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## British Celtic influence on English phonology

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# **British Celtic Influence on English Phonology**

Stephen Laker



# **British Celtic Influence on English Phonology**

PROEFSCHRIFT

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in 1976

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## Preface

Very few publications have considered what influence, if any, British Celtic had on the development of English sounds. Owing to recent interest into British and Anglo-Saxon relations – not only from linguists but also from historians, archaeologists and even geneticists – such a study is timely. Writing on a new topic presents many challenges, but it has the advantage of allowing one to look at the data afresh, and one is not forced too much into long discussions about the ideas and theories of earlier scholars. Fortunately, a large number of books and publications, while not directly concerned with the question of Celtic influence on English, have in fact been very adaptable to the needs of this investigation. By using research not directly associated with Celtic influence on English it has been possible to maintain the required level of impartiality throughout.

My interest in historical linguistics and the topic of Celtic influence on English began when I was a student at the University of Munich. There I came under the inspiring influence of Theo Vennemann, who has had a great influence on my subsequent work and therefore also on this dissertation. I am grateful for his guidance and support over many years. With the arrival at the same university of Peter Schrijver, I was able to receive the best possible training in Celtic historical linguistics that I needed to initiate and ultimately complete this project. I am grateful for his help and input, both as a student in Munich and later during my occasional visits to Utrecht. While much of my linguistic training was received in Munich, the place did not however necessarily provide the ideal working conditions for me to write a doctoral dissertation. Circumstances changed when Rolf Bremmer took me under his wing as a PhD student in a funded position at Leiden University. I have been immensely fortunate to have profited from his expertise while writing this dissertation. His support and criticism have been indispensable to the completion of the project.

Leiden provided me with an excellent base to do research in an amicable environment surrounded by many talented linguists with diverse interests. Many friends and colleagues at Leiden, especially in the English Department and the Centre for Linguistics, helped me in many ways during my time there. These are too many to thank individually, but I do wish to record my special thanks to Rob Goedmans, Vincent van Heuven, Gea Hakker-Prins and Jeroen van de Weijer for much help especially in the early stages of my appointment. I am also grateful for the support and encouragement of my former colleagues at Manchester University, especially Eva Schultze-Berndt, David Denison, Nuria Yáñez-Bouza, and to my new colleagues at Kyushu University, in particular Nobuaki Nishioka and Taras Sak. Furthermore, I have benefitted from the assistance of numerous scholars who have often generously sent me their publications, provided feedback on queries or offered other help. Among many others, I here wish to thank Andrew Breeze, Nick Higham, Petri Kallio, Angelika Lutz, Donka Minkova, Patrizia Noel, Guto Rhys, Karling Rottschäfer, Patrick Stiles, Hildegard Tristram, Peter Trudgill, Michiel de Vaan and David White.

I am particularly indebted to those who helped me in the process of writing up this dissertation. Robert Mailhammer read and commented on earlier drafts of each chapter. The corrections and comments of Rolf Bremmer, Peter Schrijver and, later, the reading committee – Cor van Bree, Richard Coates, Colin Ewen and Alexander Lubotsky – greatly improved the quality of the final version. For the faults that remain I must of course accept full responsibility.

Finally I wish to thank my parents, family and friends for their continuing love and support.

Stephen Laker

6 August 2010

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## Abbreviations and symbols

### (a) Languages

Angl.	Anglian
Co.	Cornish
Du.	Modern Dutch
E	Modern English
EBr.	Early (Proto-)British
F	Modern French
Fris.	Modern Frisian
G	Modern German
Ir.	Modern Irish
L	Latin
LBr.	Late (Proto-)British
MB	Middle Breton
MCo.	Middle Cornish
ME	Middle English
MIr.	Middle Irish
MW	Middle Welsh
NSGmc	North Sea Germanic
OB	Old Breton
OCo.	Old Cornish
ODu.	Old Dutch
OE	Old English
OFris.	Old Frisian
OIr.	Old Irish
ON	Old Norse
OW	Old Welsh
PBr.	Proto-British
PCl.	Proto-Celtic
PGmc	Proto-Germanic
PIE	Proto-Indo-European
PreOE	Pre-Old English
RB	Romano-British
VL	Vulgar Latin
W	Modern Welsh
WS	West Saxon
WGmc	(Proto-)West Germanic

## **(b) Grammatical and other linguistic abbreviations**

1, 2, 3	first person, second person, third person
acc.	accusative
C	consonant
dat.	dative
f.	feminine
gen.	genitive
impv.	imperative
ind.	indicative
m.	masculine
nom.	nominative case
n.	neuter
N/A	not applicable
pl.	plural
pret.	preterit
R	rounded
sg.	singular
V	vowel

## **(c) Symbols**

*	reconstructed form
**	reconstructed but impossible form
>	develops into
<	develops from
< >	denotes a grapheme
//	denotes a phoneme
[ ]	denotes an allophone
:	denotes vowel length, i.e. a long vowel
˘	denotes that a vowel or diphthong is short (when there is a need to be explicit)
ˈ	indicates that the immediately following syllable is stressed
.	indicates a syllable boundary
#	indicates word boundary
†	extinct

Phonetic and phonological symbols are those of the International Phonetic Association.





## **PART I: INTRODUCTION AND PRELIMINARIES**



# 1 Introduction

## 1.1 Aim and scope

The aim of this dissertation is to assess the influence of British Celtic (Brittonic) on the phonological development of English during and shortly after the Anglo-Saxon settlement period, ca. AD 450–700. It is generally believed that Brittonic had very little influence on English phonology, but no comprehensive investigation has ever been conducted to find out precisely what phonological influence it might have had on English. This study attempts to provide such an analysis. By reconstructing and then comparing the phonological systems of both Brittonic and English at the time of contact, an independent assessment of the differences and similarities between the sound systems of the two languages can be achieved. On this basis, it is possible to gauge which English segments may or may not have been susceptible to change in a situation of language contact and language shift; evidence for such change can then be sought in the medieval textual records.

As noted, the study limits itself to the first centuries following the Anglo-Saxon settlement of Britain – the so-called Dark Age period. More recent cases of Celtic influence on English will therefore not be dealt with here, though they may be referred to for comparative purposes insofar as they may shed light on the mechanisms of language contact and language change. It is also worth pointing out that, unlike most studies on the history of English, the prime focus of this investigation will not be on the development of English in the south-eastern quarter of England, i.e. English varieties of London and the Home Counties, from which Standard British English and Received Pronunciation are principally derived. Rather, attention will more often be given to English dialects which are different in many respects from those of South East England. Much attention is given to dialects of the North and West of England, not least because more intense British–Anglo-Saxon interaction has been posited for these regions by historians and archaeologists, and it is in the English of these areas that most suspected Brittonic influence has so far been suggested, in the form of loanwords, place-names, syntax and phonology.

In a wider perspective, this phonological investigation hopes to contribute to the ongoing debate about the influence of Brittonic on the English language in general. A weakness of studies into British influence on English so far has been that scholars have posited significant influence in the domain of English grammatical structure, but have detected very little in the area of phonology. For example, a recent survey of research into English and Celtic in contacts devotes almost twenty times more space to morphosyntactic influences than it does to phonological influences (cf. Filppula *et al.* 2008: 30–118 vs. 118–23). The present investigation therefore hopes to fill a major gap in current research on linguistic contacts between Britons and Anglo-Saxons. Furthermore, it is hoped that this study will also be of some interest to scholars in neighbouring disciplines – historians, archaeologists, geneticists – who have a shared interest in early Anglo-Saxon Britain.

## 1.2 Languages and periodisation

It is important to define the languages under investigation and their periodisations at the very outset. The language spoken by the Britons during the fifth century was a variety of Brittonic (also termed Brythonic and British Celtic). Brittonic belongs to the Celtic family of languages. All Celtic languages derive from an earlier language, known as Proto-Celtic, which in turn descends from Proto-Indo European, the common ancestor of most modern European languages. Like other proto-languages, Proto-Celtic is not documented but it can be partially reconstructed on the basis of its descendant languages, such as Gaulish, Old Irish and Middle Welsh. The precise details of how Proto-Celtic evolved in prehistory are a matter of dispute. Most scholars agree that it is convenient to differentiate those Celtic languages spoken on the British Isles (Insular Celtic) from those formerly spoken on the continental mainland of Europe and Asia Minor (Continental Celtic). Insular Celtic is a cover term for the Celtic varieties which developed in Britain (Brittonic languages) and Ireland (Goidelic languages).

First evidence for Brittonic stems from shortly before the Common Era and continues during four centuries of Roman rule almost exclusively in the form of personal-names, tribal-names and place-names recorded in Latin sources.<sup>1</sup> From about the first century AD until perhaps as late as 650, no dialectal differences in Brittonic are detectable from the available remnant sources. It is conventional to divide this period into Early British ca. AD 0–450 and Late British ca. 450–650. This division can be justified on linguistic as well as historical grounds. On linguistic grounds Early British seems to be characterised by the following developments (as discussed in Chapters 4 and 8): monophthongisation of all Proto-Celtic diphthongs, completion of the first stage of the Great British Vowel Shift, final *i*-affection, apocope, syncope, phonemic lenition, spirantisation and provection. Late British, by comparison, seems to be characterised by: internal *i*-affection, shortening of pretonic long vowels and loss of phonological quantity oppositions. The date of ca. 450 is also meaningful on historical grounds because it represents an important turning point in the history of Britain. According to the historical accounts of Gildas and Bede (see Chapter 2), it marked the advent and subsequent take over of a considerable part of Britain by the Anglo-Saxons. The period after Late British, beginning perhaps in the mid seventh to early eighth century, is termed ‘Old British’. At this stage it is possible to define two dialects, namely West British (which became Old Welsh) and South West British (which gave rise to Old Cornish and Old Breton). Since a distinct Old Cornish and Old Breton language cannot be established before ca. 1000, these designations only gain true significance after this date. From Old British there developed the Middle British languages: Middle Welsh (ca. 1150–1450), Middle Cornish (ca. 1300–1600) and Middle Breton (ca. 1100–1600), and the Modern dialects thereof

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<sup>1</sup> For a survey of the Latin inscriptions of Britain that contain Celtic names and places, see Sims-Williams (2003). Two short Roman-age Celtic texts were found in Bath, namely the ‘Bath pendant’ and a fragmentary curse tablet, see Schrijver (2007: 168–70).

(Cornish became extinct ca. 1800 but has since been revived). A timeline for the development of Brittonic from Early British into the modern languages is presented in Table 1.

The principal focus of my investigation is on the development of the language brought by Anglo-Saxon settlers to Britain, later to be known as English. Like other Germanic languages, English stems from a common Germanic ancestor language known as Proto-Germanic, which, like Proto-Celtic, ultimately derives from Proto-Indo-European. How Proto-Germanic evolved in prehistory is disputed among scholars, but most accept that it spawned three major Germanic subgroups. First, an East Germanic branch can be identified, represented almost exclusively by a fourth-century Gothic Bible translation. Then there continued a line of common development before two more subgroups can be identified, namely North Germanic, comprising the Germanic languages of Scandinavia (surviving in Danish, Swedish, Norwegian, Faroese, Icelandic), and West Germanic, which gave English, Frisian, Dutch, German, Afrikaans and Yiddish.

Within the West Germanic group it is possible to identify a specific group of languages, including English, which share a number of (mainly phonological) developments not found in other, more southerly dialects such as German. These languages, spoken in close proximity to the North Sea Coast, are designated here as North Sea Germanic languages (also known as Ingvaemonic languages). The two historically attested languages which show these North Sea Germanic features best are Old English and Old Frisian. However, North Sea Germanic features are also attested in Old Saxon as well as in poorly attested older dialects of the Netherlands, such as in the Saliar Frankish *Lex Salica* in Old Dutch, as well as Middle and Modern Dutch dialects along the coastal areas, in contrast to inland varieties. The rich amount of linguistic data often exacerbates the difficulties of making clear cut divisions between dialects. Undoubtedly, we have principally to do with a kind of dialect chain or North Sea Germanic continuum along the North Sea littoral in the years prior to the Anglo-Saxon settlement of Britain.

Thanks to the account of the first Anglo-Saxon historian, Bede, it was long thought that three principal Germanic tribes settled in Britain during the fifth century: the Saxons from the German Bight, the Angles from Angeln, and the Jutes from Jutland. Yet it is difficult to substantiate Bede's account. Some investigators have argued that there are some archaeological patterns corresponding to the general idea that Northern Britain has closer links with the Danish peninsula and that Saxon settled areas share more correspondences with northern Germany (Hines 1994). There seems to be at least some evidence to suggest that clothing and jewellery of the Angles and Saxons might have differed too, which could possibly indicate that the people did view themselves as different from one another. In terms of language, the most important dialectal differences of Old English at this early period can be found in the vowels; some such differences certainly predate *i*-mutation and probably have pre-Conquest origins (see Chapter 5). However, apart from a few short and sometimes indecipherable runic inscriptions, there is very little evidence of English before the late seventh century to enable one to discover more about early Old English dialects. For the purposes of this study, the period from ca. 450–650 will here be termed Pre-Old English. AD 650 marks the approximate beginning of the Old English period proper, which continues roughly until the end of the eleventh century (thus corresponding approximately with the Norman Conquest and

take over of England in 1066). The period from about 1100 until 1500 will be defined here as Middle English (roughly drawing to a close with the introduction of the printing press to England in 1476), and thereafter Modern English. For an overview of the periodisation employed in this book see Table 1.

Apart from the languages discussed so far, it is sometimes necessary to consider a few others which came into contact with early English during this investigation, in particular British Latin. Some scholars argue that during almost four centuries of Roman rule (ca. 50–410), a significant proportion of the British population became either bilingual or monolingual speakers of Vulgar Latin, especially in the heavily Romanised Lowland Zone of south-eastern Britain (for some idea about the area of Roman impact in terms of archaeology see Map 2 in Chapter 2). Indeed, earlier scholarship proposed that Latin was the only or main language spoken throughout Lowland England (e.g. Zacharison 1927: 25) – graffiti made by tile makers was cited as evidence in support of this claim (Haverfield 1923: 30, 32). However, Jackson (1953: 105–21), after a long review of the evidence, discarded this view, contending that in Roman Lowland Britain only the upper classes spoke Latin, and that their variety of Latin was remarkably close to Classical Latin and devoid of many traits of Vulgar Latin to be found on the Continent at the time. He maintained that the bulk of the population continued to speak Brittonic through the centuries of Roman rule and would probably only have known a smattering of Latin. For many years, Jackson’s authority stood on this issue, but since the 1980s several investigators have questioned his analysis (see Gratwick 1982, Smith 1983, Russell 1985), and today scholarly opinion certainly acknowledges that Latin in all likelihood must have been the language of communication for a much larger proportion, if not the majority, of the Lowland population by about the fourth and fifth centuries AD.

Date	Brittonic			English	Period
0	Early British (EBr.)			North Sea Germanic (NSGmc)	Roman/ Continental
450	Late British (LBr.)			Pre-Old English (PreOE)	Dark Age
650	Old British: Later, Old Welsh (OW); Old Cornish (OCo.) and Old Breton (OB)			Old English (OE)	Early Medieval/ Anglo-Saxon
1150	Middle Welsh (MW)	Middle Cornish (MCo.)	Middle Breton (MB)	Middle English (ME)	Late Medieval
1500	Modern Welsh (W)	†Modern Cornish (Co.)	Modern Breton (B)	Modern English (E)	Modern

Table 1. A periodisation of Brittonic and English and corresponding historical periods

The most recent studies which set out to demonstrate that Latin was spoken throughout Lowland Britain are by Schrijver (2002, 2007). Schrijver (2002: 92–5) demonstrates that several morphosyntactic developments and a very large number of phonological developments which took place in Brittonic towards the end of the period of Roman rule correspond to identical or very similar changes specific to Vulgar Latin. Jackson, who was aware of at least some of the shared phonological correspondences mentioned in Schrijver’s discussion, took a different view: ‘some of the changes which affected British took place by coincidence in Continental Latin too’ (1953: 257). But due to the large number of phonological correspondences between Vulgar Latin and Late British identified by Schrijver, Jackson’s dismissal now seems difficult to sustain. A more logical explanation for the especially large number of phonological correspondences between Brittonic and Vulgar Latin would be language contact, a scenario which Schrijver indeed proposes and develops in some detail. In short, spoken Latin was probably more widespread in the Lowland Zone than Jackson envisaged. It is not the aim of the present study to pursue this debate in a direct manner; the focus is rather on identifying possible Brittonic influences in Early English. Yet if this investigation identifies little or no evidence of Brittonic influence in the Lowland Zone, it could provide indirect support for the proposal of Latin use in that area.



Other later contact languages that will sometimes be referred to in this study include (Scots) Gaelic, Viking Norse and Old French; this is because the later influences of these languages on English could affect this study's conclusions. Occasional reference is made to both Irish Gaelic, for the reconstruction of British vowels and consonants, as well as Scots Gaelic, e.g. when discussing the development of Northern English and Scottish vowels. The North Germanic language of the Viking marauders who settled and colonised parts of the North and the East Midland counties of England from about the late-ninth to mid-tenth century is referred to here as Viking Norse. Although the influence of Viking Norse on Old English will not be investigated directly in this dissertation, due attention is given to proposals of Viking Norse influence made by previous scholars. Furthermore, in some cases it emerges that certain phonological developments in northern England could be explained by either Norse or Brittonic influence. The other medieval language to have significantly influenced English is, of course, Old French. Here the language of the Norman settlers and mercenaries is referred to as Norman French, though in the later Middle English period the Central variety of Old French had a greater influence on English.

No further contact languages are discussed in the present study. However, it is necessary to consider the developments of other Germanic languages for comparative purposes, chief among them are other West Germanic dialects which are historically and genetically most closely related and linguistically similar to English. As Hines (1994: 57) has noted: 'a more obviously important issue for appreciating the significance of understanding how the English language developed is the relationship between Old English and the other West- and North-Germanic languages'. For one thing, such a comparison allows one to gauge whether a certain development, which may have occurred in the early development of English, is to some extent unexpected and so may result from language contact. Thomason (2004: 710) emphasises this point:

The key to a convincing demonstration that the change occurred at least partly because of contact with B is to look beyond this one change and consider all changes that have occurred in A but not in its sister languages. If this feature turns out to be completely isolated in the system, the only innovation that makes A more like B, then a contact explanation is not promising. But if other innovations in A also match B features, then contact with B is a likely cause of the whole package of changes.

Of course, the analogy is not an absolute one: if a change occurs in English, it need not imply that the same change ought to have occurred in German, Dutch or Frisian, or vice versa. Nonetheless, given careful scrutiny valid comparisons can often be drawn, which sometimes help to determine whether a specific development is unexpected or peculiar. The main language of comparison in this study is Frisian, because it is the only other well-attested Germanic language

to retain its North Sea Germanic character.<sup>2</sup> Further comparisons, however will also be made with other, especially, Old West Germanic languages (Old Saxon, Old Dutch and Old High German) as well as their modern descendents.

### **1.3 Structure of this investigation**

The book is divided into four parts. Part I is introductory in nature. It consists of the present chapter, which defined the aim and scope of this dissertation and introduced the languages under investigation. Chapter 2 surveys past cross-disciplinary research into contacts between Anglo-Saxons and Britons, thereby placing the investigation in context. The chapter addresses claims by some scholars that there was basically no British–Anglo-Saxon linguistic contact. It also outlines the sociohistorical and sociolinguistic circumstances of the period under investigation and discusses some related theoretical considerations, e.g. the likelihood of early language shift in many areas of Britain, the nature of class-based distinctions in Anglo-Saxon society and the repercussions these would have had on the written tradition. Finally, Chapter 3 provides an introduction to the approach and methods employed in the subsequent investigative chapters.

The phonological investigation begins at Part II, which comprises four chapters devoted to the study of consonants. Chapter 4 introduces the Late British consonantal system. First of all a short synchronic description of the consonants in Late British is presented, which leads on to a more detailed survey of how the system may be reconstructed from Proto-Celtic. Chapter 5 is similar in conception and format to Chapter 4 but considers the consonantal system of Pre-Old English rather than Late British. Together, Chapters 4 and 5 allow the reader – especially the reader who is unfamiliar with the historical phonology of Brittonic and English – to become acquainted with the most important characteristics of the Late British and Pre-Old English consonantal systems. Chapter 6 begins by analysing the assumed differences (as well as the similarities) between the Late British and Pre-Old English consonants and their distribution, before reviewing some of the key developments of English consonants during the Medieval period and analysing whether some of these could potentially have resulted from contact with Brittonic. Chapter 7 builds on the initial results of Chapter 6 but extends the analysis to include consonant groups. A comprehensive analysis of the initial consonant clusters of Late British and Pre-Old English is offered, which identifies precisely which Pre-Old English initial consonant

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<sup>2</sup> Cf. Bremmer (1990: 368): ‘The prevailing opinion today among students of Frisian on the close links between English and Frisian is that Frisian is the last of the North Sea Germanic or Ingvaemonic languages to have withstood linguistic innovations spreading from the more central Frankish cultural centres. English remained outside this sphere of influence, because of its insular position. Secluded from the mainland by marshes and orientated to the sea, Frisian likewise escaped this fate’.

clusters were present in Late British and which were not. The rest of the chapter is given over to a detailed investigation of the development of initial consonant clusters in English.

Part III of the book is devoted to vowels and diphthongs; it comprises three chapters. Chapters 8 and 9 provide surveys of the vowels and diphthongs in Late British and Pre-Old English, detailing how the respective systems may be derived from Proto-Celtic and Proto-Germanic. Chapter 10 examines the developments of vowels and diphthongs in Medieval English with an eye to possible Brittonic influences. This chapter begins with a contrastive survey and discussion of the long vowel systems in both languages, followed by a detailed investigation into the development of English long vowels in the North and Midlands. The remainder of the chapter considers other short vowel, diphthongal and quantitative developments in English.

Part IV summarises the main results of the investigation and attempts to draw a number of conclusions from the results. In the space of this final chapter, an attempt is made to find connections and correspondences between the various findings, the result being that some English phonological and phonetic changes which may be attributed to Brittonic influence are found in some regions more recurrently than others. Finally, an attempt is made to connect the findings of my investigation to other related, ongoing linguistic research, especially in the domain of English morphosyntax. My assessment of the linguistic findings is offered and some possible areas for future research are identified.

## 2 Changing views about Anglo-Saxons and Britons

Current handbooks on the history of English tend to agree that Anglo-Saxons and Britons enjoyed little or only superficial contact following the Anglo-Saxon settlement and take-over of Britain in the fifth century.<sup>3</sup> The reasons given are twofold: First, the native Romano-British population was in large measure wiped out by incoming Anglo-Saxons as a result of repeated defeats in battle. Secondly, a large proportion of the native population fled from, or was forcefully driven out of, present-day England by the Anglo-Saxons, but found refuge elsewhere. Curiously, no qualification for these notions is ever offered in the form of supporting evidence, beyond the observation that there is a lack of Brittonic loanwords in English. The following citation, taken from Robert Forby's posthumously published treatise of the dialect of Norfolk, reflects these ideas in the early nineteenth century:

The Saxons brought their language into this country exactly in the middle of the fifth century. [...] This we know, that not many years had elapsed, before those fierce invaders, to whom it belonged, throwing off the insidious character of allies, under which they came, had not only occupied the greater part of the country, but had driven out its ancient inhabitants, and replaced them by successive hordes of barbarous invaders from the north-western coasts of Germany. The whole story of mankind does not afford a stronger, perhaps not so strong, an instance, of the entire conquest and extermination of a whole people by an invading enemy. Of all the proofs of such a conquest, the most cogent and demonstrative is that of language. In our case, the language of the invaders so totally superseded that of the original inhabitants, as to have soon become, in body and substance, the language of the nation, retaining no more than a very scanty sprinkling of the old British, and even that, in a great proportion of the instances, fairly disputable. (Forby 1830: 20–21)

Almost two centuries on, the same view, expressed in plainer turns of phrase, is held by many academics:

The Celtic-speaking Britons, who had already accommodated, and had absorbed or expelled, an earlier set of invaders, the Romans, retreated before the Germanic tribes. They consolidated themselves in Cornwall, 'North Wales' (that is, Wales), Scotland, and Ireland, leaving most of the rest of the large island to the soldiers, farmers, poets, and others from the longitudinal western edges of Europe. (Burchfield 1985: 7)

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<sup>3</sup> This chapter, which aims to provide an overview of research into Anglo-Saxon–British relations, is a revised version of Laker (2008b).

Old English, or Anglo-Saxon, is the group of dialects imported by immigrants from the continent in the fourth, fifth and sixth centuries, who drove back the native Romano-Celtic population to Cornwall, Wales and Scotland. (van Kemenade 1994: 110)

Many of the Celts undoubtedly were driven into the west and sought refuge in Wales and Cornwall, and some emigrated across the Channel to Brittany. (Baugh & Cable 2002: 50)

There is, surprisingly, very little Celtic influence – or perhaps it is not so surprising, given the savage way in which the Celtic communities were destroyed or pushed back into the areas we now know as Cornwall, Wales, Cumbria, and the Scottish borders. (Crystal 2003: 8)

The arrival of Angles, Saxons and other Germanic-speaking tribes in Britain from the fifth century onwards exerted a pressure on Welsh which continues to the present day. Celtic speakers were driven into the area now known as Wales, thereafter to be subject to a long process of anglicization. (Penhallurick 2004: 98)

Celtic appears to have had little impact on English; for this reason it is likely to be the most overlooked language of medieval England, and for this reason too it features little in the present chapter. It appears that fewer than a dozen words were borrowed from Celtic into English in the Anglo-Saxon period [...] (Townend 2006: 65)

While a number of the writers cited above do mention elsewhere that there must have been some degree of assimilation of Britons within Anglo-Saxon society too (e.g. through intermarriage or slavery), undoubtedly the radical notions of genocide and, especially, population displacement prevail in their accounts. So certain are they about the lack of early linguistic contacts between Anglo-Saxons and Britons that discussion of the whole issue is thought pointless; for this reason, little more than a few sentences or a single paragraph are usually spent on the topic.<sup>4</sup> Yet such certainty is not shared by all scholars, as will become clear in this chapter. The following cross-disciplinary survey of historical sources, archaeological finds, genetic sampling and linguistic research indicates, rather, that life in Dark Age Britain cannot only have been characterised by genocide and folk movements.

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<sup>4</sup> David Crystal's discussion 'The Celtic language puzzle' in his recent history of English is an exception in this respect, see Crystal (2005: 29–33).

## 2.1 Historical sources

It is usually held that Britain, after more than three centuries of Roman rule, slumped into a state of decline in the second half of the fourth century. Barbarian attacks became increasingly common in Britain as well as at other fringes of the Empire, and by the end of the fourth century Gothic federates under Alaric had entered Italy, leaving General Stilicho, who was then in charge of the western Roman Empire, no option but to withdraw troops from Britain in AD 401 or 402, thereby weakening its defences considerably (Claudian *De Bello Gothico* verses 416–18; Gildas *De Excidio et Conquestu Britanniae* 18.3). This action led to further unrest and a number of revolts, as Britain became increasingly distanced from Rome, which had enormous problems of its own. It is while describing how Alaric sacked Rome in 410 that Zosimus writes that ‘Honorius sent letters to the cities in Britain, urging them to fend for themselves’ (Zosimus *Historia Nova* 6.10). Indeed, there seems to be general agreement among early and later sources that 409/410 marked a new era for Britain, a Britain without Rome.<sup>5</sup>

The next four decades are of great importance for the history of Britain and are the subject of considerable dispute. From a power vacuum there seem to have emerged a number of military elites who each governed parts of Britain; according to later sources the leading ruler among them went by the name of Vortigern. Unfortunately, there are few historic records from this sub-/post-Roman period (ca. 410–450), but two continental sources are of great importance. First, chapters 12–18 of the *Life of St Germanus of Auxerre* (ca. 378–448), written by Constantius, a priest of Lyon ca. 480–490, tell of how the Bishop of Auxerre went together with the Bishop of Troyes to England in 429 in an attempt to defeat Pelagianism. Apart from chronicling a number of miracles and a fantastical victory over the Picts and Scots, Saint Germanus is also said to have given encouragement to a British army fighting against Saxons who were already located in Britain. Secondly, there is an entry in the *Gallic Chronicle* AD 441–442 which states that ‘the British provinces, which to this time had suffered from various disasters and misfortunes, are reduced to the power of the Saxons’. Thus, according to the Gallic Chronicle, the Saxons had already become dominant in Britain by about 441 (see further Snyder 2003: 83).

This date of 441 can be reconciled with *Historia Brittonum* (sometimes ascribed to Nennius, ca. 829/30), from which the arrival of the Saxons can be computed to the late 420s or ca. 430 (Higham 1992: 155); but it does not match the dating of ca. 446–452, which must be deduced from Gildas *De Excidio et Conquestu Britanniae* (written ca. 540) – our (and Bede’s)

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<sup>5</sup> A mid-fifth century Roman chronicle, *Narratio de imperatoribus domus Valentinianae et Theodosianae*, describing the events of 410 also adds that: ‘The British provinces were removed from Roman authority forever’ (see Snyder 2003: 81). Similarly, Bede 1.11 (AD 409), *Historia Brittonum* 28 (AD 409), Anglo-Saxon Chronicle (Parker A), AD 409.

major (near-)contemporary source for the events of the fifth and early sixth centuries.<sup>6</sup> Gildas tells us that the Britons initially sent an appeal for military aid to the Roman general Aëtius, who was on campaign in Gaul in the 430s, to ask for military might to wage war against ‘the peoples of the north’ (thus, it is presumed, Picts and Scots, rather than Saxons). Since no help was forthcoming, the leader of the Britons at the time, whom Gildas calls the *tyrannus superbus* ‘the proud tyrant’ and whom Bede named as Vortigern, brought in Saxon mercenaries to defend the Britons. Of this decision Gildas (23.2) writes: ‘of their own free will they invited under the same roof a people whom they feared worse than death,’ noting that (23.4) ‘on the orders of the ill-fated tyrant, they first of all fixed their dreadful claws on the east side of the island, ostensibly to fight for our country, in fact to fight against it’. Ultimately the Saxons, finding their provisions not sufficient (according to Gildas), broke their agreement and laid the island to waste. The picture which Gildas presents is one of death and destruction. It has provided the blueprint for all future accounts, like Bede’s, and from it spring the ideas – still prevalent in English studies – that the Saxons turned on their British hosts, who were either killed (first two quotations below) or put to flight (second two quotations below):

All the major towns were laid low by the repeated battering of the enemy rams; laid low, too, all the inhabitants – church leaders, priests and people alike, as the swords glinted all around and the flames crackled. It was a sad sight. In the middle of the squares the foundation-stones of high walls and towers that had been torn from their lofty base, holy altars, fragments of corpses, covered (as it were) with a purple crust of congealed blood, looked as though they had been mixed up in some dreadful wine-press. There was no burial to be had except in the ruins of houses or the bellies of beasts and birds – saving the reverence due to their holy spirits, if indeed many were found at the time to be carried by holy angels to the heights of heaven. (Gildas 24.3–4)

So here in Britain the just Judge ordained that the fire of their brutal conquerors should ravage all the neighbouring cities and countryside from the east to western sea, and burn on, with no one to hinder it, until it covered almost the whole face of the doomed island. Public and private buildings fell in ruins, priests were everywhere slain at their altars, prelates and people alike perished by sword and fire regardless of rank, and there was no one left to bury those who had died a cruel death. (Bede 1.15)

So a number of the wretched survivors were caught in the mountains and butchered wholesale. Others, their spirit broken by hunger, went to surrender to the enemy; they

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<sup>6</sup> I shall not enter the debate about which date is right or wrong; suffice it to say that the continental sources have claimed greater interest from scholars in recent years. One account of an Anglo-Saxon advent in the first quarter of the fifth century based on a different interpretation of the early sources has been presented by Charles-Edwards (2003).

were fated to be slaves for ever, if indeed they were not killed straight away, the highest boon. Others made for lands beyond the sea; beneath the swelling sails they loudly wailed, singing a psalm that took the place of a shanty: 'You have given us like sheep for eating and scattered us among the heathen'. Others held out, though not without fear, in their own land, trusting their lives with constant foreboding to the high hills, steep, menacing and fortified, to the densest forests, and to the cliffs of the sea coast. (Gildas 25.1)

Some of the miserable remnant were captured in the mountains and butchered indiscriminately; others, exhausted by hunger, came forward and submitted themselves to the enemy, ready to accept perpetual slavery for the sake of food, provided only they escaped being killed on the spot: some fled sorrowfully to lands beyond the sea, while others remained in their own land and led a wretched existence, always in fear and dread, among the mountains and woods and precipitous rocks. (Bede 1.15)

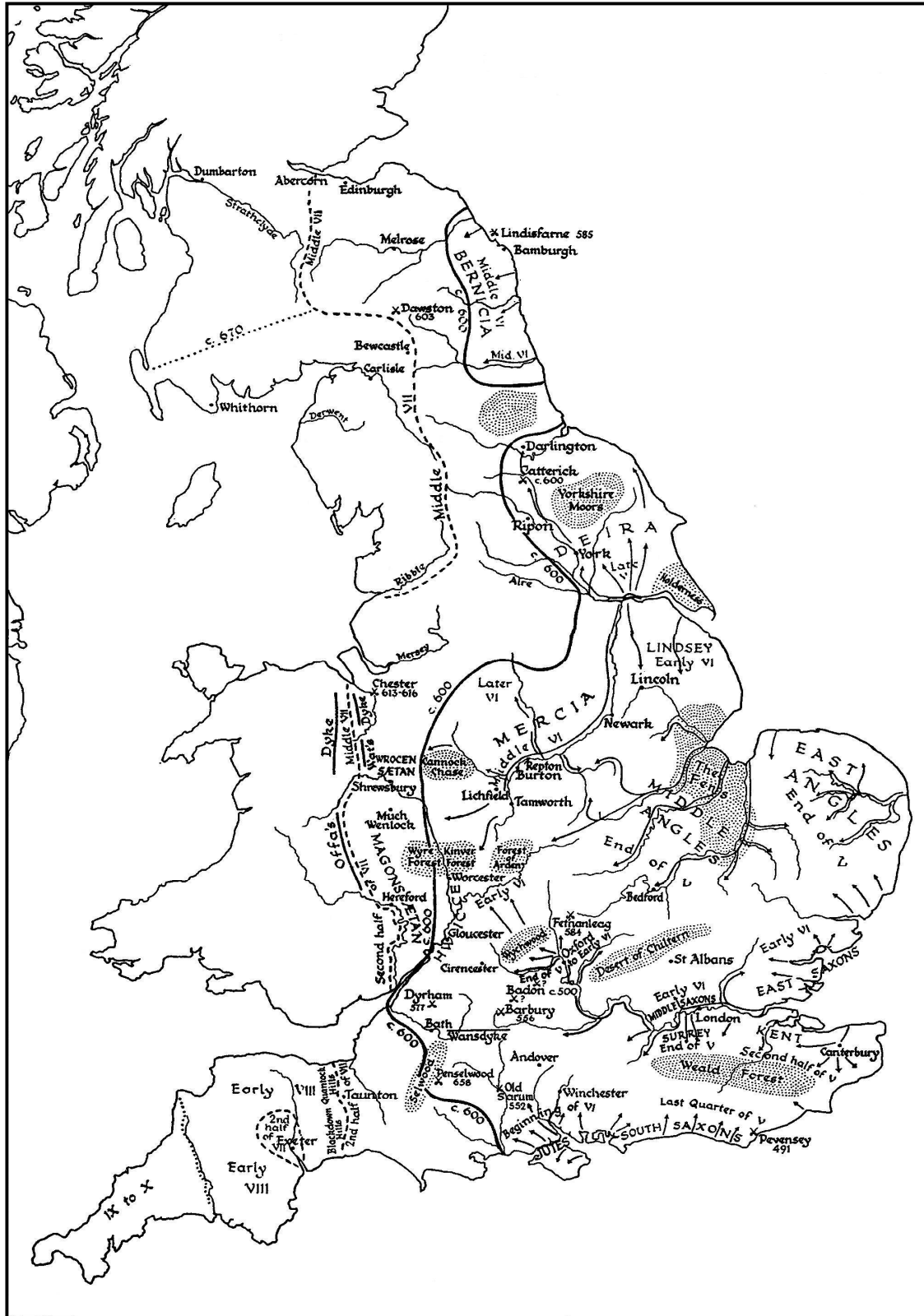
According to Gildas, the Anglo-Saxon settlement of Britain had apocalyptic traits, which have been recounted by historians ever since (cf. the quotations of Forby, Baugh & Cable, Crystal and others above). Bede naturally had to rely on Gildas' record of events, since he was not even a near-contemporary witness, writing almost 300 years after the events in question. Yet Bede's account is shorter and less vivid than Gildas' – the ghastly simile of the wine-press has been removed, as have the bellies of birds and beasts, and the text of the psalm. Other investigators, too, have crafted their own mini historical narratives since, usually in a more matter-of-fact manner with the interpolation of regions or countries of present-day Britain, but in essence they are very similar.

