sea Germanic features which were not included in the mapping

A few further features which were not included in the mapping deserve closer attention, including two additional characteristics frequently referred to as North Sea Germanic phenomena and two OS-OE innovations which are not shared by OFris.

One of the North Sea Germanic features which were not included in the map is the loss of nasals before unvoiced fricatives. The process is difficult to date, as the time span between its phonetic emergence and the final stage of denasalization of the vowel is considerable (cf. Versloot 2014b, 31–2). The feature is well attested across Germanic languages and has a different scope depending on the type of the fricative. Accordingly, the loss of /n/ before /f/ is found in Dutch (*vijf*, 'five' vs. High German *fünf*); the loss of /n/ before /s/ is common in North Germanic (Danish *gås*, 'goose') and is also attested in Low Rhine Franconian (Old Limburgian) already in the late 9th century (INL, s.v. *unsa*). The loss of /n/ before /p/ is characteristic only of North Sea Germanic: OE, OFris and OS. Before /s/ and /p/, the loss of /n/ is widespread in OS, even in the south-west, but 6 out of the 9 tokens from Eastphalia show <n>, as in *uns*, 'us' and *munde*, 'mouth' (PsLub, PsWit). At the same time, all 9 relevant tokens in the Straubing fragment testify to a lack of /n/. If the assumption that the Straubing fragment reflects the oldest (attested) stage of the Eastphalian dialect is correct, the presence of /n/ in the modern Eastphalian variety can be interpreted as a case of a later restoration of the nasal (König 2001, 160).

A morphological feature frequently considered to be a North Sea Germanic innovation is the extension of the dative singular form of the first and second person pronouns, *mi* and *thi*, to the accusative (e.g. Nielsen 1985: 113). While commonly found in OLF and OFris, its distribution in OE and OS is diversified, depending largely on the dialect. In both languages the picture is biased by the state of affairs attested in the dominant varieties: West Saxon for OE and the *Heliand* idiom, representing the language from the south-west, for OS. It is precisely the dominant dialect of West Saxon and the south-western OS dialects that are most advanced with respect to the loss of the historical accusative form. In Anglian and in OS from the area beyond the south-western region, the old accusative forms are pretty much alive (as confirmed by the material from Paderborn and Eastphalia). In Eastphalian these forms survived even into the modern dialects (König 2001, 160). This feature therefore shows a North Sea Germanic spread in a literal way, i.e. it is most prominent in the varieties geographically closest to the North Sea, including Kentish and West Saxon, OFris, OLF and south-western OS.

Finally, Nielsen (1985, 125, 126) discusses two morpho-phonological phenomena which are exclusively shared by OE and OS. The first one is a shared archaism: OS *bium*, *biun* and OE *beom*, *biom* (< PIE **b^heuH-* (or **b^hueH-*) (Philippa *et al.* 2003, s.v. *zijn*, *bouwen*) in contrast to *bim*, *bin* in OFris, OLF and OHG. The other phenomenon involves a common innovation, found in the plural paradigm of the verb *to be*, where *sind* can be extended with *-on*, *-un* in OE and OS. This latter feature can also be found in adjacent Franconian dialects (not in Low Franconian though). The forms *biun* and *sindon* are found predominantly in the region Essen and Westphalia (Freckenhorst), while Eastphalia and the Straubing fragment attest to *bin/bim* and *sind*, corresponding thus to the OFris forms.

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