The idea that the native Romano-British population was completely wiped out is not well substantiated by Gildas's account. It is clear that during Gildas' lifetime there was relative peace, as a result of the British victory at Mount Badon ca. 500, after which large parts of western Britain and the North of England remained under British control for several decades. During this time, Gildas acquired his Latin education. In fact Gildas (and by implication Bede) do not talk specifically about complete ethnic cleansing of the whole Romano-British population. However, when one calculates that over a period of about 250 years, ca. 450–700, the Anglo-Saxons conquered and settled almost all of present-day England, through numerous battles and skirmishes, and when one computes that at each point of advance a significant proportion or all of the native Romano-British population may have perished, then one can start to imagine mass ethnic cleansing on a large scale.

A detailed portrayal of the occupation of England (and southern Scotland) between the fifth and seventh centuries, and as far as Cornwall in the tenth, based on historical sources and archaeological finds, has been provided by Jackson (1953: 100–246), the essence of which is summarised in Map 1. Following the so-called Gildasian peace of the first half of the sixth century mentioned above, by the mid sixth century a number of significant battles were being



fought and won again by the Germanic invaders. Significant was the battle at Catterick (ca. 572), where the Deirans wiped out an entire band of the Votadini (Britons from around Edinburgh), thereby paving the way for an English Northumbria (Dumville 1989). The battle of Dyrham (ca. 577) severed the land-link between the south-western Britons of Cornwall and Devon from Wales, as the Saxons took the towns of Gloucester, Cirencester and Bath. The battle of Chester (ca. 616) produced a further rift in the line of British strongholds along western Britain. After these events the hostile climate towards the Britons changes somewhat, in that battles begin to be waged more and more among the Anglo-Saxon kingdoms themselves, at which point ethnic Saxon or Briton counted for less, and indeed British and English kings sometimes fought alongside against rival English kings, as at the battle of Hatfield Chase (ca. 633), where Cadwallon, king of Gwynedd, and Penda, king of Mercia, colluded to defeat the Northumbrian King Edwin. By about 670–680, little land remained to gain overlordship of, since almost all of present-day England, excluding Devon, Cornwall and parts of southern lowland Scotland, was under Anglo-Saxon rule. Furthermore, the introduction of Christianity seems to have fostered greater stability and peace.



Map 1. The Anglo-Saxon occupation of Britain (Jackson 1953: 208–09)

Thus, if one assumes that the Anglo-Saxons ethnically cleansed Britain of the Britons between the fifth and seventh centuries, as their settlement moved from east to west, indeed a whole population could in theory have been wiped out. But, as pointed out above, there is no detailed information about ethnic cleansing on this scale in the historical sources. Unique among the early sources, the *Anglo-Saxon Chronicle* does record death tolls at a number of battles. The highest tallies mentioned are 4000 men at Crayford in Kent (entry AD 457), 5000 men at a place called Natanleod (AD 508), and a ‘countless number’ of Welsh and 200 priests at Chester (AD 607).<sup>7</sup> The last mentioned battle, led by Æthelfrith, king of Northumbria, must have been particularly bloody, as Bede tells of his ruthless approach towards the Britons:

He ravaged the Britons more extensively than any other English ruler. He might indeed be compared with Saul who was once king of Israel, but with this exception, that Æthelfrith was ignorant of the divine religion. For no ruler or king had subjected more land to the English race or settled it, having first either exterminated or conquered the natives. (Bede 1.34)

However harrowing these death tolls (and Bede’s account) may at first appear, taken over several centuries and in view of the population estimates for native Britons in the fifth century, which are presently set at 1 to 2 million (see 2.2), they do not seem especially significant.

In fact, the last-mentioned citation from Bede is somewhat ambiguous, as it is not clear whether Bede means ‘exterminate’ or ‘drive out’ – the latter being the classical sense of the word (Higham 2007: 3). But if Bede did mean exterminate in the modern sense of ‘annihilate’ it is clear that Æthelfrith’s efforts were not completely successful: Elmet remained an independent British kingdom during his reign (it was annexed only later by Edwin King of Deira, *Historia Brittonum* 63). Furthermore, Æthelfrith’s son Oswiu, who later rose to the throne after the death of his elder brother Oswald, becoming the most dominant king in England when Penda died in 655, had a British wife, Rhianmellt (†642).<sup>8</sup> It has even been suggested that Oswiu’s marriage with Rhianmellt, the great-granddaughter of King Urien of Rheged, could have led to, or at least facilitated, a peaceful absorption of western British kingdoms into Northumbria after the mid-

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<sup>7</sup> The Anglo-Saxon Chronicle date for the Battle of Chester is generally considered erroneous. It is usually dated to about AD 616.

<sup>8</sup> As told in *Historia Brittonum* (57, 63) and later confirmed by the Durham *Liber Vitae* (3, fol. 3), see Grimmer (2006: §28). In fact, Oswiu seems to have had three wives: one Irish (Fína), one British (Rhianmellt) and one English (Eanflæd, daughter of Edwin). Grimmer (2006: §32) concludes that, during the early stages of Northumbrian territorial expansion, Anglo-Celtic intermarriages may have acted as a ‘mechanism for integration between the Northumbrians and Celts of the north’.

seventh century.<sup>9</sup> At any rate, if an Anglo-Saxon prince could marry a British princess, we may suppose that intermarriage was not unknown or indeed forbidden among the lower classes either.

Despite the possibility that Anglo-Saxons repeatedly wiped out native Romano-British populations at each successive advance, it is difficult these days to find any historian or archaeologist willing to accept that the native Romano-British population of present-day England was completely exterminated. It is fair to say that in English studies, and Celtic studies too, there has arisen a tendency to distance oneself somewhat from the wipe-out theory. Nonetheless, the idea that there was a mass folk migration of Romano-Britons westwards continues to have great appeal (see citations by Burchfield, van Kemenade, Baugh & Cable, Crystal and Penhallurick at the very beginning of this chapter). Indeed, the idea has become such a commonplace in English studies these days that it seems high time that the basis for it be reconsidered in light of the historical sources.

We have already traced the main source for the notion of population displacement back to Gildas (25.1 cited above), who refers to Britons finding refuge in high places, dense forests, and cliffs of the sea coast. Bede (1.15, also cited above) followed Gildas' account, since he also states that the Britons found refuge in mountains, woods and precipitous rocks. However, Gildas does mention that some Britons took to the sea – naturally Bede does as well – and this could be a reference to a migration to Brittany. Six more references to running away are found in the *Anglo-Saxon Chronicle* from the years AD 457, 473, 477, 552, 607 and 682:<sup>10</sup>

AD. 457. This year Hengest and Æsc fought against the Britons at a place which is called *Crecganford* [*Crayford, K*], and there slew four thousand men; and the Britons then forsook Kent and fled to London in great terror.

AD. 473. In this year Hengest and Æsc fought against the Welsh and captured innumerable spoils, and the Welsh fled from the English like fire.

AD. 477. This year Ælle came to Britain and his three sons Cymen, and Wlencing, and Cissa with three ships at the place which is called *Cymenesore* [The Owers to the south of Selsey Bill], and there slew many Welsh and drove some to flight into the wood which is called *Andredesleag* [Sussex Weald].

AD. 552. In this year Cynric fought against the Britons at the place called *Searoburh* [Old Sarum, W], and put the Britons to flight.

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<sup>9</sup> Peace in a divided Britain was probably already achieved under Oswiu's elder brother Oswald, for Bede (3.6) tells how four peoples received him as lord: Picts and Britons, Scots and Angles.

<sup>10</sup> Translations are from the Parker A Chronicle.

AD. 607. In this year Æthelfrith led his levies to Chester and there slew a countless number of Welsh; and so was Augustine's prophecy fulfilled which he spoke, 'If the Welsh refuse peace with us, they shall perish at the hands of the Saxons.' Two hundred priests were also slain there who had come thither to pray for the Welsh host. Their leader was called Scrocmail [Bede: Brocmail], who was one of the fifty who escaped thence.

AD. 682. In this year Centwine drove the Britons as far as the sea.

As is evident from the citations above, the *Anglo-Saxon Chronicle* focuses mainly on southern Britain; but further instances of fear and flight in the North and Midlands are known from other sources.

Recall that Bede refers to the Northumbrian King Æthelfrith exterminating Britons (1.34, cited above), which might possibly be a use of 'exterminate' in the classical sense of the word, i.e. 'drive out'. Then there is a reference to fleeing British priests in Eddius Stephanus' *Life of Bishop Wilfrid* (chapter 17), with reference to the estates given to Ripon by the Northumbrian kings on the dedication of the church there ca. 671–678:

Then St Wilfrid the bishop stood in front of the altar, and, turning to the people, in the presence of the kings, read out clearly a list of the lands which the kings, for the good of their souls, had previously, and on that very day as well, presented to him, with the agreement and over the signatures of the bishops and all the chief men, and also a list of the consecrated places in various parts which the British clergy had deserted when fleeing from the hostile sword wielded by the warriors of our own nation.

Finally, a reference is made to fleeing Britons in Felix' *Life of Saint Guthlac* (chapter 34). Here we are told that in the days of Cœnred King of the Mercians (ca. 704–706), the Britons were still wreaking havoc among the English and that one night the Mercian Saint Guthlac came under attack. Guthlac, who was then a hermit at Crowland in the Lincolnshire Fens, was aroused from his sleep. As he went out of his cell he at once recognised the British tongue, having once been an exile among them, and was 'able to understand their sibilant speech'. He was then approached by the armed mob, which by this time had set his buildings on fire:

Straightaway they strove to approach his dwelling through the marshes [...] they caught him [Guthlac, SL] too and began to lift him into the air on the sharp points of their spears. Then at length the man of God, perceiving the thousand-fold forms of this insidious foe and his thousand-fold tricks, sang the first verse of the sixty-seventh psalm as if prophetically, 'Let God arise,' etc.; when they had heard this, at the same moment, quicker than words, all the hosts of demons vanished like smoke from his presence.

Here the flight of Britons is different from all others cited previously, as Britons are not fleeing from the sword but from a psalm. Nonetheless, the Britons are portrayed as escaping in a somewhat cowardly manner, which, as we have seen, is very much a *leitmotiv* in other early sources.

This completes our survey of references to Britons running away from Anglo-Saxons in early sources. In summary, Gildas, Bede, Anglo-Saxon Chronicle, Eddius Stephanus and Felix do mention Britons running away under various circumstances, usually in the context of losing a battle.<sup>11</sup> However, no reference could be found to support the notion that present-day Wales, Cornwall or Scotland functioned as safe-havens during the settlement period. Investigators who make claims to this effect do not provide any evidence to support their views. One can only conclude that such notions arose on the one hand from the idea that Brittonic dialects were spoken in Wales, Cornwall and Scotland in the later-medieval or modern periods, and the rather simplistic analogy that language and ethnicity are inextricably linked to one another, coupled perhaps with the observation that there are few British loanwords in English (see section 2.4 for further discussion on this last point).

## 2.2 Archaeology

In recent times the debate about the Anglo-Saxon settlement of England has come to focus more and more on archaeology, not least because no new historical sources have come to light, while archaeological discoveries are being made on an almost-daily basis. Furthermore, technological advances have improved ways of analysing finds, both old and new. Importantly, however, in no other discipline have ideas and theories about the Anglo-Saxon settlement changed so rapidly and radically within recent decades.

Until the second half of the twentieth century, archaeology tended to be used to support the historical sources, without playing an independent role in its own right (cf. Härke 2003: 14). It was used to embellish the pictures of destruction and genocide delineated by Gildas and Bede. One of the principal ways of adding substance to the historical sources was to track ‘cultures’, i.e. burial techniques, pottery or jewellery styles, and identify them with peoples or tribes, which in turn could be identified with areas found on the continent. Thus, support could be found for Bede’s notion that there were three principal Germanic tribes that settled in Britain: Angles, Saxons and Jutes. Such ideas are found in Stenton (1971) and Myers (1986). But it was noted in retrospect that archaeology was not making an independent contribution, and was being significantly influenced by an interpretation of historical documents based largely on nineteenth-century ideas (Härke 2003: 14; see also German 2000). In pre-historic archaeology, matters were different: since no historical sources existed, the material culture had to be analysed in its own right. By the last quarter of the twentieth century the same approach came to dominate Anglo-

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<sup>11</sup> There are, of course, several instances of Anglo-Saxons fighting each other and, sometimes, fleeing from battle too, cf. *Anglo Saxon Chronicle* entries AD 591, 597, 607, 658.

Saxon archaeology too. Thus, it was reasoned that an Anglo-Saxon burial type might not necessarily represent an Anglo-Saxon (as had previously been taken for granted). Likewise, a shard of pottery, though Saxon in style, might not imply that only an Anglo-Saxon must have made it or used it. Rather, new styles could also have been adopted by people of non-Anglo-Saxon ethnic descent. These insights led some archaeologists to argue that the population of post-Roman Britain could have remained for the most part intact, being governed by a comparatively small military elite who enforced their laws, fashions and customs on the Romano-British natives to such a degree that they become practically invisible in the archaeological record. This view gained additional support from some historians who questioned the accounts of Gildas and Bede in particular (already Kemble 1849, also Dumville 1977, Sims-Williams 1983).

The major problem faced by archaeologists investigating the question of British survival is the lack of diagnostic British material culture in post-Roman Britain (ca. 410–450), resulting from an end of import and production of Roman goods, coinage, and the abandonment of Roman towns and estates (Esmonde Cleary 1989, Jones 1996, Härke 2003, 2007). Basically, the native Britons become invisible. Yet the situation obtains not just for eastern areas of Britain settled by Anglo-Saxons in the fifth century, but also in the west and north of Britain. The situation is summed up by Härke (2007: 58) as follows:

The archaeological sequence of the first half of the first millennium AD in England is, in itself, reasonably clear and unambiguous: (1) Roman material culture up to the beginning of the fifth century; then (2) a black hole ('post-crash gap') in the first half of the fifth century, first punctuated, and then followed, by (3) Anglo-Saxon material culture from the second half of the fifth century.

Härke (2007: 58–60) presents three ways of explaining the archaeological situation. First, one might assume that the Britons were either wiped out (yet, despite occasional evidence of battle wounds on skeletons, there is no archaeological evidence so far for genocide on any scale), or they fled to western Britain (here there is no archaeological evidence either, but this scenario would presumably be harder to trace in the archaeological record). Second, as Britain became separated from the Roman Empire, coinage, mass-produced pottery and other identifiable items, ceased to be imported and manufactured. The Britons came to rely more on perishable materials, such as leather, wicker and wood (as in Ireland at the same period), which have since disappeared without trace. Thirdly, the Britons were present, but their evidence has not been recognised. Specifically, Härke points out that in some cemeteries and settlements of the post-Roman period the evidence has been so undiagnostic, that only in some instances have experts stumbled on some very slight evidence of Romano-British pottery which would point to a Romano-British context. In general, Härke tends to think that the third possibility (i.e. unrecognised presence) is most likely (i.e. not the first, traditional interpretation). As pointed out already, it is important to realise that the lack of material evidence for Romano-Britons in the

post-Roman period is not restricted to the east of Britain settled by Anglo-Saxons; the situation is the same in the north and west of Britain too, and many of these areas were not settled by Anglo-Saxons until the seventh century or later.

Some archaeological discoveries have genuinely underpinned the processual model, however. First, new methods of fieldwalking and aerial-photographic techniques have shown that there were far more buildings during the Roman period than previously thought, leading scholars to project a population of between 2 to 4 millions in the later Roman period (Millet 1990: 182–5, Jones 1996: 13–17). Taking account of a rapid population decline towards the end of Roman Britain, most investigators seem to agree that the British population stood at approximately 1 to 2 million by about the mid-fifth century (Härke 2002: 150). Second, in the past it was assumed that lowland Britain came to resemble a wasteland after the Roman period, whereby shrubs and trees began to grow on previously tendered land. This dense wasteland was then cleared by the Anglo-Saxons as they gradually settled further inland (Hoskins 1955: 44–8). Palaeobotanical research has now shown this to be a false assumption of earlier historians (see Dark 2000). The land was tended by a native population right through the post-Roman period, with only some alterations in farming patterns, namely an increased amount of cattle breeding becomes evident (Rackham 1990, Higham 2007: 8). Third, evidence has been gathered to demonstrate that field boundaries and kingdom boundaries largely remained stable, thus again pointing to a certain degree of population continuity. Such evidence, combined with occasional less hostile references to Britons in Anglo-Saxon sources – most especially in the Wessex lawcode of King Ine (ca. 700), which makes provisions for ethnic Britons – serves to strengthen the case for a greater degree of population continuity in Post-Roman Britain, though there are great differences of opinion on how these findings can be projected.

Concentration on population continuity has led to the postulation of population estimates for the native population as set against the Germanic incomers. The present view, as stated above, is that there was a resident population of 1 to 2 million. However, estimates for the Germanic force of mercenaries vary significantly. Gildas' account of three ships is generally considered mythical in nature, as Henson (2007: 143) points out:

A small number of Germanic mercenaries would not have been an adequate substitute for the late Roman army in Britain, which has been estimated at c.30,000 men at the end of the 4th century (Jones 1996: 214). This was divided into three commands: the northern frontier under the *Dux Britanniarum*, the south east coast under the *Comes Litoris Saxonici* and the central mobile field army under the *Comes Britanniarum*. The employment of the Germanic troops suggests that they were meant to replace or augment the northern frontier and the south-east coastal commands.

Just as historical linguists prefer to refrain from guessing possible dates of linguistic change in prehistory, so too do archaeologists refrain from estimating the number of Germanic migrants to Britain during the Dark Ages. Be that as it may, there are basically two factions,



namely minimalisers, e.g. Higham (1992), Laing & Laing (1990) and Jones (1996), who have proposed figures of 10,000, 25,000 and 30,000 respectively, and there are maximalisers, e.g. Härke (2002), who suggests the figure could have been as high as 250,000.

Supporters of the minimalist view (e.g. Higham 2007: 7) have discounted the possibility of such large scale migration as envisaged by Härke. Yet while we can agree that a sudden influx of between 100,000 or even 250,000 speakers was logistically impossible in fifth- and sixth-century Britain, when one considers a long-term approach to settlement, i.e. the possibility of settlement over a one-hundred or two-hundred year period, it is possible to imagine such substantial immigration numbers. Henson (2006: 146) has conjectured that one ship every year, holding 60 soldiers, with another ship for wives and families would bring roughly 14,000 people over in a 120 year period, say between 430–550. If this figure was increased tenfold, thus twenty ships per year, the figure would rise to a substantial 140,000 people. Henson concludes that the ‘capacity to bring sizeable numbers of people from the continent clearly existed, as did the capability to maintain regular contact between Britain and the Germanic homelands’ (2006: 146). Therefore, nothing rules out an initial migration of about 10,000 followed by more substantial migration in eastern and south-eastern Britain over a one- or two-hundred year period. If land and spoils were there for the taking, migration numbers may well have been high.

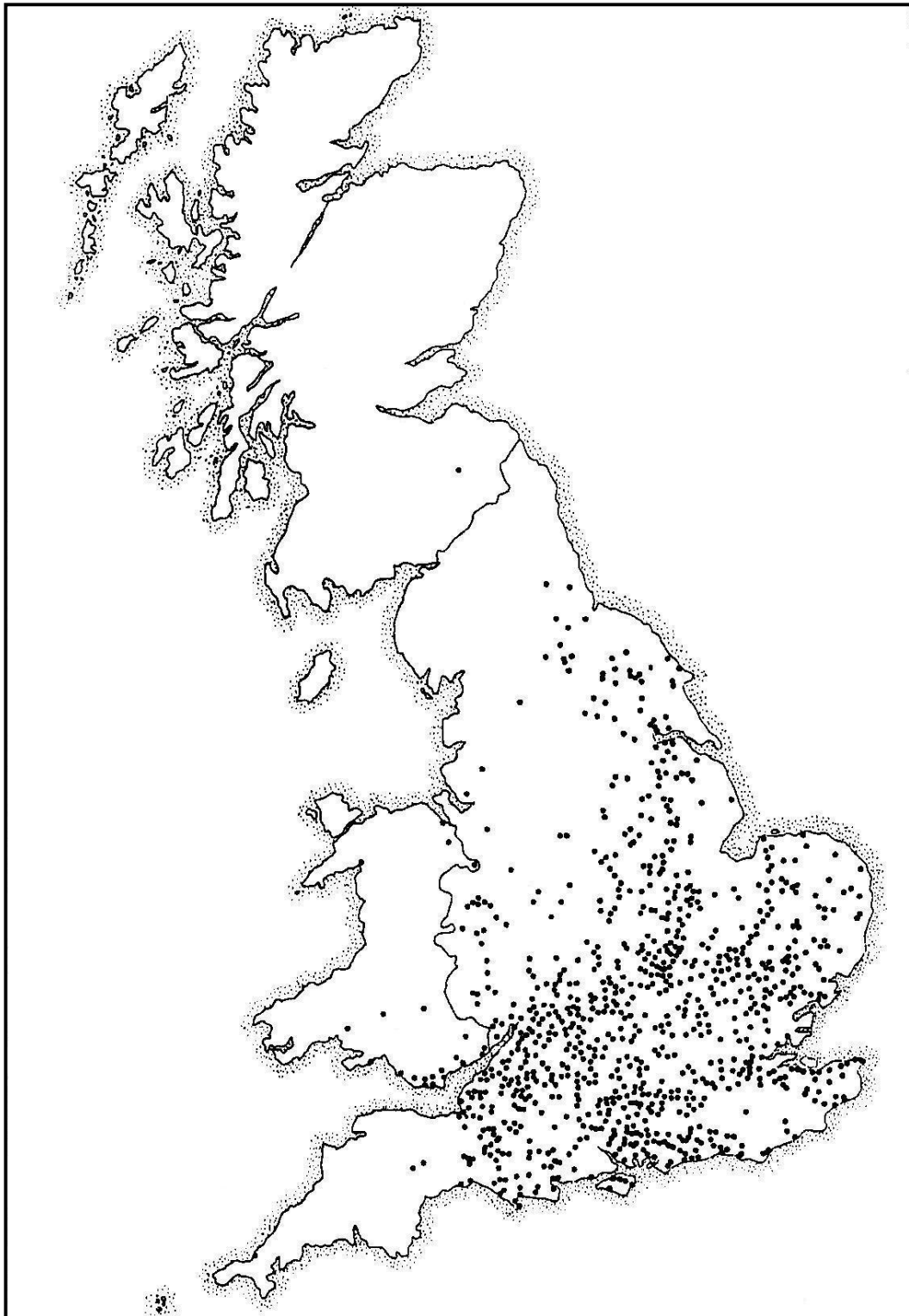
While we can accept that the number of migrants may well have been as substantial as Härke and Henson suggest, at the same time no contemporary historian or archaeologist has to my knowledge suggested that the incoming migrants outnumbered native Britons (Härke 2002: 150):

Archaeological and skeletal data suggest an immigrant–native proportion of 1:3 to 1:5 in the Anglo-Saxon heartlands of southern and eastern England (Härke 1999), but a much smaller proportion of Anglo-Saxons (1:10 or less) is likely in the later expansion areas of south-west, northern, and north-west England. Assuming a British population which had declined to about 1 to 2 million by the second half of the fifth century, the proportions translate into an immigration of up to 250,000, although a figure between 100,000 to 200,000 is more likely.

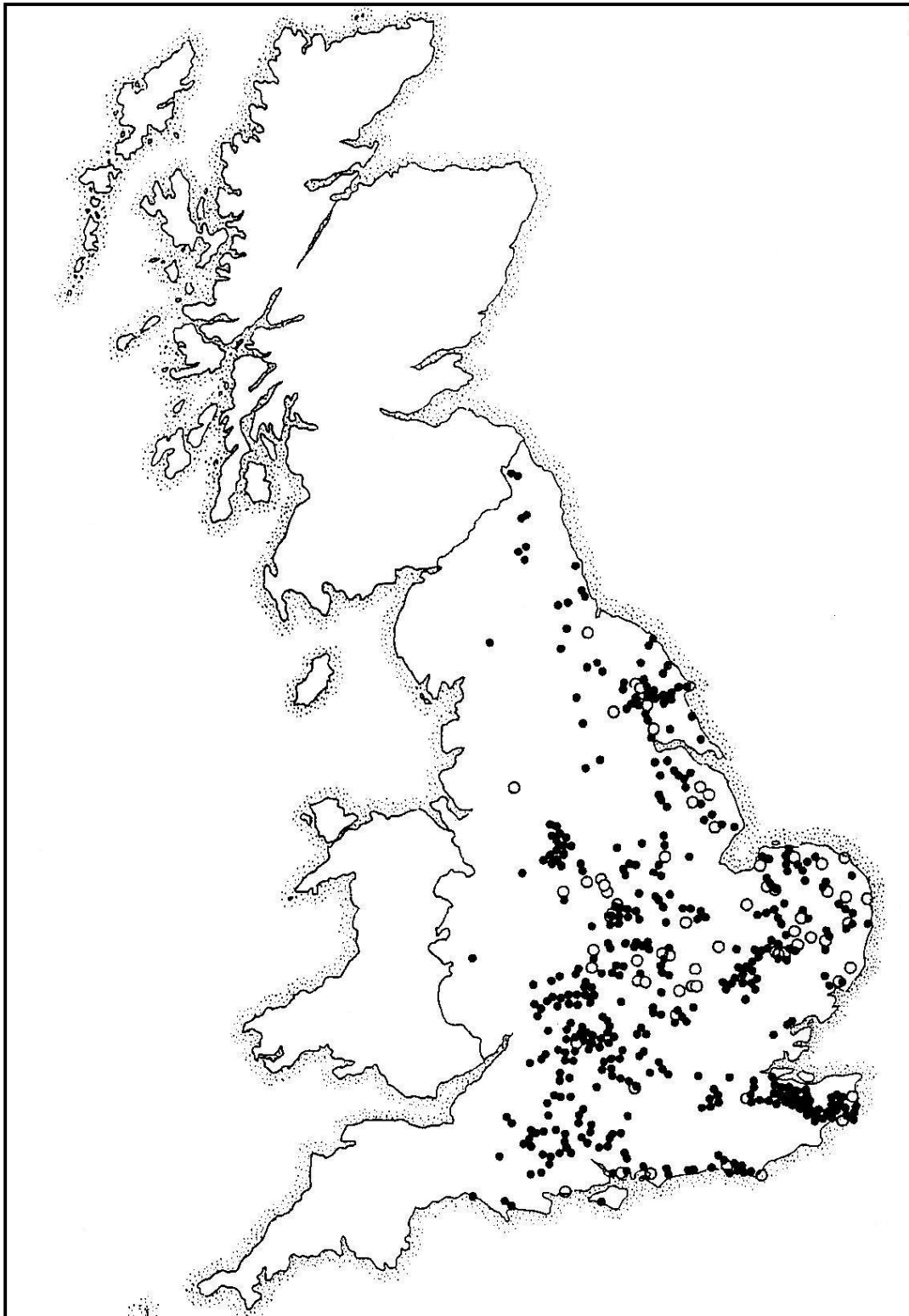
Nonetheless, it is possible to argue, in line with the traditional model, that a large proportion of the native population perished at the hands of the Saxons, either in battle or through slavery. Significantly for Woolf (2007), a form of social apartheid, for which there is clear evidence in the lawcode of Ine (i.e. Britons are not entitled to the same compensatory rights as the English), would have decreased the economic means of Britons, resulting in impoverishment. Furthermore, other factors such as climatic change or the Justinian plague of the mid-sixth century may also have played a role in decreasing population levels. But even accepting that these aspects, which must have had an influence on the British population (and in cases of natural catastrophes on Anglo-Saxon populations too), it is impossible today to sustain the argument that the native population was completely wiped out or pushed into Wales, Cornwall and Scotland – a notion

which, as I have shown, is not even supplied by the historical sources (see 2.1), let alone by the archaeological evidence. As the archaeologist Francis Pryor (2005: 143–44) has frankly observed: ‘If such a thing did happen, one would expect it to have left clear archaeological traces: massive war graves, settlement dislocation and “knock-on” impact in northern and western Britain. But so far they have not been found’.

What is important to bear in mind, however, is the point made by Härke (2002: 150, cited above) that settlement and the proportion of Anglo-Saxon to Romano-British natives may have differed significantly according to region, and, as such, this insight needs to be taken into consideration as much in English studies as it has been in neighbouring disciplines. There has in fact been some consistency of agreement on this issue, at least since the publication of Fox’s seminal work *The Personality of Britain* (1959, 1st edition 1932). A clear disparity is registered in Britain’s archaeological landscape from Roman times (and beyond) into the Anglo-Saxon period (and beyond); in brief, Britain is split diagonally down the middle in terms of archaeology, and the dividing line corresponds with the lowland vs. highland division separating Britain’s south and east from the north and west respectively. Most striking of all is the parallel between earlier Roman settlements of the period (Map 2) and later Anglo-Saxon burial sites of fifth- to seventh-centuries (Map 3).



Map 2. Distribution of Roman villas and other 'substantial buildings' (Pryor 2005: 222)



Map 3. Distribution of 'Anglo-Saxon' cemeteries (filled circles = cremations; open circles = inhumations) (Pryor 2005: 223)

Sargent (2002: 226) observed that Roman settlements of Britain (civil settlements, villas, temples and shrines) are hardly found at all outside of the lowland zone, leading him to wonder about the highlanders: ‘Did these people “become Roman” in their own way, or did they become Roman at all?’ Judging by the distribution of Anglo-Saxon cemeteries, one might equally ask whether the people in the North and West became Anglo-Saxon in their own way or not at all. The fact is that they did become English linguistically. There is, however, some evidence which could support the idea that these highlanders may have become Anglo-Saxon in their own, different way, especially in the north (see Härke 2003: 19, Henson 2006: 76–7). First, the medieval estate structure of northern England had strong similarities to that of North Wales (Jones 1979). Second, Faull (1977: 5–11) has shown that there is more evidence for continuity of burial rites in the North throughout the Roman and beyond post-Roman era. She draws particular attention to the continuity of the contracted or crouched burial with the head pointing somewhere between north and north-east, a practice typical of Iron Age burials throughout the whole of Britain.<sup>12</sup> Third, Alcock (1981) noticed that there are few Anglo-Saxon burials in Bernicia, but that the wealth of the Anglo-Saxon burials was far greater. This observation could support the idea that an immigrant elite was in control of a larger native population. Finally, Henson (2006: 76) notes:

It was in the 7th century that Anglian conquest of the native Britons reached its peak in the north with Northumbrian annexation of Elmet and, in stages, Rheged. The conquest of both of these must have involved dispossession of the native aristocracy, but there is no reason to suppose that the social and economic structures that had supported them would also have been destroyed.

More clues are also offered by the possibility of a more peaceful annexation of western Northumbria by the Anglo-Saxons under Oswald and Oswiu (see 2.1), albeit after the one-year bloody rampage of Cadwallon, King of the Britons, ca. 634, who according to Bede had tried his level best to exterminate all the Angles from that area.<sup>13</sup> As we shall see below, some geneticists (Capelli *et al.* 2003, Oppenheimer 2006a-b) and linguists (notably Schrijver 2002, 2007) have argued that there was a linguistic and genetic North–South divide too, although the genetic evidence could go back to times well beyond the fifth century.

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<sup>12</sup> Regarding Anglo-Saxon inhumations, cf. Faull (1977: 5): ‘Examination of 5293 Anglo-Saxon inhumations [...], excluding those of Northumbria, shows that the normal pagan rite was extended or loosely-flexed burial, either supine or on one side, with the great majority orientated with heads pointing somewhere in the western sector of the compass’.

<sup>13</sup> ‘He [Cadwallon, SL] occupied the Northumbrian kingdoms for a whole year, not ruling them like a victorious king but ravaging them like a savage tyrant, tearing them to pieces with fearful bloodshed’ (Bede 3.1).

In summary, there are few archaeologists today who believe that the native Romano-British population of Britain was wiped out or driven out of Britain, cf. Henson (2006: 79): ‘Incredibly, some scholars still talk of the possibility of genocide or population displacement’. Yet the reverse could be said about the current academic climate in English language studies. It seems to me that a greater exchange of ideas across disciplinary boundaries is needed for a consensus to be reached.<sup>14</sup>

### 2.3 Genetics<sup>15</sup>

With the advent of genetic research, investigators from all disciplines hoped to gain clearer indications about the scale and origins of the Anglo-Saxon migrations than were presented in the historical sources or derived from archaeological or linguistic finds. Surprisingly for the non-scientist, however, geneticists have reached as drastically differing conclusions as investigators from other disciplines. The large-scale studies for the British Isles that have been carried out so far have each yielded different outcomes. It must be stressed, however, that research has so far concentrated mostly on the Y-chromosome, which is held only by males (in contrast to mitochondrial DNA [= MtDNA], which is held only by the females). While the Y-chromosome offers the highest definition of genetic information available from the British Isles (Oppenheimer 2006a: 356), it nonetheless provides only half of the picture necessary for an exposition of population continuity or replacement.

The first study to receive considerable media and scholarly attention was published in 2002 by Michael Weale and a group of colleagues mostly associated with University College London. Their study argued that there must have been mass migration and almost 100% population replacement by Anglo-Saxons, thus apparently confirming the apocalyptic events related to us in Gildas’ sixth century tract. The result was based on a comparison of seven sample populations of seven small towns along a line, or transect, from Llangefni in Anglesey across England to North Walsham in Norfolk; in addition, further samples were taken from Friesland and Norway as controls.<sup>16</sup> The results showed that the genetic samples from five towns of central England were almost identical to the Frisian samples, yet the two sample populations from North Wales were very different. The conclusion drawn by Weale *et al.* was that ‘the Anglo-Saxon cultural transition in central England coincided with a mass immigration from the continent.’ However, Mark Thomas, who co-authored the Weale *et al.* article of 2002, has since co-authored two further articles on the same subject matter. In short, he has felt it necessary to revise the

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<sup>14</sup> One recent paper, namely Thomas *et al.* (2008), demonstrates that interdisciplinary research is indeed possible and worthwhile (see 2.3).

<sup>15</sup> The following discussion of genetic studies is based mostly on Oppenheimer (2006a).

<sup>16</sup> The sample sites in Wales and England were: Llangefni (Anglesey), Abergele (Denbighshire), Ashbourne (Derbyshire), Southwell (Nottinghamshire), Bourne (Lincolnshire), Fakenham (Norfolk), North Walsham (Norfolk).

conclusions drawn from Weale *et al.* (2002) in light of an apparently more plausible alternative interpretation (cf. Thomas *et al.* 2006, 2008). His most recent article was written with the geneticist Michael Stumpf, as well as archaeologist Heinrich Härke and linguist Gary German. It argues that the initial migration cannot possibly have been as enormous as was originally surmised in Weale *et al.* (2002); cf. Thomas *et al.* (2008: 60):

Explaining such a high proportion of Continental genetic input with migration alone would require migration on a massive scale (approx. 500,000+), well above documented population movements of the Early Middle Ages (see for example Heather (1991)). An alternative explanation would be provided by a combination of a smaller-scale immigration but with a degree of post-migration reproductive isolation and social and economic conditions that give the immigrants a higher reproductive success.

Therefore, according to Thomas *et al.*, a sharp reduction in native male gene types in Britain might not be the result of genocide but more the consequence of an apartheid-like situation (an idea attributed to Woolf 2005, 2007). Clearly, native males were at an economic and legal disadvantage compared to their Anglo-Saxon male counterparts, which would have limited reproduction by British males over a period of several hundred years (however, the situation with British women was probably quite different, see section 2.4). Importantly for this study, the authors conclude that ‘Old English spread as a result of a language shift, not as a consequence of language or population displacement’ (Thomas *et al.* 2008: 65).

An important study from 2003, by the Italian geneticist Christian Capelli together with a team of other scientists (including Weale), differed from the Weale *et al.* (2002) study in that it extended the former dataset to include samples taken throughout the British Isles. In addition, samples from the supposed Anglo-Saxon homelands of Schleswig-Holstein as well as Scandinavia were taken for comparative purposes. Capelli *et al.* argue that there was substantial population continuity, namely 37% for England as a whole. In particular, there was a ‘limited continental input in southern England, which appears to be predominantly indigenous and, by some analyses, no more influenced by the continental invaders than is mainland Scotland’. Furthermore, the results suggested that the Danelaw division was in fact in some way reflected in the genetic record, such that Danes had a greater demographic impact than the ‘Anglo-Saxons’. However, they point out that another interpretation could be that the ‘invaders in the two areas were genetically different [i.e. to begin with, SL] and that we cannot see this difference reflected in the current inhabitants of the Continental areas corresponding to Anglo-Saxon and Danish homelands.’ Further, they note that their results indicate that the sharp transition between England and Wales is somewhat more gradual than is visible from the small sample supplied in Weale *et al.* (2002).

Thirdly, Oppenheimer (2006a: 410), using a larger dataset and a new, apparently finer-grained analysis,<sup>17</sup> has argued that the population of Britain has largely remained intact since Neolithic times and shows greatest similarity with the Basque region. Oppenheimer dismisses the idea of an Anglo-Saxon genocide: ‘there was no genocide in the Dark Ages in England’. While there is evidence for an invasion from the region of Schleswig-Holstein, in his estimation ‘this amounts to 4% of male gene types in the British Isles’ rising to over 10% in Norfolk, where he thinks the Angles settled first (this is the view of some archaeologists too, e.g. Carver 1989: 152). Furthermore, Oppenheimer has launched a controversial idea that the Anglo-Saxon invasions were those of Angles and Jutes and that there was a resident Saxon population in lowland Britain long before AD 450. Support for the idea is claimed by Oppenheimer (2006: 371) from the fact that similar results were also reached in a completely independent study based on a different mathematical approach and dating methods (this study has now been published: see Amos *et al.* 2008).<sup>18</sup>

In summary, the picture from genetics is less clear than one might have anticipated. Furthermore, research has focused mainly on the male Y-chromosome, and thus only half of the picture has been told so far. Some published research on MtDNA indicates that there was female survival (cf. Forster *et al.* 2004: esp. 107–8 and Oppenheimer 2006: 382); but in general MtDNA has not been researched in the same depth as Y-Chromosome DNA to date. A project currently underway at Oxford University, entitled the People of the British Isles, promises to bring new results to the table, however. As part of the project, over 4000 blood samples from rural populations throughout the United Kingdom have now been collected. These samples, moreover, were taken only from men and women who could prove that their parents and grandparents lived in the same locality. Since this project investigates both Y-Chromosome and MtDNA and pays close attention to the demographic and family history of its donors, its results are eagerly awaited by historians, archaeologists and linguists alike.

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<sup>17</sup> Two alternative methods have been employed by geneticists so far, as Oppenheimer (2006b) explains: ‘In the British Y-chromosome studies, the traditional approach of *principal components analysis* was used to compare similarities between whole sample populations. This method reduced complexity of genetic analysis by averaging the variation in frequencies of numerous genetic markers into a smaller number of parcels – the principal components – of decreasing statistical importance. The newer approach that I use, the *phylogeographic method*, follows individual genes rather than whole populations. The geographical distribution of individual gene lines is analysed with respect to their position on a gene tree, to reconstruct their origins, dates and routes of movement’.

<sup>18</sup> Linguistic relations between southern England (especially Kent) and the continental mainland (especially, Flanders) have been noted by many authors previously, but the topic has not received a great deal of attention. Useful articles on this issue are Samuels (1971), Derolez (1977) and Voss (1995).



## 2.4 Linguistics

The notion that incoming Anglo-Saxons either exterminated the earlier Romano-British population or drove them to the peripheries of Britain may still be regarded as the consensus view among historians of English. Indeed, the idea that Britons were driven into Wales seems self-evident, as that is where Welsh is spoken today. By this analogy, the Welsh are the descendants of the ancient Britons, who still speak a Celtic language, while the English are the English-speaking descendants of the Anglo-Saxons, albeit somewhat intermingled with later migrants, particularly from Scandinavia, Normandy and the former British colonies, and they speak essentially a Germanic language. Though expressed rather too simply here, this view is basically the same as that presented in a great many handbooks on the history of the English language.

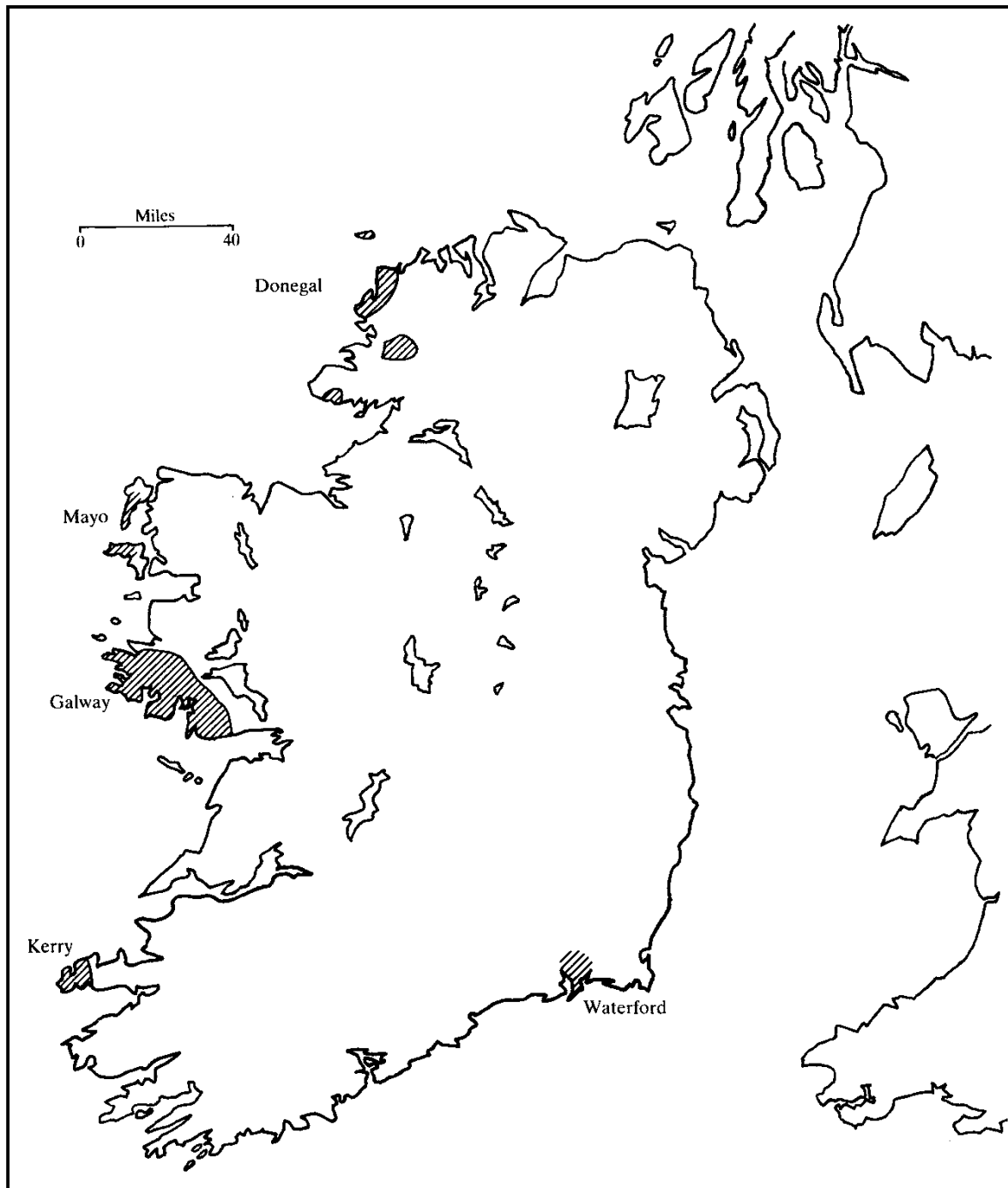
However, by the same analogy, one might conclude for example that the tiny Irish native speaker population who live in Gaeltacht areas along the west coast of Ireland are the descendants of ancient Celts, while the native speakers of English, who make up the majority of Ireland's population, are the descendants of the English, and therefore ultimately Anglo-Saxons (see Map 4).<sup>19</sup> But although Cromwell did lead an English Parliamentary conquest of Ireland in the seventeenth century, resulting in great loss of life, and despite considerable settlement of populations from Great Britain to Ireland over the centuries, no one considers the majority population of Ireland to be of English descent because they speak English. Over the course of the last 800 or so years, but most especially during the last three hundred years, speakers of Irish have simply begun to speak English at the expense of Irish, without any complete population replacement. The situation in Ireland has therefore been one of language death. The traces of Irish in the English variety of Ireland – Irish English – are still noticeable to keen observers but in fact have become weaker and weaker over time (see Bliss 1984, Filppula 1999).<sup>20</sup>

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<sup>19</sup> The remaining native speaker population lives mainly in the western coastal areas; these speakers represent between 1 and 2 per cent of the total population of the country (Ó Dochartaigh 1992: 22).

<sup>20</sup> It is noteworthy, too, that 'the Irishman learning English had no opportunity of learning it from speakers of standard English', rather they 'had to rely on teachers of their own race, whose own English was different from standard English, so that there was nothing to check the progressive influence of the Irish language' (Bliss 1977: 16–17). Cf. also Tristram (2007: 200–1 note 51): 'Here [in Ireland, SL] adult learners passed on their fossilised L<sub>2</sub> phonology and morphosyntax to their children to the effect that present-day Irish English is easily recognisable by its pronunciation, prosody, grammar and phraseology, while lexical transfers from Irish are rather limited. Knowledge of lexical Irishisms is rapidly decreasing among the younger generation, as a Potsdam study in the 1990s, on the recognition of Irishisms by Irish university students compared to over-sixty-year-old interviewees, has shown'.

The main reason why a similar scenario of Romano-British to English language shift is not usually posited for early Britain is that most historians of English believe that Brittonic had virtually no influence on Medieval English to support such a claim. However, this consensus view has sometimes been challenged, especially in recent years. In the remaining sections of this chapter, I shall review some of the linguistic arguments for and against the British–Anglo-Saxon language contact, focussing on different domains of language in turn: loanwords, morphosyntax and phonology.



Map 4. The Gaeltacht in the 1980s (Ó Dochartaigh 1992: 23)

### 2.4.1 Loanwords

The dearth of Brittonic loanwords in English has been seen as the most obvious indicator for a lack of British–English interaction. In the eyes of many, this fact alone provides the best confirmation for an almost complete rooting out of Celts by incoming Anglo-Saxon invaders. Even Dutch has had a far greater impact on the English lexicon than Brittonic (see Bense 1926–1939). Yet in recent years historical linguists have been forced to reconsider viewing the numbers of loans as a kind of litmus test for establishing the intensity of one language’s influence over another. One of the most important theoretical insights to have emerged in the field of contact linguistics since the late 1980s is that different types of language contact situation typically lead to different types of linguistic influence. Research into various historical as well as contemporary language contact situations has demonstrated the importance of distinguishing between situations of language maintenance and language shift.<sup>21</sup>

As a rule, it is in a situation of language maintenance (i.e. when the native language is preserved within the community) that borrowing ensues. Borrowing typically involves speakers incorporating linguistic features from another language into their native language (Thomason & Kaufman 1988: 21). In principle, all kinds of linguistic material can be borrowed but the first elements to enter a borrowing language are typically words (Thomason & Kaufman 1988: 37, van Coetsem 2000: 59, Winford 2003: 12). Crucially, however, lexical borrowing is very much dependent on social factors. There is ample evidence that languages typically borrow lexical items from socially dominant or superstrate languages (i.e. not languages of a subjugated population, as must be assumed for Britons living in Anglo-Saxon Britain). The history of English provides good evidence for this general trend. During the Middle English period borrowing of French words in English was enormous. An often cited estimate is that over 10,000 French words entered English during this period, of which about 75% remain in use today (Baugh & Cable 2002: 178). Contrast this with the lexical influence of Welsh on English over a much longer period. Very few Welsh loanwords have arrived in standard English; indeed, not many more words are found even in present-day varieties of Welsh English, even those that have emerged through language shift in recent centuries such as in the Welsh valleys (see Filppula *et al.* 2008: 209–12).<sup>22</sup> While there are over half a million native speakers of Welsh today, who are also bilingual in English, Welsh seems to be making no impact on the lexicon of mainstream British English. One of the last Welsh words to make it into English – as well as into other languages via English – is the dog breed *corgi*; in recent times the word *eisteddfod* seems to have

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<sup>21</sup> In fact these insights also feature in earlier accounts of the nineteenth century (see Tristram 2007: 195). Even in Keller’s (1925) pioneering article on Celtic influence on English, the difference between lexical borrowing and structural influence as a result of adult language acquisition is emphasised, if not as tightly formulated, as in later accounts by Thomason & Kaufman (1988) and van Coetsem (1988, 2000).

<sup>22</sup> By contrast, it has long been recognised that there has been considerable borrowing of English words into Welsh over the last millennium and more (see already Parry-Williams 1923).

gained some popularity as a designation for all manner of cultural events – not just the Welsh national event.<sup>23</sup> Clearly, there is plenty of English–Welsh language contact and bilingualism going on in many areas of Wales, yet lexical borrowing is predominantly in one direction only. English words continuously enter Welsh, and not the other way around. Thus, the main reason why so few Welsh words have entered English over time, while so many French words have, is basically because Welsh has never enjoyed any prestige among speakers of English. Due to the fact that there is no evidence whatsoever to suggest that the Brittonic language and its speakers enjoyed any high status among the Anglo-Saxons (see further 2.4.2 below), it is likewise hard to imagine that there would have been Brittonic lexical borrowing on a very large scale then. By the same token, it is also most unlikely that bilingual Britons would have carried over significant numbers of Brittonic words when speaking English.

Nonetheless, it would be wrong to completely downplay the lack of Romano-British loanwords in English altogether. Coates (2007), who is prepared to accept more Brittonic influence on English than most scholars, sees the lack of loanwords as a problem that will not go away. Indeed, Coates may well be right that the low social status of Brittonic language cannot be the only reason for the lack of Brittonic loanwords in English (see in this regard the discussion of possible British Latin influence in many areas below). Yet one wonders how and where the threshold of numbers should be set. There do seem to be other recorded situations of language shift which have also resulted in very small numbers of loanwords being transferred into the newly acquired language. For instance, the Cornish language died a slow death after the later Middle Ages. The supposed last native speaker of Cornish, Dolly Pentreath, died in 1777, yet during the *Survey of English Dialects*, which was conducted mainly in the 1950s, only 28 Cornish words were recorded in the dialects of Cornwall (including incidental material, see Wakelin 1975: chapter 7), and one wonders how many of these are known among the younger generation today. Similarly, it is generally accepted by scholars of Dutch that a Germanic variety closely akin to Frisian, usually referred to as either Frisian or Ingvaemonic, at any rate very different and easily identifiable from Dutch, was once spoken in North and South Holland as well as Zeeland, but ceded to (Franconian) Dutch from about AD 800 (Heeroma 1951, van Bree 1997, Bremmer 2008). Bremmer (2006) draws attention to the fact that van der Sijs (2001) finds only 26 Frisian loanwords in Dutch after searching through the multi-volume *Woordenboek der Nederlandse Taal* (*WNT*) and other dictionaries. In his paper, Bremmer is able to deduce more

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<sup>23</sup> The Welsh dog breed known as the *corgi* (< W *cor* ‘dwarf’ + *ci* ‘dog’) is first recorded in English in 1926 (*OED* sv. *corgi*). The ‘Teesside International Eisteddfod’ (formerly held yearly at Middlesbrough) may be noted as an instance of the word *eisteddfod* being used outside of Wales. Even if the number of native Welsh speakers were higher, it is unclear whether more words would be taken into English. For instance, there are an estimated 354,000 native West Frisian speakers in Friesland, and as many as 150,000 in Dutch provinces, out of a Dutch national population of approximately 16 million. Yet no significant loanword transfer is evident in Dutch either, despite close and generally amicable contact.

possible Frisian loanwords in Dutch, thus taking the tally of Frisian loans beyond 30.<sup>24</sup> Nonetheless, the number remains low. All the same, ethnic cleansing and mass folk movements have not been deduced to explain the dearth of Frisian loans. Furthermore, Frisian has certainly had an impact on the grammar and phonology of some traditional dialects, especially of North Holland (see Hoekstra 1993, 1994a, 1994b).

In fact, research has shown that the number of British loans in English is larger than the dozen or so words usually repeated in the handbooks; however, quite a number of words are only attested in earlier stages of English or dialectally, especially in the North and West. Generally accepted loans in Old English are *binn* ‘manger’, *brocc* ‘badger’, *cumb* ‘valley’, *luh* ‘sea, pool’, *tor(r)* ‘outcrop, peak’, *funta* ‘spring’ and *cuople* ‘boat’<sup>25</sup> (other words, e.g. *becca* ‘fork’, *dunn* ‘dun (colour-term)’, *hogg* ‘hog’, *mattuc* ‘mattock’, are considered doubtful by Coates 2007: 178–9). Other loans, such as *gull* ‘(sea)gull etc.’ and *bragget* ‘a drink made of honey and ale’ (*OED* s.vv. *gull*, *bragget*), are not attested in Old English documents, but due to attestations in several Middle English dialects must be posited for Old English.<sup>26</sup> To these can probably be added the numerals of the scoring systems used mainly for counting sheep, which were attested mainly in northern England and southern Scotland in the eighteenth and nineteenth centuries. Though often corrupted in form, their closeness to the numbers in Modern Welsh is undisputed, and it is hard to explain away the numerals as recent borrowings, e.g. the numbers 1–10 in a Cumbrian scoring system are: *yan*, *tan*, *tethera*, *pethera*, *pimp*, *sethera*, *lethera*, *hovera*, *dovera*, *dik*, compared with Modern Welsh *un*, *dwy*, *tair*, *pedair*, *pump*, *chwech*, *saith*, *wyth*, *naw*, *deg*. In this system, *tethera* (3), *pethera* (4), *pimp* (5) and *dik* (10) are clearly Brittonic, *sethera* (6) seems to be related to Welsh *saith* (7); *yan* (1) is English, and *tan* (2) is a rhyme on *yan*, but the initial ‘t’ probably points to English; *lethera* (7) and *hovera* (8) are obscure (see further Barry 1969).<sup>27</sup>

In recent times, Andrew Breeze has identified a number of additional British loans in English. In Old English he (2002a: 175–6) identifies: *mil(pæp)* ‘road, highway’, *prass* ‘pomp,

<sup>24</sup> As a comparison, we may note that far more Dutch words were taken into English during the Dutch Golden Age of the seventeenth century.

<sup>25</sup> This word seems to have been used only in northern and Scottish dialects. It is first attested in the Lindisfarne Gospels (ca. 950) Matt. viii. 23 *in lytlum scipe vel in cuople*. In North Yorkshire coastal dialects the ‘coble’ is the name given to the small flat-bottomed fishing boat that is typically found in the area.

<sup>26</sup> ‘Bragget’ is notable for featuring in Chaucer’s *Miller’s Tale*. It seems once to have been a popular drink throughout many parts of Britain. In Lancashire mid-Lent Sunday (now Mothering Sunday) was traditionally called Bragget-Sunday from the tradition of drinking the beverage on that day (see Hardwick 1872: 78).

<sup>27</sup> Greene (1975–76, 1992: 551–2) argues that the numerals derive from contacts between Welsh and English speakers within the last few hundred years; however, he is unable to explain in any convincing way the methods of transmission and reception of the scoring system over such a large area of northern England and in such traditional dialects.

array', *wassenas* 'retainers', *trem* 'pace', *trum* 'strong' and *truma* 'host', *wered* 'sweet drink', *lorh* 'pole, distaff', *clædur* 'clapper', *hreol* 'rell', *deor* 'brave', *stor* 'incense', *stær* 'history', *lærig* 'shield rim', *billere* 'watercress'. For Middle English Breeze (2002a: 177) mostly points to words found in West Midland dialects: *baban* 'baby', *genow* 'mouths, jaws', *mil* 'animal', *keis* 'sergeant', *tikes* 'bondmen', *enke* 'villein', *kennet* 'grey cloth'. Also, Breeze (2002a: 177) identifies a number of other words in Middle English which are not as clear etymologically, but may be from Brittonic: *hurl* 'rush, thrust', *fisk* 'hasten', *clog* 'block, wooden shoe', *cokkunge* 'striving', *tirven* 'flay', *warroke* 'hunchback', *luche* 'throw', *brag* 'boast', *gird* 'strike', *lethe* 'soften', *cammede* 'bow-legged', *glaverez* 'deceives' and *tagild* 'entangled'. He observes that these words could have been borrowed from Welsh or Cumbric, i.e. the variety of British spoken in northern Britain and surviving in Cumbria until about 1100. Finally, Breeze (2002a: 177) etymologises a sub-group of words in Scots: *jockteleg* 'knife', *cow* 'hobgoblin', *maggie* 'to spoil', *gully* 'knife'. All told, the number of loanwords from Brittonic into English may not be as insignificant as many scholars think. Certainly, further work is necessary to evaluate all of Breeze's findings, but in general the onus is on critics to find alternative or better etymologies than those already suggested by Breeze.<sup>28</sup>

One important outcome of Breeze's research has been that a large number of the Brittonic words have been identified in dialects outside of the south-east of England, i.e. not in dialects from which modern Standard English principally derives. And since most handbooks on the history of English tend to describe how Medieval English developed into southern Standard English, this is perhaps one reason why little attention is given to Brittonic influence on (standard) English. Some support for the idea that there was more Brittonic influence on western and northern varieties of English may also be inferred from the evidence of Brittonic toponyms in England. Jackson (1953: 220) observed how the number of Romano-British river-names increases outside of the south-eastern quarter of England, and in particular as one travels west. The same distribution in concentration of names can be observed in place-names too, as is evident from a recent monograph on Celtic (as well as pre-Celtic) place-names in England by

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<sup>28</sup> In the second half of the nineteenth century John Davies contributed numerous articles on Celtic loanwords in early English writings and English dialects in the *Proceedings* (later, from 1854 on, *Transactions*) of the *Philological Society* and *Archaeologia Cambrensis*, cf. Davies (1853–85). A thorough sifting of Davies' papers is certainly needed to separate the wheat from the chaff, but potentially dozens of possible Celtic etymologies – Davies considers both Brittonic and Goidelic loans – may still stand up to scrutiny. In addition, Andrew Breeze (p.c.) also informs me that another untapped source of possible Brittonic loanwords is the *Scottish National Dictionary* (*SND*), since, according to a senior editor, little heed was paid to identifying possible Celtic etymologies. Thus, a careful search of the entries labelled 'etymology obscure' (and similar) in the *SND* conjunction with the *Dictionary of the Older Scottish Tongue* (*DOST*) may yield many more Celtic loanwords.

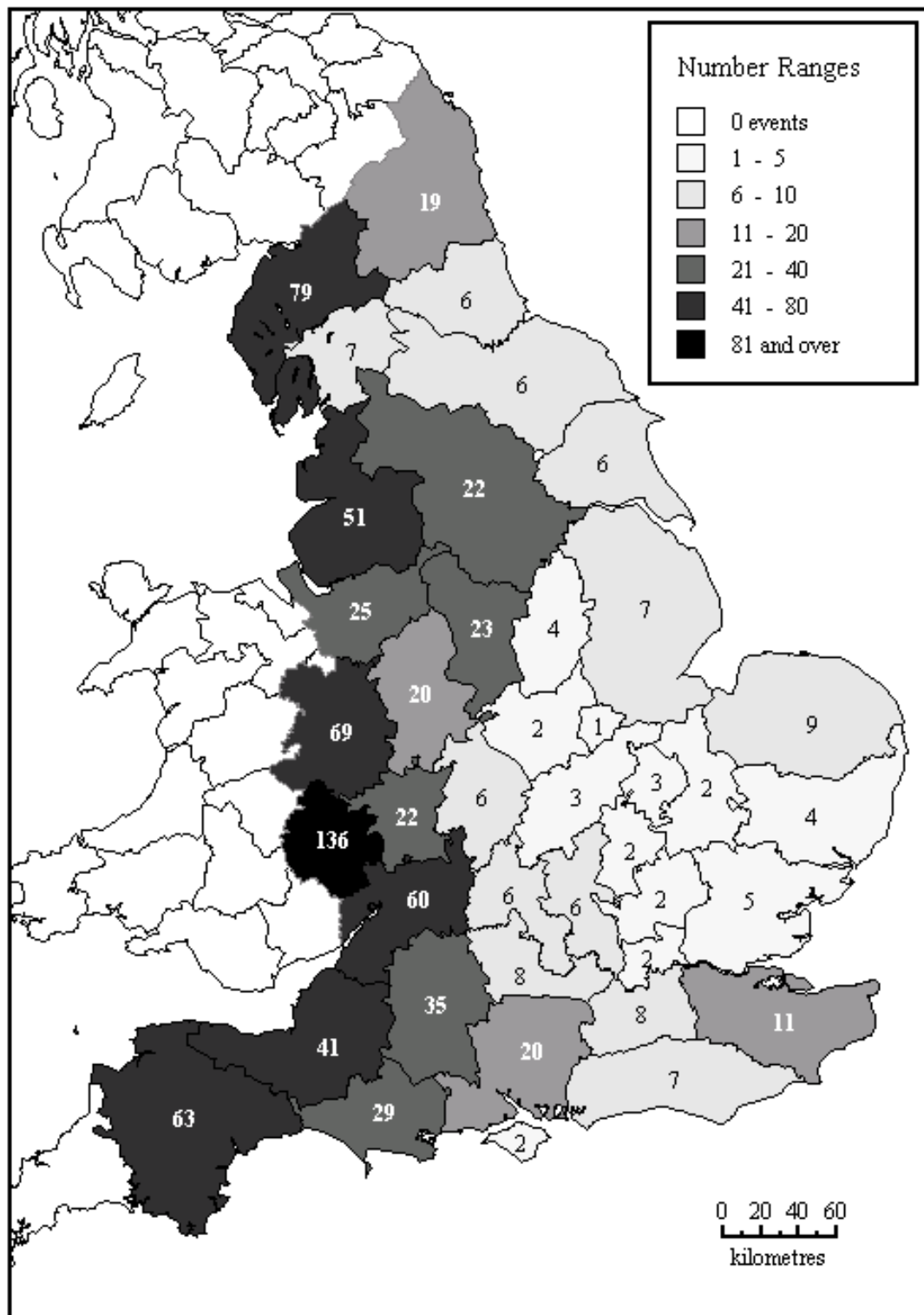
Coates and Breeze. Using the data supplied by Coates & Breeze (2000), it has been possible to make a synoptic county-fill map (see Map 5).<sup>29</sup>

A further explanation for the dearth of British loans in eastern varieties of English could be that a significant part of the population in especially lowland Britain could have been either bilingual or monolingual speakers of Vulgar Latin in the fifth century AD. As Britain had been subject to almost 400 years of Roman rule, the possibility of there having been a large-scale language shift is quite likely, and would reflect the same linguistic effects that Roman rule had in other parts of Europe. Schrijver (2002, 2007) is the most vehement advocate of this thesis in recent times, providing strong evidence from the structure and development of the Brittonic languages to demonstrate a considerable influence of Latin on Late British, which speaks for a considerable Latin speaking population during the fourth and early fifth centuries, rather than just a small upper-class elite. Furthermore, this hypothesis finds some indirect support from archaeological evidence for a highland–lowland divide in material culture during the period in question (see Map 2). And it was of course to eastern Britain – the lowland zone – where incoming Anglo-Saxons first came, according to Gildas, to defend against the Picts and Scots, but later to wrest control completely. Thus, if there is any truth to Latin-in-the-lowlands hypothesis, an influx of mainly Vulgar Latin vocabulary would be expected in eastern Britain. Such vocabulary is found, though it has long been debated whether the loanwords in question were transmitted by Romano-Britons or were ‘imported’ from the Continent (Meid 1990, Wollmann 1990), especially since the variety of Vulgar Latin appears to have been very similar to that spoken, for instance, in north-western Gaul (see Gratwick 1982, Smith 1983, Schrijver 2002, 2007, *pace* Jackson 1953: 246f.).

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<sup>29</sup> See also recent publications on Brittonic place-names in England by Coates (2002, 2007b) and Hough (2004).





#### 2.4.2 *Morphosyntax*

In the present study of British–Anglo-Saxon contacts the focus must principally be aimed not at a situation of language maintenance and borrowing but at investigating the possible linguistic effects in a situation of language shift, that is, in the present context, untutored group second language acquisition (Winford 2003: 209–67). In brief, language shift involves the acquisition of a particular foreign language (the Target Language, TL) by native speakers of another language (typically their native or first language and referred to as L1). These speakers may subsequently give up their native language or may not pass it on to the next generation, resulting in language death. However, unless learners acquire a foreign language at a young age and through sufficient contact with native speakers, the acquired version of the TL (sometimes referred to as an Interlanguage, IL) will typically be different from the TL of native speakers. Evidence from a wide range of studies into historic cases of language shift, including much data from studies of second language acquisition in general, has demonstrated that mainly structural properties of the native language, i.e. especially phonology and syntax, are carried over into the TL.<sup>30</sup> This type of language contact situation is variously described as ‘influence through shift’, ‘substratum influence’ and ‘imposition’,<sup>31</sup> and must be differentiated from the contact situation known as ‘borrowing’.

It seems worthwhile, within the context of this investigation, to emphasise two points made above, namely that ‘unless learners acquire a foreign language at a young age’ and ‘through sufficient contact with native speakers’ the acquired language will be different from that of native speakers. The first, perhaps obvious, point concerns age and embodies the fact that children have the ability to learn any language to which adequately exposed ‘perfectly’ while adolescents and adults do not.<sup>32</sup> In the context of a sudden invasion of a governing elite who spoke an unfamiliar language, we may not simply assume a conventional parent-to-child transmission of a variety of Anglo-Saxon speech to British children. More likely, adolescent and adult Britons first set about learning the language of their Anglo-Saxon masters as a second language as best they could. Indeed, even young British children may not have learned Anglo-Saxon speech ‘perfectly’, unless they had adequate exposure to native speakers. But if

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<sup>30</sup> See Van Coetsem (2000: 73–83), Dixon (1997: 9), Mailhammer (2006: 20), Thomason & Kaufman (1988: 67–8), Thomason (2001: 75–6, 2004: 691–3), Sankoff (2004: 641), Winford (2003: 23–4).

<sup>31</sup> The terms ‘imposition’ and ‘interference through shift’ are to be favoured as general designators of the change, because the linguistic mechanisms ought to be differentiated from the social stratification present. The term ‘substratum influence’ implies a social stratification which may not be valid in a given case (see van Coetsem 2000: 37, Mailhammer 2006: 20).

<sup>32</sup> At what age or ages this so-called critical period falls, probably varies from speaker to speaker. Pinker (1994: 298) observes that ‘acquisition of a normal language is guaranteed for children up to the age of six, is steadily compromised from then until shortly after puberty, and is rare thereafter’.

indigenous Britons outnumbered Anglo-Saxons settlers – i.e. the view of archaeologists (see 2.2) – children may have more likely learned a Brittonicised variety of English as spoken by their own parents and kinsmen rather than that of ethnic Anglo-Saxons. Furthermore, given the strict class-based society that obtained in Anglo-Saxon Britain (on which see below), it is far from clear to what degree young British children would have had considerable exposure to native Anglo-Saxons speech at all.

Based on current research there can be little doubt that in a situation of language shift phonological and morphosyntactic features are more likely to be found in the interlanguage than large numbers of lexical borrowings. However, current handbooks on the history of English dispute structural influence on English from Brittonic. For instance, Fennell (2001: 90) thinks that there was ‘superficial contact’ between Anglo-Saxons and Britons which resulted in ‘only minor lexical borrowings and no influence on language structure’. One would like to know on what basis Fennell’s conclusions were made. As far as I am aware, there has never been a comprehensive contrastive investigation into the phonological and grammatical structure of early Old English and Brittonic to determine which phonological and grammatical influences would be expected on early English in the first place. Without such a comprehensive analysis it cannot be concluded which changes might or might not have occurred. It is clear that English compared to all other Germanic languages has changed the most over time, especially in terms of its grammatical structure, but these changes have often been explained as natural ‘language internal’ developments or the result of Viking Norse or Norman French influences, without consideration of Brittonic influence at all.

Yet several scholars have noticed that some structural changes of English could be due to British influence. Such suggestions of structural influence on English have been around since the early twentieth century (cf. Keller 1925), though special mention must be given to the German philologist Walter Preusler, who wrote a string of articles dealing with grammatical developments attested in Old English and Middle English (an overview of Preusler’s research is found in his article of 1956). Basically, Preusler tried to demonstrate how English, typologically speaking, became more Insular Celtic-like in terms of its structure. Other investigators, too, have noted typological similarities between English and Brittonic, e.g. Dal (1952), Visser (1955), Wagner (1959), Tolkien (1963), Braaten (1967). In recent times a great deal more research has been done to adduce the effects of both older and modern Celtic languages on English (see e.g. Tristram 1997, 2000, 2003, 2006; Filppula *et al.* 2002, 2008, 2009). For instance, twelve recent topics of investigation are the following.<sup>33</sup>

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<sup>33</sup> In most cases, a kind of reciprocal influence of native English development in addition to Brittonic influence may have been underway (this may apply to the grammaticalisation of progressive aspect in English, for instance). Future analyses must try to establish, if possible, the dialectal origins of the developments, e.g. a specific development may stem from western or northern Britain, where more Brittonic influence may be expected (e.g. Klemola 2000, Laker 2008a). Also, the linguistic developments of English must be studied in relation to those of

- 1) Two substantive verb paradigms in Old English (Lutz 2009, Ahlqvist 2010).
- 2) Early grammaticalisation of progressive aspect (Mittendorf & Poppe 2000, White 2002, Filppula 2003).
- 3) Early reduction of bound morphology (Tristram 2002a, Trudgill 2009).
- 4) Early loss of grammatical gender plus associated rise of the invariable definite article (White 2002, Buccini 2004, Crisma 2009).
- 5) *It*-cleft constructions (Tristram 1999: 22; German 2007, Filppula 2009).
- 6) Contact clauses and preposition stranding (Poppe 2006, Roma 2007).
- 7) Loss of external possessor construction (Vennemann 2002b).
- 8) Split conjugation (the so-called Northern Subject Rule) (Klemola 2000, Buccini 2004, de Haas 2008).
- 9) Periphrastic-Do (van der Auwera & Genée 2002, White 2002, McWhorter 2009).
- 10) Negative Comparative Particle ‘bigger *nor* him’ (Laker 2008a).
- 11) Reflexive and emphatic forms with *self* (Vezzosi 2005a, 2005b).
- 12) Sentential answers to yes/no-questions, tagging (Vennemann 2002a, 2009a).

It would go beyond the purpose of this chapter to discuss each of these developments in detail, and so for discussions of most of the above features I refer to Filppula *et al.* (2008: 30–118). It is important to stress, however, that the main criticism levelled by Anglicists against such proposals of Brittonic morphosyntactic influence is not that the above-listed features do not ‘look’ Brittonic, but rather that they are attested rather later than expected – the features are more typical of Middle English than Old English.<sup>34</sup>

Out of the above list, only feature (1) is well represented in Old English. Some scholars, however, have pointed out that this structural parallel, which was first investigated by Keller (1925), must be viewed in light of the present tense verb paradigms of ‘to be’ in other older and modern West Germanic languages, which show suppletion/contamination (cf. 1,2,3 sg. Old Saxon *biūm* ‘I am’, *bist* ‘you are’, *is* ‘he/she/it is’ vs. Old Norse *em*, *ert*, *er* or Gothic *im*, *is*, *ist*; see Flasdieck 1937: 332–3, Schumacher 2007: 194). Thus, the mixed West Germanic paradigms could indicate that there were formerly two ‘to be’ paradigms in continental West Germanic too (see, however, Lutz 2009 for a different view). Presently, therefore, many points in the evolution of the two ‘to be’ paradigms of Old English remain unclear, though there is the possibility that

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Frisian, Dutch and Low German, and High German dialects (and in this order of priority; some investigators take German as a linguistic control instead of Frisian which, apart from being far closer to English in the genealogical sense, also largely escaped Franconian innovations from the South unlike Dutch; see note 2 above). Finally, a cogent explanation of how a specific development might have been transferred in a situation of language contact between Late British and (Pre-)Old English must be presented, not just a typological parallel.

<sup>34</sup> The fact that more Brittonic loanwords are registered in Middle English and Modern English dialects than in Old English (see 2.4.1) has not been viewed as an anomaly so far.

the two paradigms of Old English could have been supported by British influence (either from Brittonic or British Latin). At any rate, aside from the two substantive verb paradigms, all remaining features are typical of Middle English – even though some, namely features (2–7), are found sporadically or dialectally to varying degrees in selected Old English texts. Features (8–11) appear first in Middle English, and feature (12) is not significantly attested until Early Modern English. Thus, the rather late attestation of the proposed Brittonic features in English documents is typically viewed as counter-evidence to the notion of Brittonic influence through language shift between the fifth and seventh centuries. Supporters of the hypothesis of Celtic influence on English have taken a different view, however.

Researchers of Celtic influence on English, such as Dal (1952), Preusler (1956), Wagner (1959) and many others since, have argued that the delayed appearance of suspected Brittonicisms is expected. Basically, their argument is founded on the principle that the interference features which developed first in the interlanguage of the British speaking masses were only slowly adopted by native Anglo-Saxons or not at all in their standardised written medium. Consequently, only as a result of major social and linguistic upheaval, such as occurred as a result of the Norman Conquest, was the unstandardised Brittonicised language of the masses committed to paper. In a wider context, this idea would then also explain the unprecedented rapid structural redevelopment of English during the Middle English period, the disbandment of the former standardised West Saxon written dialect, and the prevalence of many regional dialects of Middle English until the formation of a new standard emerged on the basis of East Midlands dialects during the fifteenth century in England and the sixteenth century in Scotland.

As Tristram (2004, 2007) has pointed out, the situation as described above, namely the proposed existence of a stark contrast between Old English spoken and written language, would represent a classic case of *diaglossia*. This interpretation is not widely accepted among historians of English at the present time, though it is widely accepted that written Old English did not at all represent the spoken language of the masses, which indeed is completely inaccessible from Old English sources, as Hogg explains (2006: 395):

No present-day analysis of dialect variation could be conducted without reference to social variation. This will include the kinds of variation which are induced by, for example, class features or gender, or age. For Old English little of this makes much sense, even though we would like it to. The texts we do have are all the result of a tiny literate proportion of society – we can have no idea of how the average farm worker or travelling merchant spoke. Such persons remain, for ever, a hidden majority. The literate community, furthermore, were, for the most part, members of religious communities, and this necessarily further limits the type of language which was written down. Those who wrote down our texts, although not necessarily those who composed the thoughts that were written down, were from a highly restricted stratum of society. They were also likely to be from only a restricted age group, and virtually none of them was female. It is

quite difficult to comprehend how restricted the literate section of Old English society was.

Clearly, then, the problem that confronts investigators of Old English dialects is that the social variation which existed in Anglo-Saxon society is not reflected in sociolinguistic variation in any Old English texts.

In order to understand the significance of the lack of sociolinguistic variation in Old English texts, it is necessary to reflect even more upon the strict hierarchical nature of Anglo-Saxon society. From the available evidence, in particular the evidence of Anglo-Saxon law codes, we can see that both ethnicity and social class were both identified as strata within Anglo-Saxon society. As pointed out in 2.2 above, the lawcode of King Ine of Wessex makes biased provisions for Anglo-Saxon and Britons in the seventh century (though the laws of King Alfred in the ninth century do not, which could indicate that ethnicity was of lesser importance by this period at least in Wessex, perhaps due to successive assimilation and/or Anglicisation of vast numbers of Britons). It is not certain that the same ethnically based class divisions existed in all Anglo-Saxon kingdoms, but this situation seems more likely than not. As well as ethnic divisions, social rank also played a central role in Anglo-Saxon law and Germanic law in general, such that everyone literally had his or her own price (*wergild*), and thus, more obviously than today, knew his or her own station. In the early period three main social strata are identified: nobility (*eorls*), peasantry (*ċeorls*) and slaves (*thēowas*), each of which was divisible into a different internal hierarchy. We must assume that in areas annexed by Anglo-Saxons, the native population in overwhelming measure constituted the lower-end of society, for the most part slaves<sup>35</sup> or, perhaps, the semi-free (*lāts*). (An exception perhaps must be made for women who married Anglo-Saxons – note also that Anglo-Saxon society was patrilineal, thus ensuring that children born of mixed marriages took on the status of their father.)<sup>36</sup> In such a situation it is clear that social as well as ethnically based linguistic distinctions must have arisen, and these could only have served to perpetuate the otherness of Britons and Saxons which pervades the early sources – Britons were, as it were, the lowest of the low. Once the written language was in broad measure established, no later than the seventh century, at a time when some parts of Britain were still coming under Anglo-Saxon rule, it would have become more resistant to change.

The obvious problem with the above *diaglossic* interpretation is that it cannot be backed up by concrete evidence – transcripts of Old English as spoken by peasants are unfortunately not found in the Old English corpus. However, although we cannot access the language of different

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<sup>35</sup> There is considerable evidence that slavery involving native Britons was rife among the Anglo-Saxons, which must have brought with it considerable linguistic contact (see Pelteret 1995).

<sup>36</sup> ‘The status established by birth is determined always by the father, not the mother’ (*Leges Henrici Primi* 77, 1 [243]). Much of the law of Henry the First can be identified as Anglo-Saxon, though it was written the twelfth century (see the discussion in Charles-Edwards 1997: 210).

Anglo-Saxon social classes directly, there can surely be little doubt that, due to the strict caste-like hierarchy that clearly did exist in Anglo-Saxon England, some degree of sociolinguistic variation also existed. There is at least one piece of indirect evidence to support this view; it is found in a Bede's *Ecclesiastical History* (4.12) and demonstrates that language (as well as appearance, bearing and attire) marked a person's status in Anglo-Saxon England.

Bede tells us that Imma, a retainer to the Northumbrian joint-king Ælfwine, was present at the battle of the Trent between the Northumbrians and Mercians in 679. During the battle, Ælfwine was killed, the Mercians carried the victory, and the lands south of the Humber were lost to Mercia. Though Imma survived the battle, he was seized and taken to a lord (*gesith*) of King Æthelfred. It is here that Bede tells us that on being asked who he was, he was afraid to admit that he was a thegn and so said that 'he was a poor peasant and married; and he declared that he had come to the army in company with other peasants to bring food to the soldiers'. However, after Imma had been a prisoner for some time, we are told that 'those who watched him closely realised by his appearance, his bearing, and *his speech* that he was not of common stock as he had said, but of noble family' (my italics, SL). Indeed, when Imma did finally reveal his true identity to the lord under the condition that no harm would come to him, the lord exclaimed: 'I realised by every one of your answers that you were not a peasant'. The story of Imma demonstrates that, despite the fact that we are unable to recover sociolectal class differences from Old English texts, class variation must have been perceptible in Anglo-Saxon speech. Such variation originally had an ethnic basis, stemming from the settlement period. It is very likely that the disparity between different social classes may once have been much greater than the linguistic variation that exists today between different class dialects of British English; as in present-day varieties, these disparities will have been found at all levels of language: vocabulary, morphosyntax and phonology.

### 2.4.3 Phonology

None of the major handbooks on English historical phonology mention any form of Celtic influence on Medieval English (e.g. Luick 1914–40, Jordan/Crook 1974, Hogg 1992a). As far as I am aware, the authors of these works simply did not take the possibility of Brittonic influence into account. Moreover, the most important and still the most influential work on English historical phonology, Luick's *Historische Grammatik der englischen Sprache* (1914–40), was written at a time when the details and chronology of many Brittonic sound changes had not been settled. Yet even with the arrival of Jackson's *Language and History in Early Britain* (1953) not a great deal of work was done to assess whether any phonological changes in the history of English could have resulted from Brittonic influence. Excluding a handful of passing observations to phonological similarities between English and Welsh, serious research into Brittonic influence on English phonology has only really begun in the last decade or so. In the remaining paragraphs, I will survey a number proposals relating to Brittonic influence on English phonology that have been published so far.

In a lecture dealing with linguistic and cultural contacts between Anglo-Saxons and Britons, Tolkien (1963) proposes a few instances of possible Brittonic influence on English. He remarks that it is striking that English has retained the voiceless and voiced interdental fricatives /θ/, /ð/ as well as the labial-velar approximant /w/, and he goes on to suggest that it may not be coincidental that Welsh makes abundant use of these phonemes too (Tolkien 1963: 20, 32). Among other Germanic languages, only Icelandic retains both voiceless and voiced interdental fricatives, while /w/ became a fricative /v/. The Frisian dialect of the island of Wangerooze also preserved the interdental fricatives, and it may have had a labial-velar approximant /w/ too,<sup>37</sup> but the last speakers of this dialect died out around 1950. Thus, Tolkien was perceptive in viewing the existence of /θ, ð, w/ in English and Welsh in areal linguistic terms, and it is perhaps conceivable that contact with Brittonic could in some way have facilitated the preservation /θ, ð, w/ in English (see, however, the more detailed discussion on these consonants in 6.2.2.1 and 6.2.5.1).

Tolkien's other suggestions of possible Brittonic influence on Old English concern vowel mutations (1963: 32–3). In particular, Tolkien draws attention to Old English *i*-mutation, a conditioned change which involved the raising of low vowels and the fronting of back (rounded) vowels and diphthongs when a front high vowel /i(:)/ or the semi-vowel /j/ occurred in the following syllable, e.g. Old English *mȳs* 'mice' (< \**mūsiz*). Notably, long and short front rounded vowel phonemes – /y(:)/ and /ø(:)/ – were created as a result of this change (see 9.2.6). In his lecture, Tolkien observes that a very similar vowel-harmony-like change, termed *i*-affection, is found in Brittonic historical phonology (see 8.2.4, 8.2.6), but he does not state that Old English *i*-mutation occurred simply as a result of Brittonic influence, since *i*-mutation is attested to some extent in all North and West Germanic languages. Rather, Tolkien suggests that a greater understanding of both *i*-mutation and *i*-affection can be achieved by studying both changes together. Tolkien nonetheless regards 'English soil' as the focus of what he describes as a vocalic disturbance, and he seems to imply that *i*-affection in Brittonic could only have catalysed the very similar development in Old English (1963: 33 note 1).

Another scholar to have reasoned that Brittonic influence may have influenced *i*-mutation is Penzl (1988: 265–6). He believed that the earlier appearance of *i*-mutation in English than in other Germanic languages was unusual and in need of an explanation. In his article he proposes a number of solutions, among these the observation that mutation-like phenomena are also found in Brittonic historical phonology, albeit somewhat earlier than in Old English. In addition, he considers whether, along with dialect admixture, imperfect acquisition of English by Britons may have led to the simplification of Old English inflectional endings, resulting in the loss of the

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<sup>37</sup> The Wangerooze dialect may also have had a labial-velar approximant (like English IPA /w/) – though it may well have been a voiced bilabial approximant (similar to many Flemish dialects IPA /β/). The one short recording of the dialect which I have heard so far was so poor that it was difficult to detect such a very fine phonetic difference. By contrast, the interdental fricatives were very easy to detect in the recording.



conditioning factors, /i(:)/ and /j/, which induced *i*-mutation. In the context of Penzl's remarks, it is worth noting that Hickey (1995: 87), too, supposes that the attrition of Old English inflexional morphology could have been accelerated by Brittonic influence. In Hickey's view this situation would result from the fact that Brittonic had early reduction of vowels in unstressed syllables itself, which would cause similar 'low-level' phonetic influence in English.<sup>38</sup> Above all, Penzl believed that the systematic writing of Old English mutated vowels in Latin script and runes must stem from scribal influences of more literate (Romanised) Celts.

More substantial efforts at adducing Celtic and/or British Latin influence in English have been made in articles by Schrijver (1999, 2002, 2007, 2009). Unlike previous researchers, Schrijver is able to compare and contrast the reconstructed phonological systems of Brittonic and Germanic at the time of contact in order to identify potential areas of phonological and phonetic change (note that this methodology is also adopted in the present investigation). In the next few pages, I will attempt to summarise some of the main linguistic arguments presented in Schrijver's articles. However, due to the fact that Schrijver's views on the nature of the influence of Celtic or Latin contact on Old English have undergone various modifications over the last decade, I shall pay particular attention to his latest article on the topic (Schrijver 2009), while noting some alternative ideas presented in earlier publications.

In essence, Schrijver maintains that English has been subject to two waves of Celtic influence. The first wave began on the Continent before the Anglo-Saxon settlement of Britain. Schrijver makes a plausible case that a variety of Celtic very similar to British Celtic was formerly spoken in areas along the North Sea coast and that the effects of this language can be seen especially in the vowel systems of all later attested North Sea Germanic languages (see Schrijver 1999). Schrijver observes that North Sea Germanic languages, at their earliest stage of development, do not appear to have had a low vowel /a:/. Schrijver takes the view that all North and West Germanic languages formerly had a low vowel /a:/ (from PGmc \*/æ:/), but that this was changed in North Sea Germanic as a result of language contact and language shift. Brittonic of around the fifth century lacked a low vowel /a:/, though it did have two low mid-vowels /æ:/ and /ɔ:/. Therefore, in a situation of language contact and language shift, speakers may have replaced North-West Germanic \*/a:/ with either /æ:/ or /ɔ:/. It is a fact that instead of the /a:/ vowel found in Old High German and Old Norse, one encounters in North Sea Germanic languages the low-mid-vowels /æ:/ (or /e:/) and /ɔ:/ (which becomes /o:/) – the latter rounded vowel always occurring before nasal consonants.<sup>39</sup> Similarly, Schrijver observes that, when the

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<sup>38</sup> An explanation which assumes the simplification of inflectional morphology due to imperfect adult learning now seems more likely, cf. Trudgill (2009). Hickey (1995: 87, 109) also argues that Brittonic lenition of consonants in weak environments may also have affected the phonetics of Old English. Unfortunately, Hickey does not go on to mention any specific Old English phonetic changes which he thinks resulted from such influence.

<sup>39</sup> The substitution of /ɔ:/ (instead of /æ:/) for /a:/ is explained by assuming that North-West Germanic /a:/ was more back and rounded before nasals than in other phonetic positions.

nasal consonant is lost in the group /an/ + fricative, in North Sea Germanic one finds long /o:/ (from earlier /ɔ:/, while in Old High German the reflex is /a:/ found, e.g. *brāchte* ‘brought’ (< \**branxtē*). Thus, one way of accounting for the lack of a low vowel /a:/ in early North Sea Germanic languages would be to assume Brittonic contact erased its presence. Crucially for this investigation, it is generally agreed that the two North Sea Germanic reflexes of PGmc /æ:/ – either /æ:/ or /ɔ:/ – were already present in prehistoric varieties of Anglo-Saxon before settlement in Britain (see 9.2.2).<sup>40</sup>

According to Schrijver, the second wave of Celtic influence on Old English resulted from contact in Britain. Schrijver (2009) now argues that the variety of Celtic spoken in Britain was formerly much more similar to Old Irish than later attested Medieval Brittonic of the western and northern highland areas. As a result of language shift speakers of this older variety of Celtic brought about significant changes to the Pre-Old English vowel system (Schrijver 2009: 207). Schrijver maintains, however, that in areas of lowland Britain (in particular in the highly Romanised South East), Celtic may have ceded to Vulgar Latin before the Anglo-Saxon settlements. The argument that southern lowland Britain was heavily Latinised linguistically as well as culturally was made in Schrijver’s articles of 2002 and 2007. Together these articles demonstrate, convincingly to my mind, that Brittonic underwent considerable phonological, morphological as well as lexical influence from Vulgar Latin, which strongly suggests that Latin, rather than being a language spoken by a small elite in Roman Britain during four centuries of Roman rule, could actually have become the *lingua franca* in much of the lowland zone. However, as Schrijver points out, this British variety of Latin could well have retained a strong Celtic ‘accent’, which would then still have permeated Old English. The phonological changes which Schrijver identifies as being caused by Old Irish-like influence are known in Old English grammar as *i*-mutation, breaking and back mutation.

Like Tolkien and Penzl before him, Schrijver thinks *i*-mutation in Old English occurs at an unexpectedly early date and argues that the change may have been catalysed by language contact. Schrijver (2009: 201–2) hypothesises that front rounded vowels may have existed as allophones [y(:)] and [ø(:)] already in pre-settlement North Sea Germanic, i.e. due to the anticipation of the front vowel /i(:)/ or the semivowel /j/ in the following syllable; but he thinks that language contact in Britain may have phonologised the fronted variants. In earlier articles, Schrijver (1999: 27–9, 2002: 105) argued that the front rounded allophones could have been phonologised as a result of Brittonic (i.e. Late British) contact, either on the Continent or in Britain. From the perspective of Brittonic historical phonology, this proposal makes sense, because in Late British of around the fifth century the long and short front rounded vowels /y/ and /y:/ probably existed as phonemes, and the short mid-fronted vowel /ø/ may also be posited by about the sixth century (see 8.1). However, in his 2009 article, Schrijver is more concerned

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<sup>40</sup> I tend to think that PGmc /æ:/ was simply preserved in North Sea Germanic, though possibly as a result of contact as Schrijver proposes. The development to /ɔ:/, though a conditioned change occurring before nasal consonants, may have been induced by contact (see 9.2.2).

with Old Irish historical phonology. In Old Irish, front rounded vowels may also have existed, but, as far as is known, only as allophones. Such allophones must have occurred in Old Irish when back vowels stood before palatalised consonants and gained a more fronted articulation (note that the difference between palatal and non-palatal consonants was phonemic in Old Irish as in Modern Irish).<sup>41</sup> This situation, however, cannot really explain why front rounded vowels were phonologised in Old English by the sixth century (for details on the date of *i*-mutation see 9.2.7).

One reason why Schrijver (2009) considers Old Irish a better contact language is because it has the potential to explain the origins of some of the Old English front-to-back diphthongs, i.e. why long and short front vowels /i(:), e(:), æ(:)/ became opening front-to-back long and short diphthongs, which appear in Old English written as ⟨io, eo, ea⟩. Before addressing Schrijver's proposal of Old Irish influence, it will be useful to review the established views on how the front-to-back diphthongs arose by so-called breaking and back mutation.

Old English breaking involved diphthongisation of the front vowels /i(:), e(:), æ(:)/ before /l, r/ + consonant and \*/h/ (= [x]), e.g. \**līht* > *līoht* 'light', \**tīhhian* > *tiohhian* 'consider', \**nēhwest* > (\**nēohwest* >) *nēowest* 'nearest', \**feh* > *feoh* 'cattle', \**nāh* > *nēah* 'nigh, near', \**sæh* > *seah* 'he saw'. Thus, diphthongisation of Pre-Old English front vowels was a conditioned process, since the results of the change are directly predictable from the phonetic environment. Most scholars now assume that /l, r/ were somewhat velarised when followed by another consonant and that /h/ (= [x]) always had back articulation at the time of breaking (see 9.2.5). Further evidence for velarised pronunciation has been inferred from the fact that the inherited Germanic geminate /l:/ caused breaking *eall* (< PGmc \**all-*), and so was no doubt a velar lateral; but a geminate /l:/, which was created through West Germanic gemination, through the assimilation of a following palatal glide (see 5.2.3), did not (at least typically) cause breaking. Hence the last mentioned /l:/ geminate was probably palatal in articulation, as in *sellan* (< PGmc \**seljan*). Thus only when a front vowel stood before a velarised consonant did a labial transition vowel appear.<sup>42</sup>

<sup>41</sup> For illustration, compare Old Irish *tol* 'will (nom.sg.)' (< *tolā*), whose vowel /o/ is not altered in any significant way by the final lateral consonant which is not palatalised but rather velar /toʎ/ [toʎ]. By contrast, Old Irish *toil* 'will (acc.sg.)' (< \**tolen*) has the same vowel phoneme /o/; but this vowel almost certainly had a fronted realisation [ø] due to anticipation of the final palatalised lateral, thus /toʎ<sup>h</sup>/ [tøʎ<sup>h</sup>]. Note, too, that the <i> in the spelling *toil* 'will' mainly indicates that the following lateral is palatalised in Old Irish orthographic practice, although a palatal transition vowel may also have been present phonetically. More illustrative examples of how back vowels were phonetically fronted by palatal consonants are provided in Schrijver (2009: 203).

<sup>42</sup> Note, however, that the quantity of the vowel segment was not altered by the addition of the putative labial transition vowel.

Back mutation affected only the short front vowels /i, e, æ/ when a back vowel /u/ or /ɑ/ occurred in the following syllable. The change is attested to varying degrees in all Old English dialects. In West Saxon the change took place only when the intervening consonant was a labial or liquid /f, p, w, m, l, r/; in Anglian the change occurred before all consonants, except perhaps velars; in Kentish any consonant could intervene (see Campbell 1959: 85). Representative examples are *liomu* ‘limbs’, *eofor* ‘boar’, *ealu* ‘ale’ (< \**limu-*, \**eβura-*, \**ælu*). The conditioned change is obviously reminiscent of breaking, because the phonetics of the back vowels /u, ɑ/ clearly affected the preceding front vowel, resulting in a back transition vowel. This situation also suggests that the intervening consonant was also velarised, like the consonants that induced breaking. However, unlike breaking, back mutation only affects short vowels.

Now let us address Schrijver’s proposal of Old Irish influence. As noted previously, Old Irish, just like Modern Irish, distinguished palatalised and non-palatalised consonant phonemes. Furthermore, it is uncontroversial that, like in Modern Irish the nature of the following consonant, i.e. whether it was palatalised or not, could have an effect on the preceding vowel, especially when there was a difference in place of articulation for vowel and consonant. Thus, when a front vowel was followed by a non-palatalised consonant a transition vowel intervened. In the following examples the final consonants were not palatalised: Old Irish *lín* ‘number’, *cét* ‘hundred’, *cenn* ‘head’; but in order to pronounce these final consonants without any hint of palatalisation, despite being flanked by palatal vowels /i:, e:, e/, it can be inferred that a transitional non-palatal vowel was, by necessity, inserted between the palatal vowel and the non-palatal consonant, \*[i:~n], \*[e:~d], \*[e~nn].<sup>43</sup> In other words, there is certainly something of a typological parallel between Old English breaking and back mutation of front vowels in Old Irish. Yet in spite of the similarities, it must be admitted that the change in English does not seem completely unexpected from a phonetic point of view (this does not rule out contact influence, but a proposal of a completely unconditioned change would provide an even stronger case for influence). A further, unresolved point is that Irish-like influence does not seem to be able to explain why breaking affected both long and short vowels while back mutation only affected short vowels. One also wonders why such proposed Celtic phonological influence appears already in the earliest Old English texts, yet Celtic structural influences tend to appear so much later, predominantly in the Middle English period (as Schrijver 2009: 193 acknowledges). Overall I think that the hypothesis about the Old Irish like nature of Celtic spoken in Britain has not been supported by enough evidence so far. In this investigation I therefore follow Schrijver’s former view that the variety of Celtic spoken in Britain prior to Anglo-Saxon settlements was akin to Late British and that there is a very strong possibility that Latin may well have been the main community language in heavily Romanised areas of Britain (see Schrijver 2002, 2007).<sup>44</sup>

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<sup>43</sup> Modern Irish spellings of these examples – *lion*, *céad*, *ceann* – better reflect the current and supposed past pronunciation of these forms (see Schrijver 2009: 203).

<sup>44</sup> It should also be borne in mind that Schrijver’s new hypothesis of Old Irish influence was published after most of this dissertation was written.

Indeed, the results of my investigation will reveal a general lack of convergence between Brittonic and Anglo-Saxon in the southern lowlands, which would in fact provide indirect support for either of Schrijver's proposals.

Even more recently, another proposal of Celtic influence causing diphthongisation in English through the introduction of transition vowels has been posited, this time by Vennemann (2009b).<sup>45</sup> Rather like Schrijver's proposal of Old Irish-like influence causing a transition vowel to appear before Old English vowels, Vennemann points to a similar development attested in Middle English, whereby a homorganic transition vowel appears before /x, ʃ, l, n/.<sup>46</sup> The development, which Vennemann refers to as glide accretion, is nicely illustrated by examples showing the intrusion of a palatal or labial transition vowel before the palatal and velar fricatives respectively, Old English *eahta* > Middle English *eighte* 'eight' and Old English *dohtor* > Middle English *doughter* 'daughter'. Vennemann sees a connection with Celtic influence and refers in particular to the fact that homorganic glide vowels typically appear before palatalised and non-palatalised consonants in Old Irish and Modern Irish. In addition, Vennemann notes that while vowel accretion is not typical in Brittonic, there is some evidence for possible palatal glide accretion in North West British (i.e. Welsh), namely in the form of vowels that have been subject to *i*-affection, e.g. PBr. *aljōs*, *korkjo-* > Middle Welsh *eil* 'second', *ceirch* 'oats', suggesting that intervening consonants of *i*-affection were palatalised, thus inducing glide accretion.

The problem that many historical linguists may have with contact-based proposals for Middle English glide accretion, as well as Old English breaking and back mutation cited above, is the fact that the changes seem phonetically conditioned. For instance, Pilch (1988: 283–4) argues that the changes are similar in type to the development of a transition vowel before /r/ among many present-day speakers of British English, e.g. *Mary* [me:ɪ ~ meəɪ], *touring* [tu:ɪŋ ~ tuəɪŋ], and similarly before velar /l/, e.g. *feel* [fi:ɪ ~ fiəɪ], *fool* [fu:ɪ ~ fuəɪ]. If no phonetic language internal motivation for the changes could be proposed whatsoever, a scenario of language contact would be so much more convincing. On the other hand, it could be argued that such phonetic tendencies appear to have been taken further in English than in other languages and this, one could argue, is where contact could have played a role. Like Schrijver's (2009) proposal, Vennemann finds closer parallel developments in Gaelic rather than Brittonic and argues that there may have been a considerable Gaelic presence in North West England at one stage; but this leaves the South unaccounted for. Again, more evidence is needed to support such a hypothesis of Goidelic influences on historical English phonology. Furthermore, it is somewhat unusual that Schrijver and Vennemann both claim to identify Goidelic influences in English

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<sup>45</sup> Vennemann's proposal of Celtic influence on English was first sketched in Vennemann (1993: 388–9). The thesis is presented in far more detail in Vennemann (2009b).

<sup>46</sup> The main developments are as follows: [Vx] > [Vix] and [Vç] > [Viç] (Luick 1914–40: 403, 512); [Vʃ] > [Viʃ] (Luick 1914–40: 404); [Vl] > [Vul] (Luick 1914–40: 502); [Vn] > [Vun] (Luick 1914–40: 133–43, 168–74, 220; 224–33).

phonology, but at different periods. It should be borne in mind, however, that both Schrijver and Vennemann came to their conclusions independently.

As far as I am aware, the above studies represent all that has been published on Brittonic influence on English phonology so far, excepting two of my contributions (Laker 2002, 2009a).<sup>47</sup> These two papers will be discussed in 7.2.4.1. and 6.2.2.3 respectively, and so need only be presented in outline here. The first reports on the unexpected merger of the initial consonant clusters /kw/, /hw/ > /χw/. I argue that the merger could have resulted from Brittonic influence and show that the same merger occurs when early English loanwords containing /kw/ and /hw/ entered Medieval and Early Modern Welsh. The article from 2009 considers the early phonemicisation of voiced fricatives /v, ð, z/ in English. I argue that Brittonic influence was the driving force behind the phonemicisation of the voiced fricatives in English, precisely because voiced fricatives already had phonemic status in Late British. It is an interesting fact that the two phonological developments that I have written about are characteristic of Middle English, in the same way that most suggestions of Brittonic morphosyntactic and lexical influence are also registered mainly in Middle English.

## 2.5 Summary

There is no firm basis for genocide and folk movements on any wide scale during the Dark Age period although these notions are given as ‘statement of fact’ even in some of the most recent handbooks on the history of English. Rather, there is much agreement from scholars working in neighbouring disciplines that there was significant survival of the Romano-British population in the fifth and sixth centuries, especially in northern and western Britain. Many historians, it can be generalised, do still take the traditional view that there was significant migration and some degree of population replacement, as presented by Gildas and in later sources, but they exercise great caution when reading and interpreting the early sources. In addition, more and more weight is now given to the archaeological evidence, to help form a more accurate picture of the period, and in many cases the archaeological evidence points towards population continuity. Most Anglo-Saxon archaeologists now seem to have rejected the notions genocide and folk movements outright; archaeological evidence for these ideas has simply not been found. Geneticists, rather than shedding light on the Dark Age, have reached various conclusions, yet the majority of studies have argued for significant population continuity. The research base of other disciplines demonstrates that linguists involved in the study of especially Medieval English should engage more in the debate.

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<sup>47</sup> White (2006) lists some parallel developments in Brittonic and English, but he does not investigate the developments in any way. His discussion, at least of Brittonic and English phonology, is typological in nature.



### 3 Approach and methods

In order to deduce whether one language has influenced the phonological or phonetic development of another, one needs to be well informed about the sound systems of the two languages in contact. This requirement applies to contemporary as well as historic situations of language contact. The main difference in this regard is that the sound system of a language from the distant past cannot be described with the same level of precision as that of a contemporary language; hence the margin for error is much greater. This chapter introduces the contrastive methodology employed in this investigation and outlines how a combination of prognostic and diagnostic analyses can be used to fathom whether the phonological or phonetic development of English has been influenced by Brittonic.

#### 3.1 Contrastive methodology

One of the central methodological foundations of this investigation is to provide an analysis of the sound systems of the two languages in contact, since only through a comprehensive contrastive analysis of the sound structures of the two languages under investigation can independent support be found for any suggestions of various phonological or phonetic changes resulting from contact. Such methodology is of course fairly well established within the field of contact linguistics and applied linguistics. Yet the present study differs in one important respect: the languages under investigation are not present-day languages whose phonological systems can easily be described and even verified by instrumental analysis if need be. Instead, this investigation deals with historic and even prehistoric stages of Old English and Brittonic. In other words, the phonological data about the languages concerned cannot be attained first-hand, but must be deduced using methods of linguistic reconstruction. Since, however, over the past century and more the pre-historic stages of English and Brittonic have been subject to considerable study and hypothesising in their own right, now enough is known about the sound systems of these languages (at least at the phonemic level), to enable numerous first conclusions to be drawn from this study.<sup>48</sup>

Weinreich, in his pioneering study *Languages in Contact* (1953), made first attempts to provide a systematic analysis of how two languages could be compared and how many linguistic changes could result from mismatches or contrasts at all levels of language (phonology, grammar,

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<sup>48</sup> The present investigation does not represent the first historic study of its type, but it will rank as one of the most extensive ones to have been conducted so far. An early comprehensive study concerned the development of the Slavic influences on the development of Romanian phonology (Petrovici 1957). Other studies which look wholly or partly at the historic developments of languages from a diachronic contrastive perspective include Fokkema (1937), Bliss (1984), Schmidt (1990), Schrijver (1999, 2002), Wmffre (2003) and Hickey (2004).



vocabulary). Among other things, he provided persuasive evidence of how phonological developments attested in a situation of bilingualism between Swiss Rumansh and Swiss German could be understood through the systematic study of the sound systems of the two varieties. At around the same period, other scholars employed methods of contrastive analysis for purposes of applied linguistics and language acquisition strategies, most prominently by Lado (1957), and numerous books have subsequently been written for this very purpose. Indeed, many books have been published on contrastive phonology alone and these have certainly helped me to find ways of organising and presenting the data in my investigation (Moulton 1962, Whitley 1986, Collins & Mees 2003, Wang 2007 have been particularly useful in this regard).

Earlier scholarship talked of both positive transfer and negative transfer of L1 features in the acquisition process. For instance, many phonemes may be phonetically identical in the two contact languages; in this case, no problems typically arise in the acquisition process (*positive transfer*). Yet it is often the case that there are points of variance within the phonological systems of both languages, which creates the potential for *negative transfer*. In a situation of *negative transfer*, the product may not always have an exact correspondence in the native system, however.<sup>49</sup> The four principal types of phonological/phonetic interference which are recurrent in situations of second language acquisition may be defined as follows:

(i) *Phonemic influence*: Language A has a phoneme *x* which is lacking in language B. Language B may substitute a different phoneme *y* in place of *x*. For example, German and French lack the English interdental fricatives /θ, ð/; substitution with /s, z/ is frequent.

(ii) *Phonetic influence*: Language A and language B share a particular phoneme *x*; but the phoneme in Language A differs phonetically in Language B. This situation could lead to negative transfer if speakers of Language A acquire language B and vice versa. For example, English voiceless plosives /p, t, k/ are followed by aspiration [p<sup>h</sup>, t<sup>h</sup>, k<sup>h</sup>]; those of French are not [p, t, k]. Many French speakers do not aspirate /p, t, k/ when speaking English. Many English speakers aspirate /p, t, k/ when speaking French.

(iii) *Allophonic influence*: Language A has a phoneme *x* which has an allophonic variant *x'* in specific phonetic environments; Language B does not apply the allophonic rule. Speakers of Language A may carry over the allophonic variation into Language B. For example, in many varieties of British English, /l/ has two variants: so-called light-*l* [l] before vowels and dark-*l* [ɫ] elsewhere. Speakers of English often transfer their allophonic variation into other languages which do not observe such variation, e.g. into German, where /l/ is light in all positions (similarly, German learners often do not acquire the English allophonic rule).

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<sup>49</sup> The binary distinction ‘positive transfer’ and ‘negative transfer’ now appears rather crude, to judge from recent contrastive studies. However, when contrasting the sound systems of languages spoken well over a millennium ago, these basic terms of reference are still useful.

(iv) *Phonotactic influence*: The distribution or combination of phonemes in Language A may not exist in Language B; this may lead to change. For example, Spanish does not permit initial clusters of the type /sC/. In the acquisition of English words with initial /sp, st, sk, sm, sn/, Spanish second language learners often adopt a strategy of epenthesis, i.e. an initial epenthetic /e/ is added to such clusters.

To what extent it is possible to predict which phonic influence might take place in a situation of second language acquisition is a matter of considerable debate (NB. the term ‘phonic’ serves as a cover term for phonemic, phonetic, allophonic and phonotactic properties). In terms of systemic contrasts, one of the most intensive areas of research into the predictability of interference has involved the degree of similarity and dissimilarity between phones; this particular aspect could have direct relevance to this study. In particular, Flege (1987 and subsequent studies) has carried out extensive research into this area with many detailed instrumental phonetic analyses involving the similarity of phones in L1 and L2 along with age and achievement. The central claim in Flege’s research has been that ‘equivalent’ or ‘similar’ sounds are often the most difficult to acquire because language learners typically do not set up a new phonetic category for such sounds. On the other hand, ‘new’ sounds, i.e. more obviously dissimilar sounds – i.e. usually different phonemes, are often easier to acquire because the learners readily perceive the differences and are able to establish new phonetic categories. Although much of Flege’s data is quite convincing – and many cases which would seem to support his hypothesis are easy to recall from experience<sup>50</sup> – it must be pointed out that it is not always possible to define degrees of similarity between phones. The notion that a shared phonetic symbol which differs only in having different diacritic marks sometimes provides a starting point, but certainly does not cover all degrees of (dis)similarity. Furthermore, some phonemes are perceptibly very different but may be the most difficult to acquire for some learners (an obvious example being the trilled alveolar /r/, which many native speakers of English never acquire despite considerable effort). All in all, like most theories it seems that Flege’s model for language acquisition may not be applicable in all cases, but it certainly merits consideration in the present study, even though precise phonetic details on particular phonemes required for such an analysis are often difficult or impossible to acquire for early stages of languages.

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<sup>50</sup> For instance, many Dutch speakers acquire the interdental fricatives /θ/ and /ð/ while never acquiring English aspirated voiceless plosives or the phonetics of English /s/. The Dutch voiceless plosives are unaspirated, and the friction of Dutch /s/ is typically graver than the sharp friction which characterises English /s/. In fact, Dutch /s/ sometimes sound like /ʃ/ to native speakers of English (cf. Collins & Mees 2003: 145).

### 3.2 Prognosis and diagnosis of Brittonic phonological influences

By comparing two languages, it is often possible to make reasonable predictions about which areas or properties of a language will cause difficulties for an adult language learner. For example, Japanese has a very simple syllable structure and a relatively basic vowel system, therefore one would be right in predicting that Japanese speakers encounter difficulties when acquiring the more complex syllable structure and vowel system of English. Contrastive analysis is less successful at predicting how such potential problems will manifest themselves in practice, however. For one thing, it is not always clear why language learners will adopt different substitution strategies for unfamiliar phonemes: in place of the English interdental fricatives /θ/ and /ð/, French speakers will typically substitute /s/ and /z/, while Russians will typically substitute /t/ and /d/ (Weinreich 1953: 20). Certainly, auditive perception plays a role in the acquisition process of sounds, and not just place of articulation. Consider the voiceless dental lateral fricative /ɬ/ of Modern Welsh. Different substitution strategies seem to be on record for this phoneme among English speakers, including /l/, /fl/, /hl/, /sl/, /θl/ and /kl/.<sup>51</sup> Speakers seem to notice that the sound is a lateral, a fricative and voiceless. The lateral is typically taken over in English but with the addition of an initial voiceless fricative. English speakers most often hear and use an initial voiceless interdental fricative /θ/. This outcome seems a little unexpected, because the cluster /θl/ does not even exist in English. Furthermore, the cluster /sl/ is slightly closer to /ɬ/ in terms of place of articulation. As Ternes (1976: 31–3) points out, the common substitution of /ɬ/ with /θl/ results from the fact that English speakers are able to perceive that Welsh /ɬ/ does not contain a sibilant and realise that the Welsh sound is different from native /sl/. Hence they follow a different substitution strategy.

Thus, the outcomes of phonological contact cannot be predicted in any straightforward manner. While it is generally agreed that L1 tends to have a profound effect on L2 even in situations of tutored, let alone untutored learning, some scholars have warned against relying solely on contrastive analysis to explain or predict possible negative transfer in situations of second language acquisition, i.e. in the orthodox sense of the theory usually associated with Lado (1957). For example, it is true that some learners will encounter fewer problems when acquiring a new language than others. Major (2001: 34) remarks that very few theories claim exceptionless predictions, and an extremely gifted learner could potentially discredit all theories claiming predictions of any kind. Yet in the current study the concern is with group second language acquisition, which cancels out such possibilities. It is also arguable that most criticism of the failure of contrastive analysis to predict potential errors has come from less finite areas of language, in particular grammar rather than sound systems (see Major 2001: 34–6). Indeed, not only the degree of contrast between two language systems or even auditive perception have a role to play, but also many other factors such as age as well as attitudinal and motivational

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<sup>51</sup> Most English speakers simply use /l/ as a substitute, but this seems partially due to the spelling ⟨ll⟩.

factors. In situations of language shift it is also very important to take into consideration the ratio of indigenous speakers to native speakers during the process of shift as well as the interrelated aspect of degree of exposure which indigenous populations will actually have to the target language as spoken by native speakers.<sup>52</sup> Furthermore, the speed by which language shift takes place must also be taken into account. In spite of all this, contrastive phonic studies have demonstrated that where indeed two systems match, positive transfer generally results, where two systems differ, negative transfer has the potential to occur.

So far I have described the prognostic approach of contrastive analysis used for spotting potential areas of phonic inference for Brittonic learners of English. However, as Ternes (1976: 64–7) makes clear, an effective contrastive study should ideally contain both prognostic and diagnostic approaches. The second methodological approach to this investigation therefore involves studying in detail a large number of phonic changes which took place in Old and Middle English in order to see whether these in any way may be attributed to any form of Brittonic influence based on the earlier prognostic contrastive analysis, as well as any other known details that can be mustered about the sounds systems of early Brittonic languages. But it might well be asked how a change resulting from language contact can be distinguished from a change resulting from the natural internal evolution of the language. After all, it is generally agreed that languages are always changing. Also, the problem is compounded by the fact that most historical linguists tend to favour language internal explanations over external explanations.<sup>53</sup> The diplomatic answer to the general question then of what constitutes so-called internally or externally motivated change is that incontrovertible proof one way or the other will often never be found in cases of historic change, but in some instances it is possible to make a good case for an externally motivated change. In this regard, it is important to take three points into account: 1) Is the nature of the sound-change peculiar or unexpected? 2) Is the change unique in the sense that other (genetically related sister) languages have not changed in a similar way? 3) Is the change one of many that could be explained as resulting from a particular contact language?

What constitutes a natural and a non-natural change is of course not immediately obvious and must be judged on a case by case basis. However, at least some preferred and recurrent avenues of change have been recognised for, especially, consonantal change in Vennemann's (1988) seminal study of preference laws, and, as far as universal developments of vowels systems are concerned, Labov's (1994) monograph on internal factors of linguistic change also

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<sup>52</sup> Irish to English language shift in the 18th and 19th centuries is a case in point, for it is thought that the majority of the Irish learned English from each other without large scale contact with native speakers of English from England, Scotland or Ireland (see 2.4).

<sup>53</sup> Why this is so is unclear to me. In identifying change in present-day languages it is extremely difficult to find instances of language change resulting from internal mechanisms alone, i.e. change which is not the result of contact between different languages or different varieties (regional, social etc.) of the same language.

offers numerous insights. The second way to assess the possibility of a change being externally motivated or not involves the comparison of sister languages of the language in contact. For Old English this includes especially Old Frisian, Old Saxon, Old High German and their later attested dialects. Such a comparison can be performed with relative ease, due to the large number of reference works available for these languages. If, then, a particular sound change in the history of English is not attested in any of the sister languages and, moreover, is a rare or to some degree unexpected change, a case for contact can naturally be made if the resultant feature/structure is attested in the assumed contact language. In such cases the change will result in an areal feature. The more peculiar or regionally confined that feature is – e.g. within the context of Europe – the more plausible becomes the case for contact induced change. Finally, however, it is the sum of such cases for externally motivated change that will ultimately provide the argument of greatest moment for or against contact induced change.

### **3.3 Summary**

The investigation utilises prognostic and diagnostic approaches to help establish whether phonological or phonetic developments in the early history of English may have been induced by Brittonic language contact and language shift. Comparison of the reconstructed Late British and Pre-Old English sound systems forms the prognostic framework. Such a contrastive analysis is used to hypothesise about phonemes that may have been prone to phonological and phonetic change in a situation of Brittonic to Pre-Old English language shift. This prognostic approach is supplemented by a diagnostic approach to sound change. Here phonological and phonetic changes that occurred in Old or Middle English dialects – especially changes that are in some way unexpected or unique to English among other Germanic languages – are re-examined with an eye for possible Brittonic contact. As such, the sound system of Late British as well as later attested Brittonic dialects is re-inspected to establish whether or not Brittonic contact influenced the particular change in Medieval English.

## **PART II: CONSONANTS**



## 4 The consonants of Late British

This chapter introduces the reader to the consonants of Late British. The chapter consists mainly of two parts. The first part offers a basic description of the Late British consonantal inventory and draws attention to some less familiar consonants as well as some important phonetic and phonological issues. The second part provides a summary of how the Late British consonantal system may be derived historically; the details in this longer section provide points of reference for Chapters 5 and 6. Finally, a summary of how the Late British consonant may be derived is presented at the end of the chapter.

### 4.1 Synchronic overview of Late British consonants

The consonants of Late British are categorised in terms of where they are articulated, how they are articulated, and whether they are voiced or not in Table 2. As far as place of articulation is concerned, labial, coronal, dorsal and glottal consonants are differentiated (horizontal axis). As for manner of articulation, eight categories are differentiated: plosives, fricatives, sibilants, nasals, laterals, rhotics and approximants (vertical axis). Voiceless consonants always appear to the left in the boxes of Table 2, and voiced consonants to the right. The probable inventory of Late British consonant phonemes was as in Table 2.

	Labial		Coronal		Dorsal		Glottal
Plosives	p	b	t	d	k	g	
Fricatives	f	v	θ	ð	x	ɣ	h
Sibilants			s				
Nasals		m		n		ŋ	
Lateral				l			
Rhotic				r			
Approximants		w				j	
Other		ʋ̃					

Table 2. Late British consonants

The majority of the Late British phonemes are familiar from Modern English. Those consonants not found in Modern English are the voiceless velar fricative /x/ (which may well also have been uvular in articulation [χ]), the voiced velar fricative /ɣ/, and the voiced nasalised labial fricative /ʋ̃/. The latter phoneme is undoubtedly the most unusual from a typological perspective. It originated from frication of /m/ by a process known as lenition (see 4.2.2.1 for details). It may be noted that this nasalised fricative ultimately merged with \*/v/, but it must have been present at



the time of the Anglo-Saxon settlements based on the evidence of Old English spellings of British place-names.<sup>54</sup>

A quantity distinction, i.e. long vs. short, existed for some Late British consonants, namely \*/n, l, r/. The length distinction was most probably salient in medial positions. A length distinction also seems to have existed in initial position too but here there may also have been a further phonetic difference in pronunciation, in particular it seems that here long /n, l, r/ may also have been voiceless or aspirated, based on the evidence of Welsh and also some spelling evidence from Breton and Cornish. For this reason, it is a convention in Celtic studies to mark initial unlenited liquids with a capital letter /N, L, R/, which helps to signify that the phonetics of these consonants are not entirely certain but are different from lenited /l, r, n/. Furthermore, unlenited /w/ may also have varied phonetically, since this later develops to initial /gw-/ in Welsh, Cornish and Breton. Most consonants do not have a contrastive length, thus \*/f, θ, x, v, ʋ, ð, ɣ, j, h/ were all short. On the other hand, \*/p, t, k, m, s/ were all long in intervocalic positions, that is word medially and word-initially in conjunction with preceding words ending in a vowel. The long intervocalic plosive consonants \*/p:, t:, k:/ were created by an assimilatory change known as protraction (see 4.2.5); long medial \*/m:/ mainly reflects assimilation of the clusters \*/sm/ and \*/mb/ (see 4.2.2.1 and 4.2.2.3); long medial \*/s:/ mainly derives from the assimilation of the clusters \*/st/ and \*/ns/ (see 4.2.2.1 and 4.2.2.2).

## 4.2 Derivation of Late British consonants<sup>55</sup>

Since there are no speakers of Late British, its phonological system must be reconstructed from a variety of different sources. Celticists are rather well informed about the phonology of Late British, thanks to the careful deductive reasoning of generations of scholars based on the analysis of a rich variety of data, including: fifth- to twelfth-century roman-letter and Ogam inscriptions; Brittonic names mentioned in various Latin sources such as Gildas, Bede, saint's lives and charters; Brittonic personal-names, place-names and loanwords in Old Irish and Old English sources; early Brittonic texts from the late eighth century onwards. The information garnered from these sources, moreover, has long been set against various comparative pieces of evidence from historically-attested and present-day Celtic languages and dialects. Of major importance are the more copiously attested languages and dialects which stem directly from Late British, namely

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<sup>54</sup> The Late British nasal fricative \*/ʋ/ appears as either ⟨m⟩ or ⟨f⟩ in Anglo-Saxon sources, e.g. OE *Tame* 'River Tame (Warwickshire, Staffordshire)' (< PBr. *\*Tamā*) vs. *Defena scire* 'Devon(shire)' (< PBr. *Dumnonia*). Early loans show substitution of the British nasalised fricative on ⟨m⟩. According to Jackson (1953: 493) the degree of nasality seems to have weakened around the seventh century, which is why substitution on /v/ (spelled ⟨f⟩ in Old English, see 5.2.4) also becomes frequent at this time.

<sup>55</sup> In writing this section I have profited enormously from a forthcoming historical study of Old British made available to me by Peter Schrijver (see Schrijver 2008).

Medieval Welsh, Cornish and Breton as well as their modern counterparts, but also the more distantly related Old Irish and even the scattered remains of the Continental Celtic languages are often of great importance, especially when it comes to deducing pre-historic stages in the development of Brittonic. Thus, with well over a century's worth of research into all aspects of the historical phonology of Brittonic, a reasonably reliable outline of the sound system of Late British can be reconstructed at the present time, even if some parts will inevitably remain less certain and debatable.

#### 4.2.1 *Proto-Celtic consonants*

The consonant phonemes of Proto-Celtic were \*/t, k, k<sup>w</sup>, b, d, g, g<sup>w</sup>, φ, s, m, n, r, l, j, w/. Conspicuous in this system is the absence of the /p/, though a last reminder of its former presence in the form of a bilabial fricative \*/φ/ (or possibly a glottal fricative \*/h/) still lingered on in Proto-Celtic before finally disappearing altogether. However, a new /p/ phoneme was later recreated in British Celtic from earlier \*/k<sup>w</sup>/.

#### 4.2.2 *Lenition*

Of the developments that served to create the consonantal system of Late British, lenition was of greatest moment. Lenition involved a consonant developing a more weakly articulated or lenis allophone in intervocalic position or between a vowel and a resonant. The Early British consonants to be affected by lenition were \*/p, t, k, b, d, g, s, m, n, l, r, j, w/.<sup>56</sup> The change took place not only word internally (e.g. W. *gobr* 'reward', *crwydr* 'sieve', *mynog* 'noble' < PCl. *\*woprV-*, *\*kreitro*, *\*monāko*) but also across word boundaries in close syntagma, such as in pronominal and determiner phrases, e.g. W *ei ben* 'his head', *y gadeir* 'the chair', < *\*esjo pennon*, *\*sindā kateðra*. It is usually assumed that this allophony was abandoned in Late British, by virtue of which the number of consonantal phonemes was essentially doubled. The phonemicisation of the lenited consonants is explained by the fact that some lenited consonants in formerly sonorous environments came to stand in non-sonorous environments as a result of apocope and syncope. Most Celticists now believe that the roots of lenition lie in Proto-Celtic, although it is debated whether or not it was a single process (e.g. Jackson 1953: 544–5) or proceeded in two stages: voiced spirantisation \*/b, d, g, m/ > \*[v, ð, γ, ̃v] then voicing \*/p, t, k/ > \*[b, d, g] (e.g. Sims-Williams 2003: 48). Since the place-name evidence indicates that lenition

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<sup>56</sup> There is to my knowledge no evidence that the two other reconstructed Proto-British consonants, \*/j/ and \*/φ/, underwent lenition. In fact, it is unclear whether \*/φ/ – a last phonetic trace of earlier IE \*/p/ – was still present in the Proto-British consonantal inventory. To avoid confusion, I should point out that a new \*/p/ emerged secondarily in Early British from Proto-Celtic \*/k<sup>w</sup>. The latter remained a dorsal consonant in Old Irish; this dialectal difference underlies the designations *P*- and *Q*-Celtic, often used to designate Brittonic and Goidelic Celtic respectively.

had completely taken its course by the fifth century, it is unnecessary to distinguish two developments in the present analysis.<sup>57</sup> Jackson (1953: 696) – whose absolute datings are usually on the late side – placed Late British apocope and syncope in the late fifth and sixth century respectively. Sims-Williams (1990: 245–7), however, would also place syncope in the fifth century. It can be agreed that lenition had indeed been phonologised by the time of the Anglo-Saxon incursions, and nothing in the form of Brittonic toponyms in Medieval English contradicts this conclusion (see Jackson 1953: 553–61). Yet some of the phonological oppositions must have been more distinctive than others. Some products of lenition – such as lenited vs. unlenited \*/n/ – are not distinguished in the orthographies of even the oldest manuscripts, but may be reconstructed on the basis of modern dialects (Irish and Breton in this case). Some phonemic contrasts, however, are found in one language or dialect, but not in another. Such anomalies will be dealt with in the following pages, as the probable phonetic and phonological outcomes of lenition in Late British are surveyed in more detail.

#### 4.2.2.1 Lenition of \*/p, t, k, b, d, g, m/

The plosives \*/p, t, k, b, d, g/ and the bilabial nasal \*/m/ can be discussed together. These consonants assimilated to sonorous surroundings by developing more sonorous allophones.<sup>58</sup> As such, voiceless plosives became partially (or fully) voiced while the voiced plosives and /m/ fricated: \*/p, t, k, b, d, g, m/ > \*[b, d, g, v, ð, γ, ̃]. It is often assumed (e.g. Jackson 1953: 565) that the resulting split of non-lenited vs. lenited consonants also correlated with a contrast in phonetic length, such that non-lenited \*/p, t, k, b, d, g, m/ became phonetically long. What is clear is that, as a result of the lenition of the voiceless stops \*/p, t, k/, the only voiceless stops to remain intervocally were the old, rare voiceless geminates, e.g. PBr. *brokkoh* ‘brock, badger’ (< \**brokkos*), PBr. *kattoh* ‘cat’ (< \**kattos*).<sup>59</sup> It is unclear whether intervocalic voiceless stops which derive from old geminates were still phonetically long in Late British; it is possible that they had simplified by this time.<sup>60</sup> It is likewise unclear what the glottal settings of the plosives were. Since plosives cannot be lengthened, they presumably had delayed release and may have been phonetically glottalised, indeed there could also have been dialectal variation. Greene (1956, 1966) argued that due to their lack of functional load following lenition, intervocalic geminates

<sup>57</sup> For a discussion of the actuation of lenition in prehistory, see McCone (1996: 81–98).

<sup>58</sup> By ‘sonorous’ I mean weaker in terms of consonantal strength in the sense of Vennemann (1988).

<sup>59</sup> If, as is sometimes assumed (e.g. by McCone 1996: 82), \*/p, t, k/ lenited to \*[b̥, d̥, g̥], and \*/b, d, g/ lenited to \*[v, ð, γ], it is also possible that fully voiced stops only existed as geminates \*[b:, d:, g:]; these voiced geminates seem to have arisen out of consonantal groups, e.g. \**ad-bero-* ‘stream, estuary’ > \**abbero-* > \**abero-* W, B *aber* [a:ber].

<sup>60</sup> According to Hammond (1997: 11), short consonants may also be classed as geminates if they are ambisyllabic (i.e. if the syllable boundary is situated within the consonant itself).

were most likely simplified before British spirantisation (dated to the mid or later sixth century by Jackson 1953: 696).<sup>61</sup> The same uncertainty about the nature of the geminate plosives could also apply to \*/m/ and \*/s/. The nasal \*/m/ underwent lenition and ultimately yielded the nasalised fricative \*/ṽ/ – a consonant foreign to (Pre-)Old English. But already in Proto-Celtic a bilabial nasal also existed as a geminate, namely in intervocalic position as a result of the assimilation of PIE \*/sm/ to \*[m:], and this was unaffected by the lenition process. Similarly, simple \*/s/ was lenited to \*/h/ and was subsequently lost intervocally; however, by assimilation of the clusters \*/st/ and \*/ns/, a new sibilant \*/s:/ was created in intervocalic position. Yet if Greene’s proposal is to be taken seriously, we cannot be certain that Late British geminate consonants were actually pronounced as long consonants \*[p:, t:, k:, m:, s:] or had already degeminated due, perhaps, to their lack of functional load.

#### 4.2.2.2 Lenition and further developments of PCl. \*/s/

It was noted above that \*/s/ lenited to \*/h/, but in fact the development of PCl. \*/s/ is so complex in Brittonic that it calls for a separate discussion – indeed, some Celticists choose not to view the change \*/s/ to \*/h/ as part of the lenition process (e.g. Jackson 1953: 515–17, Zimmer 1994). To illustrate the problem, we need only look at the development of PCl. \*/s/ in initial position. In all Greek and Roman sources, as well as in Dark Age inscriptions, initial \*/s/- is rendered as a sibilant, e.g. *Sabrina* ‘the Severn’ in the works of Tacitus and Ptolemy. Yet in later sources initial \*/s/ appears as ⟨H, h⟩, beginning with *Vita Samsonis* (ca. 600), where the Bristol Channel is named *Habrinum mare*, compare W *Hafren* (Jackson 1953: 517–18). As a rule of thumb, native \*/s/ (in contrast to \*/s/ from Latin loans) always yields /h/; there are just a handful of exceptions to this rule, such as OW *seith*, OB *seith*, MCo. *seyth*, ‘seven’ < PIE *\*septm̥* (though Falileyev 2000: s.v. believes this British form may be from Latin *septem*). Most curious, however, are rare doublet forms with *h/s* variation occurring within individual or separate branches of Brittonic. Schrijver (1995: 377) lists the following examples: W *sedd* (f) ‘seat’ but W *hedd* (m) ‘peace, calm’ (both from PCl. *\*sed-*); MB *sizl* ‘filter’ but MW *hidyl* ‘sieve, filter’ (both from < PCl. *\*sītlom*); MW *sil* (collective) ‘race, spawn’ but MW *hil* (f/m) ‘seed, offspring’ and B *hil* ‘race, seed, offspring’ (from PCl. *\*sīlo-*, cf. OIr. *síl* (n. *o*-stem) ‘seed, descendants’). Moreover, some Brittonic place- and river-names appear in (Old) English with ⟨S⟩ and some with ⟨H⟩ (Jackson 1953: 518–20). As stated above, Latin /s/ generally remains a sibilant in British in numerous loans, e.g. OW *sich*, OB *sech*, MC *sech* ‘dry’ < L *siccus*, OW *suh*, OC *soch*, B *souc’h* ‘ploughshare’ < L *soccus*, there are few exceptions to this rule, one being MW *hestawr* ‘quantity of two bushels’ from L *sextārius*. Thus, the most noticeable feature of the development

<sup>61</sup> The voiceless fricatives \*[f, θ, χ] which derive from the PCl. geminates \*/p:, t:, k:/ are treated as single consonants for the purposes of quantity rules in Late British (Jackson 1953: 341). This situation tends to support Greene’s argument that the old geminates were simplified before spirantisation ever took place.

of \*/s/ in British is its twofold distribution: native \*/s/ > /h/ vs. Latin /s/ > /s/. Two explanations have been suggested to explain this discrepancy. First, there were two types of /s/ in Brittonic which underwent separate developments. Second, native \*/s/ became /h/ quite early – first by lenition but then by extension to other, non-leniting environments – yet Latin loanwords with \*/s/, which were introduced later, no longer took part in these changes. Both proposals call for more detailed discussion.

The first explanation is associated with Jackson (1953: 517–21). He assumed that native \*/s/ had a unique articulation by about the first century AD: ‘a kind of weak lisping’ (1953: 517). He chose to designate it as ‘Σ’ – later he suggested, in a footnote, that \*/Σ/ may have been phonetically something like [ʃh] (1953: 517 note 2). Ultimately, this \*/Σ/ became /h/ in about the sixth century. Jackson’s explanation can then account for the different development of Latin loans in Brittonic: Latin /s/ was, to quote Jackson (1953: 517), ‘strongly hissed’, not lisped like native /s/ – in other words, there were two *s*-phonemes. According to Jackson, the Britons adopted the alien ‘hissed sound’ which, unlike native /s/, did not lenite. Thus, by assuming native \*/s/ was still a sibilant, Jackson was able to explain why Anglo-Saxons rendered numerous place-names and river-names with ⟨S⟩ not ⟨H⟩. One might also surmise that the curious lisped *s* could have been adopted as either /s/ or /h/ by Pre-Old English speakers, for whom the phoneme was foreign.

Problematic for Jackson are the exceptional forms in British which did not undergo the change, or which show twofold reflexes with /s/ and /h/. To explain these, Jackson notes that from an early date the initial cluster \*/st/ also developed to \*/s/. He then argues that some etyma with \*/Σ/ were apparently derailed from their normal course of change and merged with ‘hissed’ \*/s/ (< Brit \*/st-/ , Lat /s-/). Further, Jackson dismisses the majority of the *H*-variants found in adopted place-names in English: ‘almost all of them are doubtful’ (1953: 518). Indeed, Sims-Williams (2003: 286) also thinks that the change /Σ-/ > /h-/ only ‘became perceptible to English-speakers when they reached Staffordshire and Worcestershire, presumably in the sixth century’. Sims-Williams’ (1990: 241) conclusion is based on the forms: Hamps (Staffordshire), ME *Hanespa* < PBr. \**samo-sispā*: W *Hafhesp*; Ennisk (Worcestershire), OE *hennuc* < \**senāc*: W *Henog*. A problem in this regard are the various *Humber*-rivers and -streams attested throughout England (Yorkshire, Lincolnshire; Oxfordshire, Gloucestershire, Herefordshire, Bedfordshire, Huntingdonshire, Dorset, Durham). Ekwall derives such names tentatively from a British form \**sumbro* ‘good water/river/stream’. Jackson (1953: 519) is sceptical about this etymology, and also complains that ‘neither Ekwall nor Förster gives any consideration to the possibility that some at least of these names may not be Celtic at all, but pre-Celtic’. Most importantly, however, Jackson’s analysis makes clear that he assumes there were three phonemes – \*/s/, \*/Σ/ and \*/h/ – in Brittonic at the time of the Anglo-Saxon settlements, irrespective of the etymology of the Humber.<sup>62</sup>

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<sup>62</sup> Before the presumed change of \*/Σ/ to /h/ in the first half or mid sixth century (Jackson 1953: 696), Jackson reconstructs a phoneme \*/s/ (mainly from Latin loans), a phoneme \*/Σ/ (the usual

An altogether different proposal has been submitted by Schrijver (1995: 377–83). He maintains that British \*/s/ did once lenite to \*/h/, but argues that PCl. \*/st/ also had a lenited allophone \*[s], thus leading to the unlikely situation of \*[s] standing in a leniting environment, which would effectively disrupt any regularity that s-lenition may once have had. This rather convoluted state of affairs regarding lenition of British \*/s/ and \*/st/ can be better expressed in diagrammatic form, as in Fig. 1 (based on Schrijver 1995: 38).<sup>63</sup>



Figure 1. Lenition and non-lenition of PCl. \*/s/ and \*/st/ in Brittonic

The confusion created by this situation would presumably be reason enough to mark the departure of \*/s ~ h/ from the system of British lenition, which, if Schrijver's hypothesis is correct, was probably before the main influx of Latin loans that presumably entered British mostly in the third and fourth centuries. The main criticism against Schrijver's thesis has already been raised in a review by Russell (1997: 149): how does one explain the quite numerous Brittonic place- and river-names in English with initial ⟨S⟩ and, in particular, how does one explain doublets for rivers like English *Severn* vs. Welsh *Hafren*? Schrijver (1995: 382) explains that while lenition of \*/s/ had stopped quite early, allomorphic alternations must have continued to exist, e.g. W *sedd* (f) 'seat' but W *hedd* (m) 'peace, calm' (< PCl.\**sed*-). Hence variant adoptions in \*/s/ and \*/h/ are attested in toponyms. More recently, however, Schrijver (2002) has argued that much of eastern Lowland Britain was probably not Brittonic but Latin speaking by the time of the Anglo-Saxon migrations, resulting from Brittonic to (British) Latin language shift during the centuries of Roman rule. Many place-names may have been taken into Latin at an early stage with initial \*/s/ – perhaps in the first two centuries AD – and would consequently have remained as such in Latin, later to be acquired by Anglo-Saxons, either in Britain or, in the case of important rivers and cities, prior to this.<sup>64</sup> Whether one thinks that \*/s/ was initially part of the lenition process or not, it is evident that in native words \*/s/ underwent an almost wholesale change to \*/h/ (or similar), perhaps via an intermediate sound, at an early period.

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reflex of native British \*/s/), and \*/h/ (as in river names such as the Humber, which he thinks may be pre-Celtic).

<sup>63</sup> Presumably, systematic lenition of \*/s/ and \*/st/ was lost before the main influx of Latin loans, which preserved /s/, during the Roman period.

<sup>64</sup> Several years ago, Schrijver mentioned this scenario to me as a possible explanation for doublet forms such as *Severn* and *Hafren*, but as far as I know he has yet to publish his idea.

Significantly, both Jackson's and Schrijver's proposals assume that /s/ and /h/ existed as phonemes in initial position before the Anglo-Saxon settlements of the fifth century.<sup>65</sup>

#### 4.2.2.3 Lenition of \*/n, l, r/

The phonetic interpretation of the lenition of \*/n, l, r/ is somewhat complex. In Breton dialects, unlenited /n, l, r/ are usually pronounced longer than their lenited variants, but in Welsh a more salient contrast arose between the initial unlenited and lenited lateral and rhotic consonants (note that no phonetic contrast is attested for /n/ in Welsh). Schrijver (2008: §3.8) thinks that unlenited *r* in Welsh (cf. W /r̥/) likely 'represents the regular result of sandhi \*-s r- > \*h r- > -ø rh-, which was generalised in all cases of word initial r-', while Morris-Jones (1913: 162, 177) posited that both /l/ and /r̥/ arose from \*/sl/ and \*/sr/ clusters in external sandhi, i.e. \*/s/ + /l/ > \*/hl/, \*/s/ + /r/ > \*/hr/, \*/hr/ > W /l/, /r̥/.<sup>66</sup> In a thorough assessment of the phenomenon, Jackson (1953: 473–80) drew attention to /hr/ in the Breton Cornouailles dialect and possibly in Cornish manuscripts, which probably indicate that aspirated or, by assimilation, voiceless \*/r̥/ goes back to the Late British period (though the situation with *l* is uncertain). First evidence from English sources that unlenited *l* and *r* were phonetically voiceless or preaspirated in Welsh comes from the tenth and eleventh centuries and is restricted mainly to place-names. (It should be pointed out that there is no reason to suggest that Anglo-Saxons would have taken on the unlenited forms \*/hl, hr/ rather than the lenited forms \*/l, r/ anyway.) Based on the conflicting evidence, Jackson has suggested that the voicelessness or the aspiration of the unlenited variant was facultative in Late British before ultimately developing into the primary contrast of lenition in Welsh. This would tie in with the development of the fortis–lenis contrast in Welsh plosives, which relies instrumentally on the opposition of aspiration vs. non-aspiration in a way that is different from South Western British, where there are only traces of a similar development in some dialects (Jackson 1967: 349). The phonation of the Welsh plosives is especially identifiable in the nasal mutation (late eighth century; see Jackson 1953: 697). In this change, which takes us outside the time frame of this investigation, voiceless and voiced plosives assimilate to preceding nasal consonants; however, the aspiration vs. non-aspiration contrast of the respective voiceless vs. voiced plosives is transferred to the particular nasal consonant: PBr. \*/n + p, n + t, n + k/ > OW/MW/W *mh, nh,*

<sup>65</sup> Jackson thought that /h/ in many toponyms and river-names, e.g. in *Humber*, was unlikely to be a product of Brittonic \*/s/, believing it to be, in such instances, a loan phoneme from a pre-Celtic language. Also, if Schrijver is right to assume a major language shift to Latin in Lowland Britain it is quite possible that /h-/ was lost here like in other varieties of Vulgar Latin. Tristram (2008) suggests that *h*-dropping in southerly dialects of Old and Middle English could be explained with reference to a British Latin substrate (see 6.2.2.4).

<sup>66</sup> If this is so, one might wonder whether an original \*/ŋ/ from \*/hn/ might also be reconstructed, but was lost at a prehistoric stage. In theory, this is not implausible since the cluster [hn] is phonotactically more unstable than [hl] and [hr] (see Lutz 1991: 19–73).

*ngh* /m<sup>h</sup>, n<sup>h</sup>, ŋ<sup>h</sup>/ but PBr. \*/n + b, n + d, n + g/ > OW/MW/W /m, n, ŋ/.<sup>67</sup> In short, the aspiration correlation became central to the Welsh consonantal system only.

#### 4.2.3 Creation of voiceless fricatives

Further assimilatory changes involving PCl. \*/s/ in consonant clusters had far reaching effects on the Brittonic consonants, especially with the creation of new voiceless fricatives \*/f, θ, x/. An overview of these developments (based on the detailed survey in Schrijver 1995: chapter 9) is presented in Table 3.

Fricative	(< *s-cluster)	Late British (< Proto-Celtic, Latin)	Middle Welsh
*/f/	sϕ-	* <i>fer</i> (< PCl. * <i>sϕeret-s</i> )	<i>fer</i> ‘ankle’
*/f/	TsbV	* <i>difer</i> (< PCl. * <i>d-eks-ber-</i> )	<i>differ-</i> ‘defend’
*/f/	-sw-	* <i>ufel</i> (< PCl. * <i>oiswel-</i> )	<i>ufel</i> ‘fire’
*/fl/	V# spl-	* <i>flet</i> (< PCl. * <i>splitā</i> )	<i>flet</i> ‘trick’
*/fr/	V# srV-	* <i>fro yn</i> (< PCl. * <i>srognā</i> or <i>sroknā</i> )	<i>froen</i> ‘nostril’
*/fr/	V# spr-	* <i>fraçθ</i> (< PCl. * <i>sprag-to</i> )	<i>ffraeth</i> ‘swift, ready’
*/θ/	VsdV	* <i>niθ</i> (< PCl. * <i>nisdo-</i> )	<i>nyth</i> ‘nest’
*/θr/	VstrV	* <i>caθr</i> (< L <i>castrum</i> )	<i>caer</i> ‘fortress’
*/xw/	sw-	* <i>xwoir</i> (< PCl. * <i>swesūr</i> )	<i>chwaer</i> ‘sister’
*/x/	-sϕ-	* <i>wæxer</i> (< PCl. * <i>we(k)sϕero-</i> )	<i>ucher</i> ‘evening’
*/x/	-ϕs-	* <i>txel</i> (< PCl. * <i>(o)uϕsēl-</i> )	<i>uchel</i> ‘high’
*/x/	VskV	* <i>bē(i)x</i> (< Pre-PCl. <i>bask-jo-</i> )	<i>beich</i> ‘load, burden’
*/x/	VksV	* <i>dex-</i> (< PCl. * <i>deks-</i> )	<i>deheu</i> ‘right, south’
*/x/	Tsg-	* <i>dix(s)-ylenn-</i> (< PCl. * <i>d-eks-glendn-</i> )	<i>dichlyn</i> ‘choose’
*/lx/	lsk	* <i>talx</i> (< PCl. * <i>tal-skV-</i> )	<i>talch</i> ‘oatmeal’
*/rx/	rsk	* <i>arx</i> (< PCl. * <i>ϕarsk-</i> )	<i>arch-</i> ‘request’
*/xw/	skV <sup>FRONT</sup>	* <i>xwedl</i> (< PCl. * <i>sketlo-</i> )	<i>chwedl</i> ‘story’

Table 3. Late British fricatives derived from /s/ plus consonant clusters

The developments outlined above are attested in all Old British dialects (Welsh, Cornish, Breton); as such they can be considered Proto-British and need not be dated beyond the sixth century.<sup>68</sup> However, there is evidence to suggest that the changes were not contemporaneous. Initial /f/ in the early Latin loan *Febrarius* ‘February’ was clearly replaced by initial /xw/, as witnessed still in W *Chwefror*, and the same process also occurred with Latin *fibula*, which shows both reflexes, compare MW *hual* beside OW *fual*. Thus, at the time of early Latin

<sup>67</sup> For details on the simplification of PBr. /mb/, nd/ and /ŋg/, see Jackson (1953: 508–13).

<sup>68</sup> Jackson (1953: 696) dates spirantisation to the mid or later sixth century; Sims-Williams (1990: 250) thinks an earlier date is more likely.



borrowings, perhaps during the first two centuries AD, /f/ may not have existed in British, while /xw/ surely must have done (either from PCl. \*/sw-/ or from PCl. \*/sk/ before a front vowel; see Table 3). Later Latin loans keep /f/, however, indicating that British subsequently acquired \*/f/ either from the numerous sources listed above or from Latin itself.

#### 4.2.4 Spirantisation

There are two schools of thought on the mechanism which served to create further voiceless fricatives, known as spirantisation. According to Jackson, \*/s/ > (\*/Σ/) > /h/ had an instrumental role in changing voiceless plosives into voiceless fricatives in external sandhi, namely as part of Brittonic spirant mutation. Jackson thought that the aspirate, upon assimilation with a following voiceless plosive, caused its gemination, and that it was essentially a property of voiceless plosive geminates to undergo spirantisation, especially since it is clear that original voiceless geminates did undergo spirantisation, e.g. PBr. *Brokkos* > MW, OCo. *Broch*, B *broc'h* ‘brock, badger’. A variation on Jackson’s explanation, however, would be to assume that the aspirate itself (not gemination) was the motor for spirantisation in external sandhi, such that it gave rise to strongly pre-aspirated voiceless stops,<sup>69</sup> ultimately producing voiceless fricatives (i.e. \*/h/ + \*/p, t, k/ > /f, θ, x/, with loss of /h/) as in other positions as outlined in 4.2.3 above. By this analysis, the spirantisation of the rare voiceless geminates merely became part of the same development, as they were probably also accompanied by some secondary feature – if not a preceding glottal aspirate then a preceding glottal stop. The same effect could possibly explain the spirantisation of voiceless plosives after the loss of other consonants (sometimes known as aspirate mutation), e.g. after OW *ha(c)* (< PCl. *\*at-k<sup>w</sup>e*) ‘and’, compare OW *ha chepi* /a χefi/ ‘and you will get’ (but with preservation of the final consonant <c> /g/ when before words beginning with a vowel such as OW *hac in ir gueleri* ‘and on the calendar’). Likewise, OW *ni choilam* ‘I do not trust’, where the final dental of LBr. *\*nid* has been lost before a consonant which has undergone spirantisation, although the dental surfaces as <t> (= /d/) before vowels as, e.g. in OW *nit arcup* ‘cannot express’.<sup>70</sup> However, it is unclear whether the frication of voiceless and voiced plosives after \*/t/ and \*/l/ was part of the same process of spirantisation, e.g. L *corpus* > *\*korpoh* (by lenition) > *\*korfo(h)* (spirantisation) > MW *corf* ‘body’ (see further Russell 1985, Sims-Williams 2008).<sup>71</sup>

<sup>69</sup> Or rather pre-affricated stops, if \*/h/ changed to a \*[x] before voiceless stops, since this was a phonotactic rule of Brittonic.

<sup>70</sup> The examples given here are taken from Schrijver (2008: §3.8). The first two Old Welsh examples are from the Old Welsh Computus fragment (Cambridge, University Library, Add. 4543). The last two are from *Liber Commonei* and the nine stanza poem found in the Juvenius’ Gospels (Cambridge, University Library, Ff. 4–42).

<sup>71</sup> Like spirantisation in external sandhi, the change is found in all Old British dialects (Welsh, Cornish and Breton). Of the three British legal terms found in the in the Cumbrian *Leges inter*

Following Greene (1956, 1966), most scholars do not hold \*/h/ responsible for spirantisation of voiceless plosives in Brittonic at all (e.g. Harvey 1984, Thomas 1990). Instead, it is argued that \*/h/ merely inhibited lenition and that with the loss of \*/h/ voiceless plosives came to stand in sonorous positions and were spirantised as part of a new but different lenition process. Another possibility, though quite a speculative one, would be that assimilation to the glottal aspirate led first to the formation of aspirated stops – thus marking a change from a possible earlier voiceless–voiced system, which may have existed at the time of lenition as described at the beginning of this section. This transition could then have paved the way for spirantisation in Late British intervocally and after resonants, as envisaged by Greene (1956, 1966).<sup>72</sup>

In the present context, the results as well as the date of the changes are our main concern. In particular, it must be established whether the change had taken place in Late British at the time of the Anglo-Saxon settlements or not. Jackson (1953: 696) in his chronological survey dates the change quite late, namely to the mid or later sixth century – it could hardly be later than the sixth century because it is common to Cornish, Breton and Welsh, suggesting that the change arose when there was some form of Brittonic unity. Based on what little Old English evidence there is, Jackson concluded that spirantisation had not yet occurred at the time of the earliest settlements. By contrast, Sims-Williams (1990: 249–50) has argued that there is too little evidence to decide the matter, and what little evidence there is could be open to different interpretations, which could point to an earlier dating. He remarks that the ‘non-writing of voiceless spirants in most inscriptions is insignificant, given their general conservatism’. However, personal names with the element *BROHO-* (where ‘H’ represents a velar fricative, as in W *broch* < PBr. *\*brokkos*) do start to appear in inscriptions from the mid-sixth century if not earlier. Sims-Williams likewise rejects OE *brocc* ‘brock, badger’ as evidence for a non-spiranticised variant in Late British, arguing that Anglo-Saxons may have substituted /k/ for the Late British dorsal, probably uvular, fricative /χ/, since there are indications that even at an early stage of Old English the dorsal fricative [x] had been lenited to an aspirate and was lost very

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*Brettos* and *Scotos* (ca. 1000), namely *galnes* or *galnys*, *mercheta* and *kelch*, the latter two evidence the same Old British frication of voiceless plosives after liquids, compare Welsh *merch* ‘daughter’ and *cylch* ‘circuit’. The etymon *galnes* or *galnys* is equivalent to Welsh *galanas* ‘blood-fine; compensation for murder’; the Cumbric form evidences syncope (Jackson 1953: 9–10).

<sup>72</sup> Martinet thought it ‘more likely that the aspirated pronunciation of voiceless stops, as we find it today in Celtic languages spoken in the British Isles, results from an insular innovation’ (1952: 201). He thinks that a voice contrast in plosives was original in Celtic and this system underwent lenition (or at any rate lenition of voiced plosives, which is now assumed to have been the earliest stage of lenition by many scholars; see Sims-Williams 2008: 510). His analysis correlates well with recent typological research into the relationship between glottal features and lenition types (see e.g. Spaargaren 2008).

early, first intervocally and then in final position (see Chapter 4).<sup>73</sup> Further, it might be added that OE *broc* may have been lexically supported by a native Germanic word with close semantic connections, namely OHG *brakko* and G *Bracke*, Du. *brak* ‘beagle’ (see Schrijver 1995: 171, Kroonen 2006: 21 for etymological discussion). A possible fragment of evidence for early spirantisation is afforded by the name of the Saxon shore fort *OTHONA* (< \**Ottōnā*), Bede’s *Ythan-cæstir* (Bradwell-on-Sea, Essex). But Coates (in Coates & Breeze 2000: 167–71) argues that the derivation of this etymon is very doubtful and that different etymologies that do not consider spirantisation are stronger.

#### 4.2.5 Provection (= devoicing of voiced obstruents)

Knowledge of whether intervocalic voiceless plosives had or had not become fricatives would seem very important for this enquiry, because Old English did have voiceless plosives intervocalically (see Chapter 5). Yet there is general agreement among Celticists (e.g. Jackson 1953: 696, Greene 1956: 289) that at the time when spirantisation occurred, another assimilatory change resulting from syncope of unstressed medial vowels took place, namely provection, which served to create new intervocalic voiceless plosives, e.g. \**kloko-penno*- ‘skull’ > \**klogobenno*- (by lenition) > \**klogbenn* (by syncope) > \**kloppen* (by provection) > MB *klopenn*; \**ati-daw-ino*- > \**adiðawino*- > *edðewin* > \**ettewin* > MW *etewyn* ‘firebrand’, \**caletisamo*- ‘hardest’ > *caledhaṽ*, PBr. \**calettaṽ*, MB *caletaff* (see Jackson 1967: 326–7). Based on this assessment, voiceless plosives underwent spirantisation as new voiceless plosives were created by provection. Like the old intervocalic voiceless plosives, the new ones may well have been phonetically long, having arisen from the assimilation of two consonants by provection, and they would have had no short counterparts.

### 4.3 Summary

Lenition, including the aberrant developments of \*/s/, as well as spirantisation and provection led to the creation of the Late British consonantal system as presented in the synchronic overview at the outset to this chapter. A simplified summary of some of the ways in which the Late British consonant phonemes may be derived from Proto-Celtic, including later reflexes in Middle Welsh, is presented in Table 4.

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<sup>73</sup> Some support for this idea is found in the place-name *Moccas* in the Welsh part of Herefordshire, from Welsh *moch* ‘pig’ + *rhos* ‘moor’, which surely must have had a uvular or velar fricative at the time of Anglo-Saxon adoption.

Consonant	Late British (< Proto-Celtic)	Middle Welsh
/p/	* <i>pimp</i> (< * <i>k<sup>w</sup>enk<sup>w</sup>e</i> )	<i>pymp</i> ‘five’
/t/	* <i>teyl̥ū</i> (< * <i>tego-slougo-</i> )	<i>teylu</i> ‘household’
/k/	* <i>cant</i> (< * <i>kantom</i> )	<i>cant</i> ‘hundred’
/b/	* <i>bux</i> (< * <i>bukkōs</i> )	<i>bwch</i> ‘buck’
/d/	* <i>dadl</i> (< * <i>datlā</i> )	<i>dadyl</i> ‘meeting’
/f/ <sup>1</sup>	* <i>fer</i> (< * <i>sϕeret-s</i> )	<i>fer</i> ‘ankle’
/θ/ <sup>2</sup>	* <i>a theyw</i> (< * <i>ak tegwo-</i> )	<i>a thew</i> ‘and fat’
/x/ <sup>1</sup>	* <i>Waxer</i> (< * <i>we(k)sϕero-</i> )	<i>ucher</i> ‘evening’
/v/ <sup>3</sup>	* <i>eið vux</i> (< * <i>esjo bukkōs</i> )	<i>y fwch</i> ‘his buck’
/ð/ <sup>3</sup>	* <i>eið ðadl</i> (< * <i>esjo datlā</i> )	<i>y dadyl</i> ‘his meeting’
/ʏ/ <sup>3</sup>	* <i>br̥y̥ant</i> (< * <i>brāgant-</i> )	<i>breuant</i> ‘throat’
/s/ <sup>1</sup>	* <i>ser</i> (< * <i>ster-</i> )	<i>ser</i> ‘stars’
/m/	* <i>mel</i> (< * <i>meli-</i> )	<i>mel</i> ‘honey’
/N/ <sup>4</sup>	* <i>Niθ</i> (< * <i>nisdo-</i> )	<i>nyth</i> ‘nest’
/n/	* <i>eið niθ</i> (< * <i>esjo nisdo-</i> )	<i>e nyth</i> ‘his nest’
/ŋ/ <sup>5</sup>	* <i>Long</i> (< * <i>lungā-</i> )	<i>llong</i> ‘ship’
/L/ <sup>4</sup>	* <i>Long</i> (< * <i>lungā-</i> )	<i>llong</i> ‘ship’
/l/ <sup>3</sup>	* <i>eið long</i> (< * <i>esjo lungā-</i> )	<i>e long</i> ‘his ship’
/R/ <sup>4</sup>	* <i>R̥ād</i> (< * <i>roudo-</i> )	<i>rud</i> ‘red’
/r/ <sup>3</sup>	* <i>eið ros</i> (< * <i>esjo roso-</i> )	<i>e ros</i> ‘his premonitory’
/w/	* <i>Wenn</i> (< * <i>windā-</i> )	<i>gwenn</i> ‘white’
/j/	* <i>jowank</i> (< * <i>jowanko-</i> )	<i>ieuanc</i> ‘youth’
/v̥/ <sup>6</sup>	* <i>o v̥el</i> (< * <i>o meli-</i> )	<i>o fel</i> ‘from honey’
/h/ <sup>7</sup>	* <i>hen</i> (< * <i>senos</i> )	<i>hen</i> ‘old’
<b>Notes:</b> 1. PCl. /sϕ/ > LBr. /f/ (4.2.3). 2. Fricative results from spirantisation (4.2.4). 3. Consonant results from lenition (4.2.2.1). 4. Initial non-lenited /N, L, R/ were probably phonetically long in LBr. (4.2.2.3). 5. The cluster /ŋg/ simplified to /ŋ/ in Late British (4.2.2.3). 6. Lenition of /m/ created a nasalised fricative /v̥/ which contrasted with /v/ (from lenition of /b/). The nasalised fricative merged later with /v/ (4.2.2.1). 7. Lenition of /s/ > /h/ (4.2.2.2).		

Table 4. Late British consonants and their derivation in summary



## 5 The consonants of Pre-Old English

This chapter provides a descriptive and historical introduction to the consonants of Pre-Old English. Although the classification of the consonantal phonemes and their allophones is complicated by Old English spelling practices, it is fair to say that most differences in opinion among Old English scholars centre around whether certain consonants had the status of phonemes or allophones at given points in time.

### 5.1 Synchronic overview of Pre-Old English consonants

The consonant phonemes of Pre-Old English are arranged in Table 5 in terms of four places of articulation (labial, coronal, dorsal and glottal) and seven manners of articulation (plosives, fricatives, sibilants, nasals, laterals, rhotics and approximants). Note that all consonants in Table 5, with the exception of /w/ and /j/, also appeared as geminates.

	Labial	Coronal	Dorsal	Glottal
Plosives	p b	t d	k	
Fricatives	f	θ	ɣ	h
Sibilants		s		
Nasals	m	n		
Lateral		l		
Rhotic		r		
Approximants	w		j	

Table 5. Pre-Old English consonant phonemes

The inventory of Pre-Old English consonant phonemes presented in Table 5 disregards a great deal of phonetic variation, however. A large number of Pre-Old English consonant phonemes had salient positional variants. Some scholars believe that two of these variants – the palatalised velars [c<sup>j</sup>] and [ɣ<sup>j</sup>] – may even have gained phonemic status by the fifth century (instead of being allophones of /k/ and /ɣ/ respectively). Taking these positional phonetic variants into account, the actual inventory of Pre-Old English consonant phones in the fifth and sixth century may have resembled that in Table 6.<sup>74</sup>

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<sup>74</sup> The allophone which occurs initially is regarded as primary and determines the designation of the phoneme. All consonants and vowels vary phonetically according to their surroundings. This table therefore does not aim at absolute completeness. Rather it records what might be considered the most salient phonetic variants. Omitted, for example, is the variation between palatal and velarised /l/ and positional variants of /r/, though these are considered in 6.2.4.

	Labial	Coronal	Palatal dorsal	Velar dorsal	Glottal
Plosives	p      b	t      d	[cʲ]   [ɟʲ]	k      [g]	
Fricatives	f    [β] [v]	θ      [ð]	[ç]	[x]      ɣ	h
Sibilants		s      [z]			
Nasals	m	n		[ŋ]	
Lateral		l			
Rhotic		r			
Approximants	w		j		

Table 6. Pre-Old English consonant phonemes and allophones

The remainder of this chapter will provide details on how the consonantal system of Pre-Old English can be derived from that of Proto-Germanic.

## 5.2 Derivation of Pre-Old English consonants

This section how the reconstructed Pre-Old English consonant system is arrived at, based on information drawn from a variety of historical, contemporary (i.e. fifth- to seventh-century), and present-day sources. The collection of contemporary or near-contemporary sources of Pre-Old English is rather modest: about ten short runic inscriptions. However, more substantial running texts and glosses begin to appear by the end of the seventh century, and from about this time there is a continuous flow of written Old English, though not necessarily from the same areas of Britain at the same time. The information gathered from these sources must be set against other comparative evidence from older and present-day Germanic languages, in particular Frisian, Dutch and Low German. In addition, the more richly attested later Middle English sources from the twelfth to fifteenth centuries often provide valuable details which add to our understanding of the phonology of Old English. This chapter naturally draws on the work of many previous scholars (in particular Luick 1914–40, Kuhn 1961, 1970, Moulton 1954, 1972, Hogg 1992a, 1992b).

### 5.2.1 *Proto-Germanic consonants*<sup>75</sup>

A traditional reconstruction of the Proto-Germanic consonants is \*/p, t, k, b, d, ɣ, f, θ, s, z, m, n, l, r, w, j, h/, i.e. almost identical to the reconstructed phonemes of Pre-Old English, though with the addition of a voiced sibilant \*/z/. At an early stage in the development of Proto-Germanic, \*/h/ may also still have been a fricative \*/x/ in initial position (indeed it is likely that [x] remained initially in consonant groups, i.e. \*[xn], \*[xl], \*[xr] and \*[xw] for quite some time). As in later-attested Old English, a number of allophonic alternations are also posited for Proto-Germanic. In particular, the voiced plosives \*/b, d/ and the voiced velar fricative \*/ɣ/ had positional plosive and fricative variants: \*/b ~ β/, \*/d ~ ð/ and \*/g ~ ɣ/. The precise details of these alternations and their prehistoric origins do not call for lengthy discussion here. In brief, \*/b ~ β/ and \*/d ~ ð/ are traditionally assumed to have been plosives initially, as geminates and after nasals, but fricatives between vowels, word finally, and after \*/r/ and \*/l/ (though it seems \*/d/ was a plosive after \*/l/). \*/g ~ ɣ/ was a plosive when geminated and after nasals but a fricative elsewhere, including (probably) word initially (see 5.2.5). Finally, the phoneme \*/n/ had a velar allophone \*/ŋ/ before velar consonants, as in Modern English *think* [θɪŋk] (and as in some present-day English dialects of the West Midlands, e.g. *bring* [brɪŋɡ]).

### 5.2.2 *North-West Germanic developments*

From the reconstructed Proto-Germanic consonants, the consonantal systems of the attested Older Germanic languages – Gothic, Runic Norse, Old Icelandic, Old English, Old Frisian, Old Saxon and Old High German – have been derived (e.g. Moulton 1954, 1972). One early change was rhotacism of PGmc \*/z/, which led ultimately to its merger with inherited \*/r/. Rhotacism of \*/z/ cannot be projected into Proto-Germanic, since Gothic, an East Germanic language, shows no sign of the change. It is also debated whether the change was a unified North-West Germanic development. Runic inscriptions from northern Scandinavia distinguish two different, possibly rhotic, consonants until well into the medieval period, namely ⟨Y⟩ (< PGmc \*/z/) different from inherited ⟨R⟩ (< PGmc \*/r/). It is likely that for a while ⟨Y⟩ (< PGmc \*/z/) represented a quite different rhotic phoneme, e.g. it may have been palatalised, voiceless or both (\*/rʲ/, \*/r̥/, \*/r̥ʲ/). Although the merger of the two rhotic phonemes had certainly taken place by the time of the earliest Old English documents, the merger may have occurred fairly late due to dialectal

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<sup>75</sup> In the following section I shall present what might be described as a traditional reconstruction and development of the Germanic consonant system based on the assumption that it derived ultimately from a Proto-Indo-European system of voiceless plosives, voiced plosives and aspirated voiced plosives. I am aware that Germanic in particular has been used to promote the idea that the Proto-Indo-European consonantal system relied on different phonetic contrasts, in particular glottalised consonants. However, a discussion of these issues would go beyond the objectives of the present section. For a discussion of the glottalic theory and its application to Germanic, see Vennemann (1984, 2006).



differences still found in Old English, e.g. OE (West Saxon) *mēd* vs. OE (Anglian) *meord* ‘payment, reward’ (< PGmc *\*mizdō*, cf. Gothic *mizdō*).<sup>76</sup> In short, the early consonantal inventories of the older North and West Germanic languages appear very much like that of reconstructed Proto-Germanic, though *\*z/* had become a rhotic consonant.

### 5.2.3 West Germanic developments

In all West Germanic languages, root-final consonants (other than */r/*) were geminated by a following */j/*, if the root itself was light.<sup>77</sup> The change had the effect of changing light roots into heavy roots, e.g. PGmc *\*þrukjan*, *\*bidjan*, *\*hrugja-* > OE *þryccan* ‘press’, *biddan* ‘bid’, *hrycg* ‘ridge’, thus greatly augmenting the number of geminate consonants in West Germanic. It is unclear to what extent the change led to new geminate consonant phonemes. It is curious that the change known as breaking (see 9.2.5) occurred before a geminate lateral consonant *\*l:/* (e.g. OE *eall* < PGmc *\*all-* ‘all’); but not (at least usually) before an *\*l:/* derived from West Germanic gemination (e.g. OE *tellan* < PGmc *\*taljan* ‘count, tell’). To account for this difference, some scholars have argued that the geminates derived from West Germanic gemination were palatalised and thus were in phonemic opposition to other geminate consonants in Pre-Old English at the time of breaking (see e.g. Liberman 2007). But if such an opposition once existed, it was subsequently lost not only in English but in all other attested West Germanic languages. A further development to affect all West Germanic languages was the abandonment of the plosive/fricative allophony of the dentals: PGmc *\*d ~ ð/* > *\*d/*.

### 5.2.4 Voicing of fricatives

The next prehistoric development to occur was probably voicing of fricatives between voiced sounds: *\*f, θ, s/* > *\*[v, ð, z]*. In brief, fricatives were voiced between vowels and between a vowel and a voiced consonant; but they remained voiceless elsewhere, i.e. in initial and final positions, as well as in medial position when next to a voiceless consonant (see 6.2.2.2 for voicing of fricatives in initial position in southern dialects). A summary of the rules, with illustrative examples from Old English, is presented in Table 7.<sup>78</sup>

<sup>76</sup> More anchor points for dating the merger of the two rhotics are given by Hogg (1992a: 74).

<sup>77</sup> Light roots contain a short vowel plus a single consonant; heavy roots contain a long vowel or are closed by two consonants.

<sup>78</sup> The form *scipfyrð* ‘fleet’, in parentheses, is given only to complete Table 7. The word is clearly a complex of two words *scip* ‘ship’ and *fyrð* ‘army’; no simplex word with the combination voiceless consonant + *f* exists in Old English.

[f, θ, s]				[v, ð, z]		
#	#	C <sup>[-VOICE]</sup> V	V C <sup>[-VOICE]</sup>	V V	C <sup>[+VOICE]</sup> V	V C <sup>[+VOICE]</sup>
<i>fōt</i>	<i>wulf</i>	( <i>scip-fyrd</i> )	<i>sōfte</i>	<i>ġerēfa</i>	<i>þurfan</i>	<i>swefn</i>
‘foot’	‘wolf’	‘fleet’	‘soft’	‘reeve’	‘need’	‘dream’
<i>þorn</i>	<i>bæþ</i>	<i>strengþu</i>	<i>snīþst</i>	<i>snīþan</i>	<i>furþor</i>	<i>fæþm</i>
‘thorn’	‘bath’	‘strength’	‘cut 2.Sg.’	‘cut’	‘further’	‘embrace’
<i>sunu</i>	<i>hūs</i>	<i>miltsian</i>	<i>cyste</i>	<i>ċēosan</i>	<i>clænsian</i>	<i>bōsm</i>
‘son’	‘house’	‘pity’	‘kissed’	‘choose’	‘cleanse’	‘bosom’

Table 7. Distribution of voiceless and voiced fricatives in Old English

Voicing was also dependent on morphological factors. Fricatives in prefixes and suffixes at morpheme boundaries were not voiced, e.g. *þrym-fæst* ‘glorious’, *of-āscian* ‘enquire’, *op-īewan* ‘show’, *lang-sum* ‘tedious’. Nor were they voiced in verbal roots after unstressed prefixes, e.g. *ġe-findan* ‘find’, *a-þencan* ‘devise’, *be-singan* ‘sing’. However, the status of a few morphemes is debated. In particular, Bammesberger (1988: 124) and Fulk (2001: 70; 2002: 95) prefer not to explain voiceless fricatives in the feminine abstract noun suffix *-þu* and the ordinal-suffix *-þa* by morpheme juncture, but as resulting from a rule, first suggested by Luick (1914–40: 845), that fricative voicing did not take place after unstressed vowels, e.g. *streng-þ(u)* ‘strength’ (< \**strangiþu*), *fyl-þ* ‘filth’ (< \**fūlipu*), *seofo-þa* ‘seventh’, *eahto-þa* ‘eighth’. By contrast, Dietz (1997: 168–74) maintains that these two suffixes also fall under the morpheme juncture rule. He regards the productive suffixes *-þu* and *-þa* as lexical, thus akin to *-sum* in *lang-sum* and *-fæst* in *þrym-fæst*, contrasting with inflectional suffixes which do not inhibit voicing, e.g. *hūs-es* ‘houses’, *luf-ode* ‘loved’. He also argues that his account can explain a number of apparent exceptions to Luick’s rule, which states that there was no voicing after unstressed vowels, such as the (assumed historical) voiced fricatives in forms like Old English *adesa* ‘adze’ and *Temese* ‘Thames’.<sup>79</sup>

Voicing of \*/f/ presumably led to the unusual situation of there being two voiced labial fricative allophones, i.e. \*[β] and \*[v], phonemes of \*/b/ and \*/f/ respectively. Many Old English scholars tend to think that this situation is reflected to some extent in the writing systems of the oldest Mercian glossaries, which ultimately date to ca. AD 700. However, already at this time it is clear that two voiced labial fricative allophones [v] and [β] were not consistently differentiated, thus indicating that there was already a merger (it is immaterial whether the merger was at [v] or [β]), even if the spelling system remained to some extent conservative. It will be noticed that, unlike the voiceless fricatives \*/f, θ, s/, the velar \*[x] did not undergo voicing to \*/ɣ/, as might

<sup>79</sup> However, Liberman (2008: 1) thinks that <s> was originally voiceless in these forms. His conclusion is mainly based on the spelling *addice*, which was common in the 16th and 17th centuries. Yet he cannot explain why there should have been no voicing of the sibilant in Old English. With reference to Luick’s rule (cited above), he goes on to comment: ‘One would rather expect voicing under no stress’.

be expected. This is because in medial position \*[x] had almost certainly become an aspirate [h] at the time of voicing (see Hogg 1992a: 284). It is quite possible, however, that the glottal aspirate was voiced to \*[f] in intervocalic position, namely as part of the same voicing process which may ultimately have led to the early loss of intervocalic \*/h/ before the first literary documents of Old English and Old Frisian begin to surface.<sup>80</sup> Yet in syllable codas and in gemination the fricative \*[x] remained. Finally we may note that in terms of chronology voicing of fricatives must have occurred before syncope (ca. 6th century: Luick 1914–40: 321, 847–8), because the dental past tense marker *d* in weak verbs should otherwise have devoiced to *t*, had it come into contact with a voiceless fricative, e.g. *cȳdde* ‘made known’ (< \**cȳþide*) or *ræside* ‘rushed’ (< \**ræside*), but *cyste* ‘kissed’ (< \**kyssida*) (see Campbell 1959: 179–80, Hogg 1992a: 284).

### 5.2.5 Palatalisation of velar consonants

Another development to befall Pre-Old English before the migration to the British Isles was a characteristic palatalisation of the velar consonants by adjacent front vowels (though *never* by front vowels which derive from *i*-mutation, on which see 9.2.6 below). Palatalised velars are differentiated from unpalatalised velars in two northern runic inscriptions from the early eighth century;<sup>81</sup> but Old English Latin-based orthography did not distinguish the palatalised velars. In order to indicate them, the convention of a superscript dot is therefore used by Anglo-Saxonists <ç, çç, ġ, ġġ> – this approach leaves open the possibility of the velar plosives being either palatalised or assibilated, which is very convenient, since assibilation cannot be dated with any precision, though it is fairly clear that it must have taken place by about the ninth century. Indeed, most scholars distinguish between an earlier process of palatalisation and a later process of assibilation, the latter occurring much later and showing variation in Old English dialects.<sup>82</sup> In other words, the velar plosives originally had palatal allophones, \*[c] and \*[ɟ], followed by some form of secondary articulation, probably a palatal glide, which induced dentalisation and assibilation: \*[k] > \*[cʲ] > \*[tʲ] > [tʃ] and \*[g] > \*[ɟʲ] > \*[ʃʲ] > [dʒ]. It is conceivable that dentalisation had already begun in continental times.

<sup>80</sup> As Fulk (1997: 32) points out, Old Saxon orthography indicates the voicing of voiceless fricatives but not the loss of /h/ in similar sonorous positions; thus there is no need to assume that /h/ was immediately syncopated as part of the voicing process in Old English and Old Frisian.

<sup>81</sup> Important in this regard are the Bewcastle Cross (Cumberland AD 700–750) and the Ruthwell Cross runic inscriptions (Dumfries and Galloway AD 700–750) (see Page 2006: 46–7, Ball 1988). Old English Latin-based script sometimes used <e, i> to indicate that the preceding velar was palatal when before back vowels e.g. *secean* ‘to seek’. Both the palatalised and the non-palatalised velar are always written with <c> in the Old English Latin-based script, though very occasionally non-palatalised \*/k/ is written <k> (see Wright & Wright 1925: 162).

<sup>82</sup> See Hogg (1992a: 257–8), Fulk (1998: 146), Minkova (2003: 90–113).

The mechanics of palatalisation of \*/k/ were as follows. Palatalisation of \*/k/ occurred: (1) initially before all primary front vowels;<sup>83</sup> (2a–b) medially, singleton /k(:)/ before \*/i/ and \*/j/; (3) finally, after \*/i(:)/ (see Table 8).

	1. Initial	2a. Medial	2b. Medial	3. Final
	/k/ + FV	/-k-/ + /i(:), j/	/-k:-/ + /i(:), j/	/i(:)/ + /-k/
WGmc	* <i>kin-</i> ‘chin’	* <i>bru<sup>k</sup>i</i> ‘breach’	* <i>pru<sup>k</sup>kjan</i> ‘press’	* <i>dī<sup>k</sup></i> ‘ditch’
Pre-OE	* <i>ċin-</i>	* <i>bryċi</i>	* <i>θrucc<sup>ċ</sup>an</i>	* <i>dīc<sup>(j)</sup></i>
OE	<i>ċinn</i>	<i>bryċe</i>	<i>þryċcan</i>	<i>dīc</i>

Table 8. Palatalisation of West Germanic /k/ in Old English

Palatalisation of \*/ɣ ~ g/ was more complex, it occurred: (1) initially, \*/ɣ/ was palatalised by all primary front vowels; (2a) medially, \*/ɣ/ was palatalised between all front vowels, while (2b) /g:/ was palatalised before and/or after \*/j/ and \*/i/ only; (3) finally, \*/ɣ/ was palatalised by preceding front vowels (see Table 9).

	1. Initial	2a. Medial	2b. Medial	3. Final
	/ɣ/ + FV	/-ɣ-/ + FV	/-g:-/, /ng/ + /i(:), j/	FV + /-ɣ/
WGmc	* <i>yeld-</i> ‘tax’	* <i>hu<sup>y</sup>i-</i> ‘mind’	* <i>wiggja-</i> ‘horse’	* <i>da<sup>y</sup></i> ‘day’
Pre-OE	* <i>jeld</i>	* <i>hu<sup>j</sup>e</i>	* <i>wi<sup>j</sup>fe</i>	* <i>dæ<sup>j</sup></i>
OE	<i>ġield</i>	<i>hyġe</i>	<i>wiċġ</i>	<i>dæġ</i>

Table 9. Palatalisation of West Germanic /g~ɣ/ in Old English

Thus, \*/ɣ ~ g/ shows two outcomes of palatalisation: either it merged with the palatal approximant /j/ (probably by way of a palatal fricative \*[j]) or it assibilated to /d(:)ʒ/. This dual outcome is one of the reasons why two allophones \*/ɣ ~ g/ are posited for Germanic in the first place. By this analysis, the reflex \*[j] is derived from palatalisation of the velar fricative \*[ɣ], and the assibilated variant [d(:)ʒ] may be derived from the velar plosive \*[g]. This, at least, is view of many if not most scholars and will be adopted here (see Campbell 1959: 21, Schulze 1978, Hogg 1992a: 261, Minkova 2003: 113–20, Dietz 2006: 29–150). Others, however, have argued that /g/ (not /ɣ/) existed in initial position, which instead of developing to [d(:)ʒ], as might be expected, underwent a special development to /j/ (cf. Luick 1914–40: 830–2, Moulton 1954: 24, Lass & Anderson 1975: 134). The view that /g/ yielded two outcomes of palatalisation seems a more complicated and therefore a more unlikely proposition. It could be reasonably argued that assuming an initial voiced velar fricative /ɣ/ is also problematic, since one must then assume that it became a plosive /g/ at a later stage. However, the fact that there is a change in alliterative practices around the tenth century, whereby unpalatalised-g no longer alliterated with palatalised-g suggests that an important development, such as occlusion of initial unpalataised-g,

<sup>83</sup> Primary front vowels are front vowels which do not derive from *i*-mutation.

could have occurred in late Old English (see Minkova 2003: 113–20). Finally, the fact that an initial velar fricative is attested in Dutch and some peripheral dialects of Frisian can also be seen as support for an initial voiced velar fricative in Pre-Old English. Admittedly, the situation of \*/ɣ ~ g/ is not entirely settled, and perhaps never will be, but an initial velar fricative seems to me the most likely option. The rather complex series of changes involving \*/ɣ ~ g/ can now be set out in diagrammatic form (see Fig. 2).<sup>84</sup>

Finally, there is the question whether palatalisation of the voiceless velar fricative \*[x(:)] (i.e. the allophone of /h/ in medial and final positions) also occurred. Although it is often assumed that /x/ was palatalised at the same time as the other velars (e.g. Hogg 1992a: 257), this need not necessarily have been the case. It is instructive that a basically identical form of palatalisation of velars is found in Old Frisian, and several scholars link this association to before the Anglo-Saxon settlement of Britain (see Laker 2007: 165 with references). However, Old Frisian and some dialects of Modern Frisian have evidence for palatalisation of \*/k/ and \*/ɣ ~ g/ but no palatalisation of \*[x] (Laker 2007: 176–7). Therefore it cannot be taken for granted that \*[x] was palatalised at the same time as \*/k/ and \*/ɣ ~ g/ and not later.<sup>85</sup>

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<sup>84</sup> Thanks are due to Ricardo Bermúdez-Otero (Manchester) for suggesting the layout in Fig. 2.

<sup>85</sup> The evidence of Old English breaking would suggest that palatalisation of \*/h/ (= [x]) was later than that of \*/k/ and \*/ɣ ~ g/ (see Laker 2007: 177, Smith 2007: 101–2).

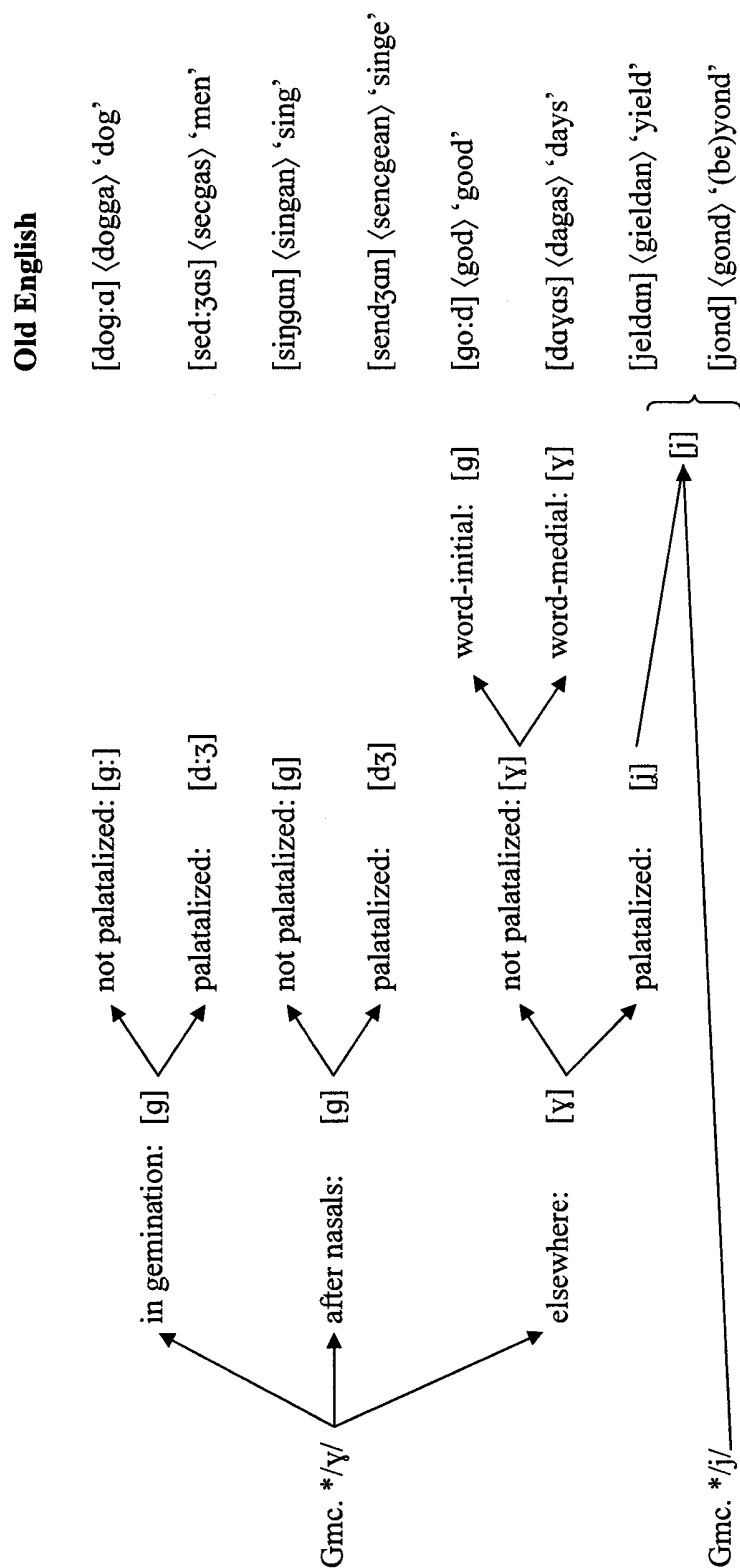


Figure 2. Development of PGmc. *\*/y/* and *\*/j/* in Old English

### 5.3 Summary

As a result of the changes detailed above, Pre-Old English must have gained a consonantal inventory which closely resembled that outlined at the beginning of this chapter. Table 10 offers a summary of some of the ways in which the phonemes of Pre-Old English, along with their assumed allophonic variants, may be derived. In addition, attested Old English forms of the derived words are also provided; in many cases these differ very marginally from the assumed Pre-Old English reconstructions. For this reason I sometimes use the heading ‘(Pre-)Old English’ to indicate that a particular property of phoneme is characteristic not only of Pre-Old English but also of Old English.

Consonant	(Pre-)Old English (< Proto-Germanic)	Old English
/p/	* <i>pæθ</i> (< WGmc * <i>paθa</i> )	<i>pæþ</i> ‘path’
/t/	* <i>tīd</i> (< * <i>tīði-</i> )	<i>tīd</i> ‘time’
/k/ <sup>1</sup>	{ [k] * <i>kyn(n)</i> (< * <i>kunja</i> ) [c] * <i>cin(n)</i> (< * <i>kinnu-</i> )	<i>cynn</i> ‘kin’ <i>ċinn</i> ‘chin’
/b/ <sup>2</sup>	{ [b] * <i>bæθ</i> (< * <i>baθa-</i> ) [β] * <i>jeβan</i> (< * <i>yeβ-a-</i> )	<i>bæþ</i> ‘bath’ <i>giefan</i> ‘give’
/d/	* <i>duru</i> (< * <i>dur-</i> )	<i>duru</i> ‘door’
/f/ <sup>3</sup>	{ [f] * <i>folk</i> (< * <i>fulka-</i> ) [v] * <i>neva</i> (< * <i>nefōn</i> )	<i>folc</i> ‘folk’ <i>nefa</i> ‘nephew’
/θ/ <sup>3</sup>	{ [θ] * <i>θorn</i> (< * <i>θurnu-</i> ) [ð] * <i>snīðan</i> (< * <i>snīθan</i> )	<i>þorn</i> ‘thorn’ <i>snīþan</i> ‘to cut’
/y/ <sup>1</sup>	{ [y] * <i>yōd</i> (< * <i>yōda</i> ) [j] <sup>4</sup> * <i>ġeldan</i> (< * <i>yeld-a-</i> ) [g] * <i>siŋgan</i> (< * <i>seŋgw-a-</i> ) [ɣ] * <i>seŋjan</i> (< * <i>saŋgian</i> )	<i>gōd</i> ‘good’ <i>ġeald</i> ‘tax’ <i>singan</i> ‘to sing’ <i>sencgan</i> ‘singe’
/s/ <sup>3</sup>	{ [s] * <i>sunu</i> (< * <i>sunu-</i> ) [z] * <i>wezan</i> (< * <i>wes-a-</i> )	<i>sunu</i> ‘son’ <i>wesan</i> ‘to be’
/m/	* <i>mōd</i> (< * <i>mōθa-</i> )	<i>mōd</i> ‘mind’
/n/ <sup>5</sup>	{ [n] * <i>nest</i> (< * <i>nista-</i> ) [ŋ] * <i>siŋgan</i> (< * <i>seŋgw-a-</i> )	<i>nest</i> ‘nest’ <i>singan</i> ‘to sing’
/l/	* <i>land</i> (< * <i>landa-</i> )	<i>land</i> ‘land’
/r/	* <i>reġn</i> (< * <i>reȝna</i> )	<i>reġn</i> ‘rain’
/w/	* <i>wæġn</i> (< * <i>waȝna-</i> )	<i>weġn</i> ‘wain’
/j/	* <i>joc</i> (< * <i>juka-</i> )	<i>geoc</i> ‘yoke’
/h/ <sup>6</sup>	{ [h] * <i>hūs</i> (< * <i>hūsa-</i> ) [x] * <i>hæoh</i> (< * <i>hauha-</i> )	<i>hūs</i> ‘house’ <i>hēah</i> ‘high’
<b>Notes:</b> 1. Allophony due to palatalisation of velar consonants (5.2.5). 2. Allophony /b ~ β/ (5.2.1). 3. Allophony due to voicing of fricatives in sonorous surroundings (5.2.4) 4. A palatal fricative allophone [j] is assumed on theoretical grounds; however, merger with /j/ must surely have been almost immediate (5.2.5). 5. /n/ > /ŋ/ in before velar consonants (5.2.1). 6. /x/ > /h/ in initial position (5.2.1).		

Table 10. Pre-Old English consonants and their derivation





## 6 Developments of English consonants

In the present chapter an attempt is made to compare and contrast the consonantal systems of Late British and Pre-Old English. The contrastive analysis aims to identify which Pre-Old English consonants were absent or phonetically different in Late British and may have been susceptible to change. Following on from the contrastive analysis, I investigate a large number of consonant developments identifiable from Old and Middle English sources, and consider whether any of these could potentially have been induced by Brittonic contact. In a number of cases, the possibility of British Latin influence will also be considered, especially when surveying phonological developments in southern and south-eastern dialects of English.

### 6.1 Contrastive overview

Now that the probable inventories of consonant phonemes and their assumed allophonic variants in both Late British and Pre-Old English have been established, it is possible to compare both sound systems in order to assess their similarities and differences. To facilitate such a contrastive analysis, the phonemes and allophones are placed in tables (see Table 11 below; similar tables appear in Chapters 7 and 10). Consonant segments (or groups of segments) are presented in cells. Pre-Old English consonants that did not exist in Late British occupy grey cells. As can be seen from Table 11, Late British had quite a rich inventory of consonants. In fact, as far as can be determined, all consonantal phonemes of Pre-Old English were present in Late British, though a number of their assumed positional variants (allophones) were not.

Table 12 sets out the distribution of the Pre-Old English consonants. It is immediately apparent from the table that not every Pre-Old English consonant occurred in every position of the word (i.e. initially, medially and finally). Differences in distribution between the Late British and Pre-Old English may (or may not) have brought about unexpected change in a situation of language shift. It is significant that almost every Pre-Old English consonant had contrastive phonemic length (i.e. as a singleton or geminate consonant) between vowels. By contrast, in Late British a much smaller number of consonants took part in a length contrast; the majority of consonants in Late British were either phonetically long or phonetically short but did not contrast in terms of their length.

Manner of articulation	Place of articulation											
	Labial			Coronal		Palatal dorsal		Velar dorsal		Glottal		
Late British												
Plosives	p	b		t	d				k	g		
Fricatives	f	v		θ	ð				x	ɣ	h	
Sibilants				s								
Nasals	m			n						ŋ		
Lateral				l								
Rhotic				r								
Approximants	w					j						
Other	ʋ											
Pre-Old English												
Plosives	p	b		t	d		c <sup>j1</sup>	ɟ <sup>j1</sup>		k	g	
Fricatives	f	β <sup>2</sup>	v <sup>2</sup>	θ	ð			ɟ <sup>j1</sup>		x	ɣ	h
Sibilants				s	z <sup>3</sup>							
Nasals	m			n						ŋ		
Lateral				l								
Rhotic				r								
Approximants	w					j						
<b>Notes:</b>												
1. Late British lacks the Pre-Old English palatalised velars *[c <sup>j</sup> ], *[ɟ <sup>j</sup> ] and *[j].												
2. Lenited PCl. */b/ is thought to have yielded first a labial fricative */v/, which may have been bilabial or labiodental in Late British [β ~ v]; in modern Brittonic languages the labiodental fricative [v] is found.												
3. There is no evidence for a voiced sibilant *[z] in Late British.												

Table 11. Late British and Pre-Old English consonants compared

Labial				Coronal				Palatal <sup>1</sup>				Velar			
#C-	-CC-	-C-	-C#	#C-	-CC-	-C-	-C#	#C-	-CC-	-C-	-C#	#C-	-CC-	-C-	-C#
p-	-pp-	-p <sup>3</sup>	-p	t-	-tt-	-t <sup>3</sup>	-t	c <sup>j</sup> -	-cc <sup>j</sup> -	-c <sup>j</sup> -	-c	k-	-kk-	-k <sup>3</sup>	-k
b-	-bb <sup>3</sup>	-β-	-β	d-	-dd <sup>3</sup>	-d-	-d	j-	-jj <sup>j</sup> -	-j-	-j	ɣ-/g-	-gg <sup>3</sup>	-ɣ-	-ɣ/-g <sup>4</sup>
f-	-ff <sup>3</sup>	-v-	-f	θ-	-θθ <sup>3</sup>	-ð-	-θ					h-	-xx <sup>3</sup>		-x
				s-	-ss-	-z <sup>2</sup>	-s								
m-	-mm-	-m <sup>3</sup>	-m	n-	-nn-	-n-	-n								
				l-	-ll-	-l-	-l								
				r-	-rr-	-r-	-r								
w-		-w-	-w					j-		-j-					

### Notes:

1. There is no evidence to suggest that the palatal consonants (third column from left above) were present in Late British (with the exception of /j/).
2. The voiced fricative [z] (i.e. an allophone of Pre-Old English /s/ between voiced sounds) was not present in Late British.
3. Other differences result from the fact that no length contrast existed intervocally for a great many consonants in Late British. The majority of Pre-Old English consonants take part in a quantity opposition of long vs. short consonants, which in some cases can be illustrated with minimal pairs, e.g. OE *stæpe* 'a step' vs. OE *stæppe* 'I step'. Some consonants also contrasted for length in Late British, but not all. It is usually assumed that /p, t, k, s, m/ were phonetically long, while /b, d, g, f, θ, x/ were phonetically short.
4. Final [g] only existed after the nasal /n/, e.g. OE *sang* [saŋg]. Final /g/ existed after vowels in Late British. In early Proto-British /g/ probably still existed after /n/ [ŋ], like in Old English. However, the homorganic nasal groups \*/nd, ng, mb/ were almost certainly simplified to /n/, m/, ŋ/ before the Late British period (as result of Late British syncope [ŋg] re-entered Brittonic, see 4.2.2.3).

Table 12. Distribution of (Pre-)OE consonants (areas of contrast with LBr. are shaded grey)

## 6.2 Developments of consonants

The remainder of this chapter investigates developments of English consonants. Consonants are categorised and studied systematically according to their manner of articulation (plosives, fricatives, nasal consonants, etc.), though sometimes overlap between sections is unavoidable.

## 6.2.1 Plosives

### 6.2.1.1 Palatalisation and assibilation of velars

Palatalisation of /k/ and /ɣ ~ g/ began almost certainly as a phonetic process in Continental times, i.e. prior to the Anglo-Saxon settlement of Britain. As outlined in 5.2.5, palatalised /k/ (= [c]) ultimately became the affricate /tʃ/, but the voiced velar had two allophones, namely /ɣ ~ g/, yielding two outcomes after palatalisation. Palatalisation of the most frequent allophone, the fricative /ɣ/, is thought to have yielded a palatal fricative /j/ which later merged with the palatal approximant /j/. Given the high degree of phonetic similarity between /j/ and /j/, it seems very likely that /j/, which was absent in Late British, would have been replaced by Late British /j/ in a situation of language shift (although such a fine distinction is unlikely to have persisted anyway).<sup>86</sup> As for the plosives, /k/ and /g/ were probably at first merely palatalised in North Sea Germanic /c<sup>j</sup>, ɣ<sup>j</sup>/, but these ultimately became affricates /tʃ/ and /dʒ/. This later process probably took place in the early settlement period and shows some variation in Old English dialects (see especially 6.2.1.1.2 and 6.2.1.1.3 below). Since it is agreed that Late British and the later attested Brittonic languages at their oldest stages of development had neither palatalised velar plosives nor affricates, Britons may have had problems acquiring these consonants in a situation of language shift. In the remainder of this section, I shall investigate various instances where /k/ and /g/ apparently did not undergo palatalisation. In brief, it appears that the arrestation of palatalisation is due to native developments in some instances, while in others contact with Brittonic and/or Viking Norse appears more likely. Many scholars have already viewed contact with Viking Norse as an important factor, but, to my knowledge, contact with Late British has never been considered, presumably because of the widely held belief that Britons and Anglo-Saxons enjoyed little contact (see Chapter 2).

#### 6.2.1.1.1 Lack of palatalisation in place-names

During the Anglo-Saxon settlement of Britain, Romano-British place-names containing /k/ and /g/ were taken into Old English and usually show the results of palatalisation before palatal vowels, e.g. Cheviot (Northumberland), Chevening (Kent) (< LBr. \**keŷn*- ‘ridge’), Yeavinger (Northumberland) (< LBr. \**gavr*- ‘goat’), Cheetham (Lancashire) (< LBr. \**kēd*- ‘forest’). Yet, as the distribution of the last mentioned place-name element in Map 1 demonstrates, non-palatalised forms are found in some areas of Britain. In the fifth century, \**kēd*- ‘forest’ had a mid-front vowel /ɛ:/ or possibly it had become a diphthong \*/ei/ (cf. 8.2.2 and 8.2.3), which would cause palatalisation and subsequent assibilation of preceding /k/ (> [c<sup>j</sup>] > [t<sup>j</sup>] > /tʃ/). Although palatalisation seems to have been the usual outcome, palatalised forms are in the minority at the very west of Britain and in the North. Place-names such as Coedmoor (Herefordshire), Hengoed (Shropshire) and Pencoyd (Herefordshire) are found in the vicinity of the present-day Welsh border, which in former times was further east, while Bodgate and

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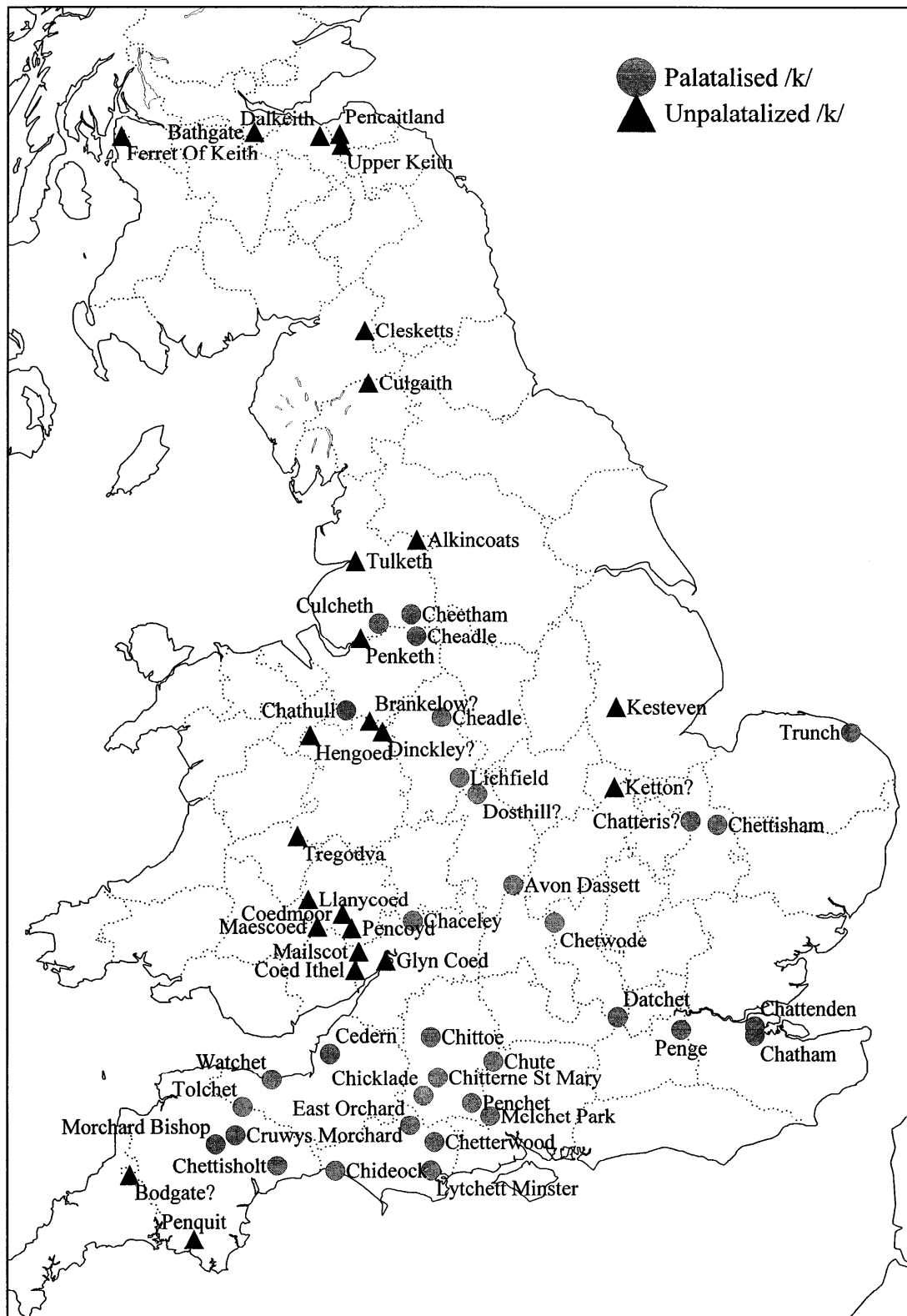
<sup>86</sup> Note, for instance, that \*/j/ (from palatalised \*/ɣ/) also merged with /j/ in Old Frisian.

Penquit (Devon) are found in the extreme South West which remained Celtic speaking until long after the Anglo-Saxon invasions. Such examples must continue former Brittonic non-palatalised pronunciations. Numerous place-names lacking palatalised forms are also attested in the North West and southern Scotland, e.g. Culgaith (Cumberland), Tulketh (Lancashire), Penketh (Lancashire), Alkincoats (Lancashire), Clesketts (Cumberland), Pencaitland (East Lothian), Dalkeith (Midlothian). It is tempting to explain away these northern forms with reference to Viking Norse influence. By this analysis, once palatalised velars in place-names were ‘de-palatalised’ by Scandinavian settlers whose pronunciation was subsequently adopted by the Anglo-Saxon majority population. However, most likely the palatalised velar plosives had become affricates by the time of the Scandinavian settlements of the late ninth and mid-tenth centuries,<sup>87</sup> and it is therefore not immediately obvious that an affricate would be identified as a velar plosive. Rather, it must be assumed that Scandinavians were aware that Old English /tʃ/ was equivalent to their velar /k/ in many Germanic cognates and so they also applied the same deductive restoration of /tʃ/ to /k/ to place-names which were not even Germanic in origin. Although this reasoning can be cited as a possibility, a simpler explanation presents itself in most cases.

As with the examples found in western Britain, place-names in the North may simply continue native British pronunciations too, especially because much of Northumbria is known to have been settled late: Lothian fell to Bernicia in AD 638 (according to the Irish Annals) and areas west of the Pennines and north of the Ribble were absorbed by Northumbria after the mid-seventh century (Jackson 1953: 208–9, 218). By this late date, namely after the phonologisation of *i*-mutation (see 9.2.7), which marks the termination date for palatalisation (on which see below), it is unnecessary to invoke Scandinavian influence to explain the northern forms. Whether or not other non-palatalised forms in the East Midlands, such as the district name Kesteven (southern Lincolnshire) and, perhaps, the etymologically uncertain Ketton (Rutland), also continue British pronunciation is more difficult to ascertain, however.

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<sup>87</sup> The data has been carefully assessed by Dietz (2006: 32–5). In particular, spellings such as *fecc(e)an* ‘fetch’ (< Pre-OE *fetājan*), which appear in Anglian texts of the ninth century and West Saxon texts of the tenth, strongly suggest that assibilation had occurred by the time of Scandinavian settlements, especially given the fact that phonological changes tend to occur in speech considerably earlier than in spelling.



Map 6. Place-names containing Late British \**kēd* 'forest'

#### 6.2.1.1.2 Lack of palatalisation before /æ/

Another characteristic of some Northern and Midland English dialects is that palatalisation apparently did not take place before fronted PGmc \*/a/ > OE /æ/ (see 8.2.3).<sup>88</sup> The main evidence for this thesis comes from reflexes of the frequent place-name element *chester* (see Map 7), ultimately deriving from Latin *castra* ‘fortification (pl.)’, no doubt an early Insular loanword on account of its absence from other Germanic languages and dialects (Jackson 1953: 252, Parsons & Styles 2000: 158–62). Most Anglicists ascribe lack of assibilation in this place-name element to Scandinavian influence (e.g. Gevenich 1918: 84, Hogg 1992a: 276, Hogg & Denison 2006: 12). The proposal again rests on the observation that Viking Norse speakers did not have palatalised or assibilated velars in their phonemic inventory and therefore replaced these with their velar stops. As noted above, this idea seems more likely if one assumes that palatalised /k/ had retained its velar properties during the period of Scandinavian influence and had therefore not assibilated by the time of contact. Ekwall (1919), however, thought it highly improbable that /k/ in the various *caster*-names resulted from Norse influence. He also pointed out that there is no reason why there should have been a special tendency for Norsemen to annul assibilation especially before /æ/. He therefore argued that non-assibilation of /k/ before /æ/ was a native development. However, since /æ/ was subject to palatal diphthongisation<sup>89</sup> (i.e. /æ/ > ⟨ea⟩) in northern Northumbrian, Ekwall (1919: 225) maintained that assibilation did take place in this area. But given that the diverging development (i.e. palatal diphthongisation vs. no palatal diphthongisation) is already recorded in Northumbrian Old English and is considered a change that pre-dates Viking contacts, not all non-assibilated dialectal forms need be attributed to Scandinavian influence. For place-names in areas taken by the Anglo-Saxons later than about the sixth century – i.e. much of central and western Northumbria (see Jackson 1953: 208–9) – sound substitution need not be invoked as it is most likely that in this area palatalisation and assibilation was no longer active as a sound change (as already indicated by the reflexes of the British place-name element \**kēd* ‘forest’). It is most probable that both /a/ and /æ/ were phonemes in Old English by the sixth century, such that Late British or British Latin /a/ would no longer have been replaced by fronted /æ/ (or back /ɑ/) and so the phonetic environment for palatalisation

<sup>88</sup> Cf. Luick (1914–40: 902): ‘Doch es gab ein kleines Gebiet, das im wesentlichen Cumberland, Westmorland, Nordlancashire, Yorkshire, Lincolnshire und Norfolk umfaßte, in welchem *ċ* vor *æ* nicht zu *č* weiterschritt: me. *kaf* “Spreu”, ne. dial. *kaff*, *-caster* wie in Lancaster. Hier gehört wohl auch der Verschlußlaut in *again* “wieder”.’ [‘But there was a small area, mainly encompassing Cumberland, Westmorland, North Lancashire, Yorkshire, Lincolnshire and Norfolk, in which *ċ* did not develop to *č* [i.e. /tʃ/, SL] before *æ*: ME *kaf* ‘chaff’, E (dialectal) *kaff*, *-caster* as in Lancaster. Probably the plosive in *again* must also be explained in this way’.]

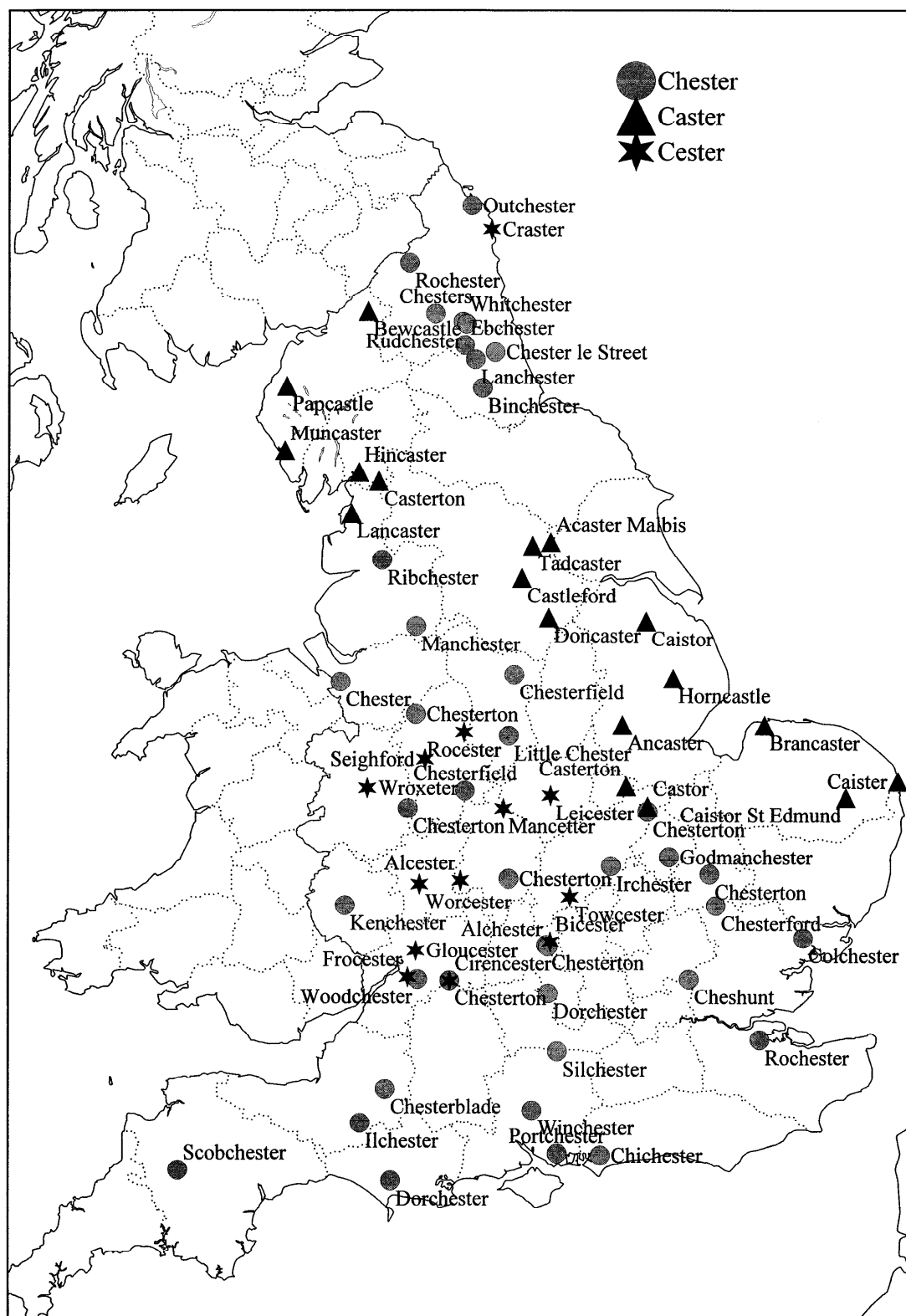
<sup>89</sup> After palatalised /k, ɣ/ and /sk/, /æ(:)/ and /e(:)/ appear as ⟨ea⟩ and ⟨ie⟩ in West Saxon and some Northumbrian Old English dialects (though in Northumbrian short /e/ is unaffected by the change). For further details on palatal diphthongisation, see Campbell (1959: 69–70), Lass (1994: 78–82).



would not have existed anyway.<sup>90</sup> However one prefers to explain the lack of palatalisation before native /æ/ or Brittonic /a/ in dialects of English, the idea that Scandinavian influence can explain all non-palatalised forms is clearly oversimplification of the facts. Although the distribution of non-palatalised forms points towards Scandinavian influence, a large number of unpalatalised forms must undoubtedly continue British pronunciations.

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<sup>90</sup> Bammesberger (1996a) argues that /ɑ/ and /æ/ became phonemes in Old English at the latest after the phonemicisation of *i*-mutation, which probably occurred in the sixth century (see 9.2.7).



Map 7. Chester/Cater/Cester place-names in England (< *L castra* 'fortification')

#### 6.2.1.1.3 Lack of palatalisation in final positions

Other instances of non-palatalised forms in the vocabulary of northern English seem to result from the combined effects of Norse influence (in the form of loanwords) and several dialectal developments, some of which may have been influenced by Brittonic or Scandinavian but are difficult to prove in any conclusive way. One such development appears to be that of /k/ after /i(:)/ and, perhaps sporadically, after other front vowels in Old English, e.g. *iċ* ‘I’, *dīċ* ‘ditch’, *līċ* ‘lich, corpse’, *wīċ* ‘wich, dwelling’, *piċ* ‘pitch’, *swalīċ* ‘such’, *hwalīċ* ‘which’. Northumbrian Old English runic evidence demonstrates that /k/ was palatalised, though not necessarily assibilated, in this environment (Ball 1991: 117–19). Indeed, unlike in later southern, especially south-western, dialects of English, it is difficult to find any evidence of assibilated reflexes after /i(:)/ in northern English dialects emerging from the Anglian area. One reason may have been the influence of Brittonic or Scandinavian; but since the same absence of assibilation in this position is also found in Old Frisian, it cannot be ruled out that this was simply a native dialectal development (see further Laker 2007: 180–2).

Another discrepancy concerning palatalisation in Old English dialects is found in *ja(n)*-stem nouns (e.g. *lǣċe* ‘physician’, *mēċe* ‘sword’, *rīċe* ‘kingdom’, *gefylċe* ‘troop’, *fliċċe* ‘flitch’, *styċċe* ‘piece’, *mereċe* ‘smallage’, *wreċċa* ‘wretch’, *weċġ* ‘wedge’, *hryċġ* ‘ridge’) and *jō(n)*-stem nouns (e.g. *wiċċe* ‘witch’, *bierċe* ‘birch’, *sæċċ* ‘strife’, *sp(r)ǣċ* ‘speech’, *cryċċ* ‘crutch’, *bryċġ* ‘bridge’, *eċġ* ‘edge’, *heċġ* ‘hedge’, *myċġ* ‘midge’, *seċġ* ‘sedge’). Such words – in particular those with geminate consonants resulting from West Germanic gemination (see 5.2.3) – have reflexes with and without assibilation in English dialects. A common reaction has been to look again to Scandinavian influence (e.g. Jordan/Crook 1974: 166–7). But the problem with appealing solely to Scandinavian influence here is that non-palatalised forms occur in English dialects outside the main sphere of Scandinavian influence, such as in Rutland, Bedfordshire, Warwickshire, Worcestershire, Gloucestershire, Buckinghamshire, Herefordshire, Oxfordshire, Wiltshire, Somerset and Dorset (Luick 1935: 274). Recognition of these facts therefore leads one rather to favour possible Brittonic influence. However, Luick (1935) has argued that when the *\*j* in the *jan*- and *jōn*-stem paradigms was lost in the prehistory of English, the palatalised velar which preceded *\*j* would have come into contact with either a following front or back vowel, depending on number and case. The general tendency was that front vowels were found in the singular and back vowels in the plural. Presumably, if loss of *\*j* was sufficiently early, originally palatalised velars could have been de-palatalised by a following back vowel, especially in the plural formations, leading to a nominal paradigms containing palatalised and unpalatalised velars. Luick points out that some words would be especially prone to appear in the plural and are quite likely to have generalised the non-palatal variant and vice versa. Even if Luick’s thesis turns out to be correct, the fact that the non-palatalised forms occur in especially Northern

England, and also in many western counties, could indicate that in these areas an additional factor disfavoured palatalisation, namely Brittonic and/or Norse influence.<sup>91</sup>

#### 6.2.1.1.4 Palatalisation in relation to *i*-mutation

Finally, it is worth looking at a somewhat ignored but important issue concerning the chronology of palatalised forms in relation to another sound change, namely *i*-mutation. The dating of *i*-mutation is usually seen as crucial for determining the termination date of palatalisation in Old English. Since velars were not palatalised before front vowels resulting from *i*-mutation (e.g. OE *kyn* ‘kin’ < \**kunni*), it is usually assumed that palatalisation must have stopped at the time of *i*-mutation. In Old English *i*-mutation must be dated quite early (see discussion 9.2.7). Luick (1914–40: 321) placed it in the sixth century. Based on an investigation and interpretation of place-name evidence, Coates also argued that *i*-mutation must have taken its course in the sixth century, probably even in the first half of that century in southern England and slightly later perhaps in the North (Coates 1984: 31, 1989–90: 6–7). If this is so, it is quite curious how Romano-British place-names, such as those names evidencing the element \**kēd*, show assimilated forms even in areas known to have been settled after the sixth century, most obviously counties of the South-West such as Somerset, Dorset and Devon (compare Map 6 with Map 1). The apparent chronological discrepancy raises the question of whether the proposal suggested above, namely that Brittonic place-names were taken into Pre-Old English and then palatalised, is correct. Four other explanations present themselves.

First, one might assume that some Brittonic place-names were already known to the Anglo-Saxons and underwent palatalisation and assibilation before certain areas to the North and West were even colonised. Such an explanation could well apply to well known larger settlements (e.g. Chester, annexed ca. 616), but probably not smaller settlements. Secondly, some scholars have claimed that palatalisation of velars could continue after *i*-mutation, arguing that rounded front vowels from *i*-mutation did not have the same palatalising effect as the older inherited non-rounded front vowels. If so, palatalisation of velars could naturally have continued as a sound change somewhat longer, perhaps until the seventh century. This explanation seems doubtful, however, since scholars who favour it never cite living languages which attest such a typology; by contrast, many languages can be cited which have palatalisation of velars before both rounded and unrounded front vowels (see Bhat 1978, Salmons 2007). Thirdly, it might be assumed that a phonemic contrast between palatalised and non-palatalised velars already existed prior to *i*-mutation and the creation of rounded front vowels (cf. Cercigani 1983, Liberman 2007). In such a case, one might assume that the velars of Romano-British place-names were palatalised on adoption into English in accordance with the phonotactic properties of Anglo-

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<sup>91</sup> Orton (1933: 137–8) once remarked that unexpected /k/ (i.e. instead of expected [tʃ]) in Northern English dialects ‘is to be accounted for as the result, in some instances, of foreign (Scandinavian) influence upon the dialect, and in other of a special Northern process, which appears (to me, at any rate) to be somewhat obscure’.

Saxon. In other words, there was sound substitution, but no new process of palatalisation occurred before rounded front vowels as such.

Finally, the fourth conceivable explanation or contributing factor would be to consider possible Vulgar Latin influence, especially in southern lowland Britain. By this scenario, Latin could have had the effect of palatalising and assibilating Brittonic /k/ (> /ts/) > /tʃ/ in place-name elements, such as \**kēd* ‘forest’, before the advent of the Saxons. This possibility should not be ruled out, but is difficult to substantiate with any evidence. While it is agreed that palatalisation – resulting in dentalisation and assibilation of /k/ – did take place in continental Vulgar Latin as early as the second century AD (indeed it is even presented as normal in grammars of the fifth and sixth centuries), it is usually assumed that British Latin did not have palatalised velars in contrast to all other varieties of Vulgar Latin with the exception of Sardinian (Jackson 1953: 90). British epigraphic evidence is thin on the ground, but a handful of British Latin inscriptions (if they are native) do in fact evidence palatalisation (see Smith 1983: 924–5, 941–2). Jackson (1953: 91) views it as significant that Latin loanwords taken into Brittonic do not show any signs of assibilation (barring perhaps one exception *W tengl* beside *cengl* ‘girth’ < L *cingula*). Still, Schrijver (2002: 168) has argued that while large numbers of Latin loans entered Brittonic during the Roman period, borrowing all but came to a halt by the fifth century. If so, assibilation possibly took place towards the end of the Roman period in British Latin, especially in more southerly areas which had close contact with the Continent. As practically nothing is known about the dialects of Vulgar Latin across the lowland zone this possibility cannot be ruled out. It is likely from an areal perspective that southerly varieties were more similar to Continental varieties than everywhere else. To sum up, further investigation must attempt to determine whether palatalisation did exist in some varieties of British Latin and whether assibilated Romano-British place-name elements in especially the South and Midlands may derive from such earlier palatalisations.<sup>92</sup>

#### 6.2.1.2 Non-etymological double consonant graphs

A significant distributional difference was identified in 6.1, namely that many Late British consonants do not take part in a length contrast. This observation is particularly relevant for a number of plosive consonants. The Late British voiceless plosives /p, t, k/ did not contrast for length intervocalically as in (Pre-)Old English. Rather, in Late British these consonants are known to have been phonetically long only, and the same holds true for the bilabial nasal /m/ and the sibilant /s/. As for the voiced plosives, a contrast in length existed for Pre-Old English /d/; but the same cannot really be said for the voiced labial and voiced velars, since here we find a

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<sup>92</sup> Whether the *cester*-names, which are prominent in the central and western Midlands (see Map 7), could in part be explained by early Vulgar Latin influence must be left to future researchers to decide. The old notion that these names result from Anglo-Norman spelling pronunciations was dismissed as too simplistic by Clark (1991).

contrast of fricative and plosive: /-β-/ vs. /-bb-/ and /-ɣ-/ vs. /-gg-/ (see Table 12). The medial voiced stops of Late British /b, d, g/ derive from lenited PCl. /p, t, k/ as well as from rare long stops (4.2.2.1), though it is thought that the original long voiced plosives were no longer phonetically long in Late British and Old British. Thus, the disparities between both sound systems may well have brought about interference errors in a situation of language shift. It should be noted, however, that a length-type contrast did exist elsewhere in the Late British phonological system, i.e. for /n, l, r/, and so the linguistic phenomenon of length contrast would therefore not have been entirely outlandish for Britons. Crucially, it must be noted that during the Late British period the Brittonic quantitative system came into a state of collapse in a way similar to Vulgar Latin and, much later, in Middle English. However, the first signs of a breakdown in quantity in English are found in the Northumbrian Old English witnesses.

A remarkable feature of late Northumbrian Old English is the curious doubling of consonant graphs in words where, for etymological reasons, no geminate is expected, e.g. *Lindisfarne Gospels*: *eatta* ‘eat’, *rioppas* ‘rip’, *breccane* ‘break’, *forcumman* ‘be rejected’, *cottum* dat.pl. ‘closets’, *scippes* ‘ship’s’; *Rushworth Gospels*: *foett* ‘feet’, *lyttel* ‘little’. The first and only detailed examination of the problem was made by Luick (1899, especially pages 58–71). Luick’s article provides a survey of etyma attesting non-etymological geminates in the *Lindisfarne Gospels* and the Northumbrian section of the *Rushworth Gospels*; a thorough analysis of the *Durham Ritual* was never completed, though similar unexpected double consonants were signalled by Lindelöf (1890: 70–1), e.g. *spreccanne* ‘speak’, *frummcend* ‘firstborn’, *vlittes* ‘face’. In his article of 1899, Luick notes that while some instances of unexpected geminates may be explained away as analogical or as scribal errors, enough examples remain which defy such explanations. He noticed, however, that double graphs were mainly restricted to certain consonants (usually in intervocalic position), principally /p, t, k, m/ and sometimes /s/ and /d/ (1899: 59, 62, 67, 68), concluding that the non-etymological double graphs were early indications of the breakdown of the inherited Germanic phonological system which distinguished vowel and consonant quantity (1899: 63, 66, 69).

Although Luick believed that the Old English system of quantitative phonology was collapsing in Late Northumbrian, he thought that the quantity distinction in consonants, i.e. long vs. short consonants, was stable. He drew this conclusion from the fact that etymological geminates were written consistently with two graphs, exceptions being restricted to absolute final position and in intervocalic positions in unstressed words, as in West Saxon (*ibid.* 1899: 58). Since etymological geminates were regularly rendered by double consonants, Luick concluded that the non-etymological double consonants (in contrast to the etymological ones) did not represent long consonants but indicated variation in phonetic length of preceding vowels. As part of a general process which he referred to as *Quantitätsregulierung* ‘regularisation of quantity’, he held that short vowels had already begun to lengthen somewhat in open syllables, i.e. before singleton consonants – a change usually associated with Middle English. Yet he did not think that these lengthened short vowels had attained the same length as long vowels, and so he spoke of these lengthened vowels having half-length (*ibid.* 63–4). In a nutshell, Luick thought that

double consonant graphs did double duty: they signified etymological geminate consonants and they indicated that a preceding vowel was not half-long but short. Following on from these conclusions, Luick (*ibid.* 68) argued that lengthening of short vowels to half-long vowels in open syllables did not regularly take place before certain consonants, especially /p, t, k, m/ (in contrast to /r, l, n, d, f, þ, s, g/).<sup>93</sup> Accordingly, scribes wrote /p, t, k, m/ (and more rarely /s/ and /d/) with double graphs in order to signal a phonetically shorter preceding vowel, i.e. a vowel which had not become half-long. In other words, a half-long vowel was simply a phonetic variant of a short vowel, and this contrasted with an original long vowel in open syllables. For all the apparent ingenuity of Luick's thesis, it is difficult to infer any motivation on the part of the scribe to indicate that a vowel was short rather than half-long: orthographic systems tend to represent the phonology of a language, not its phonetics. From a modern phonological perspective, the notion that double graphs were used to indicate that a vowel in an open syllable had not become half-long makes no sense. Unsurprisingly perhaps, Luick (1914–40: 400, 886–7) distanced himself from these ideas in later publications; but despite these criticisms, Luick's initial observation that unexpected consonant doubling was restricted to certain consonants remains valid.

Greater clarity can be achieved if we assume that double consonants were used *not* to indicate a contrast in consonantal length, as is assumed for the inherited West Germanic phonological system, but to indicate contrasts in syllable contact. This situation has been argued already for twelfth-century East Midlands English based on current interpretations of the orthographical system employed in a well-known early Middle English manuscript, namely the *Ormulum* (see especially Fulk 1996, Mailhammer 2007, 2009); but the same has also been argued for in Old English (Fulk 1996: 498f.), and this argument seems especially applicable to late Northumbrian Old English (Fulk 1996: 499–500). Accordingly, the main purpose of medial geminates was to indicate whether a preceding short vowel was closed by a tautosyllabic consonant, and so did not stand in an open syllable. Double consonants therefore signalled syllable boundaries. As a result of this restructuring, consonantal length could have remained only as a secondary phonetic feature that was ultimately replaced by ambisyllabicity, perhaps already in Old English in some dialects.<sup>94</sup> As a result of this and other quantitative restructuring, the relevant opposition became not one of quantity but rather of syllable contact. In brief, we can talk of close consonantal contact (also abrupt cut) and loose consonantal contact (or smooth cut), see further Vennemann (2000b: 252–4). The crucial difference of especially Northumbrian Old English is the tendency for etymologically singleton, non-tautosyllabic consonants /p, t, k, m/ and sometimes /s/ and /d/ to behave as if they were historical geminates, by favouring close contact with preceding vowels (i.e. abrupt syllable cut) and ultimately becoming ambisyllabic.

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<sup>93</sup> In intervocalic position, ⟨f, þ, s, g⟩ were voiced fricatives in Old English, i.e. [v, ð, z, ɣ].

<sup>94</sup> The phonological system outlined here finds close parallels in varieties of Modern Welsh and Modern Icelandic, see Morris-Jones (1913: 30–1, 65–74) and Orešnik & Pétursson (1977, cited in Fulk 1996: 500) respectively.

The process is characterised diagrammatically in Figure 3 ('C' signifies an ambisyllabic consonant):

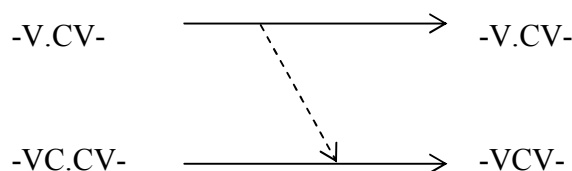


Figure 3. Development of Old English etyma with intervocalic /p, t, k, m/ (unexpected development indicated by dotted arrow)

Two questions now present themselves: Why did /p, t, k, m/ and, sometimes, /s/ and /d/ behave in a seemingly aberrant fashion by becoming tautosyllabic consonants, especially in Northumbrian English? Could contact with Late British in some way have effectuated such a development?

In the literature a number of explanations have been offered to explain why /p, t, k/ favour close syllable contact (abrupt cut), such as the fact that voiceless plosives are the least sonorous of consonants and appear to have a notable blocking effect on vowel lengthening in open syllables in the history of German (Vennemann 2000b: 263–4, 270). Apart from this, Kortlandt (1997) argues that voiceless plosives were preglottalised [ʔp, ʔt, ʔk], as in some varieties of Modern English. Thus, late Northumbrian Old English scribes in particular seem to have had their difficulties in discerning whether or not a preglottalised intervocalic plosive was a simple or a geminate consonant (preglottalised geminate consonants were apparently easily discernable and so were consistently rendered by double graphs). What both of these theses lack is an explanation for the identical propensity of /m/ for doubling and, though more rarely, /s/ and /d/. A thesis which can also explain the aberrant developments of these consonants is therefore desirable.

Based on our understanding of Late British and later attested phonologies of Medieval Brittonic languages as well as Modern Welsh, it is clear that /p, t, k, m, s/ were phonetically long in intervocalic positions – yet they did not contrast with singleton consonants and so must be regarded as prosodic geminates rather than phonological geminates.<sup>95</sup> The fact that these

<sup>95</sup> Modern Welsh and Modern Icelandic both have *prosodic* rather than *phonological* geminates (phonological geminates are found, for instance, in Modern Arabic and Modern Finnish). Prosodic geminates seem to have a tendency to lose phonetic length and then to contrast in terms of ambisyllabicity; this has happened in southern Icelandic dialects (Orešnik & Pétursson 1977: 157, 163). Morris-Jones (1913: 30–1) describes the difference between W *canu* /ca.nu/ ‘to sing’ and W *cannu* /ca.nu/ ‘to whiten’; although the orthography – ⟨n⟩ vs. ⟨nn⟩ – appears to signal consonantal length, the alternation is one of syllable contact. The former has a short (phonetically a half-long) vowel /a/ in an open syllable; the latter has a short vowel /a/ in a closed



consonants were long in Late British could have brought about a more widespread tendency for abrupt cut with these consonants.<sup>96</sup> An appealing argument for this proposal is that in some instances etymologically simple consonants appear as double graphs even after vowels that were formerly long, e.g. *let*, *little*, *slit*, *flit*, *heat* (dialectal) (see also Luick 1899: 59–60). Ultimately, it would have been possible for speakers of Late British to acquire quantitative oppositions such as long vowels (smooth cut) before voiceless plosives, too, as happened in Welsh, namely through the gradual integration of English loanwords such as *sêt* ‘seat’, *gât* ‘gate’, *plât* ‘plate’.<sup>97</sup> This explanation still leaves some examples of geminated /d/ unaccounted for. Possibly these may result from system pressure, namely that all other medial voiced plosives were written with digraphs in Old English. Furthermore, the doubling of ⟨dd⟩ is often restricted to certain words; in particular it is used to differentiate ⟨godd⟩ (< \*ȳod-) ‘God’ from ⟨god⟩ (< \*ȳōd-) ‘good’. Even so, more frequent and aberrant doubling is restricted to /p, t, k, m/, and these instances could receive an explanation based on the known mismatches between the Late British and Pre-Old English consonantal systems.

#### 6.2.1.3 Phonation of plosives

In recent years some linguists have tried to adduce and define in finer detail the phonetic properties of early Germanic consonants. Plosives, which are traditionally classified simply as voiceless and voiced (/p, t, k/ vs. /b, d, g/), have been the subject of much discussion. Iverson & Salmons (2003) argue that the main distinguishing phonetic feature of Germanic plosives was not that of voice but of aspiration vs. non-aspiration or, to use a different terminology, spread

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syllable, i.e. closed by ambysyllabic /n/. This kind of alternation is actually very similar to that found in early Middle English, to judge from the orthography of the *Ormulum* (see Mailhammer 2007, 2009).

<sup>96</sup> Schrijver has used the same explanation to explain vowel shortenings in Modern Dutch dialects (1999: 31–3).

<sup>97</sup> Although the proposal suggested here seems cogent, it is interesting that Swedish and Norwegian dialects, namely *austnorsk*, *sveamål* and *nordsvenska*, show an unexpected lengthening not only of /p, t, k/ but also /s/ and /m/ (Perridon 2002: 73). Especially within the context of Northumbria, where Scandinavian influence is assumed, the notion of Norse influence becomes a possibility. This possibility, however, must be left for later investigators. At present, it is a mystery why /m/ should have been prone to lengthening in these Scandinavian dialects; there seem to be no obvious phonetic reasons for /m/ to lengthen. Saami influence could be considered, but I have not found any leads in this direction. Petri Kallio (p.c.) informs me that there is a change known as medial preclusion involving /m/ in Saami, by which *-m-* becomes *-pm-*; however, *-n-* is also affected by this change, becoming *-tn-*.

glottis vs. non-spread glottis: [p<sup>h</sup>, t<sup>h</sup>, k<sup>h</sup>] vs. [b̥, d̥, ɡ̥].<sup>98</sup> Many modern Germanic languages – e.g. standard varieties of English and German or Scandinavian languages, such as Icelandic and Danish – can be analysed in this way, and Iverson and Salmons have presented several other reasons why this contrast might also be projected back into Proto-Germanic. This situation, however, is not the same across all modern Germanic languages and dialects (including English), leading to suggestions of later influence through language contact.

The best known exception to the aspiration vs. non-aspiration contrast is Dutch, which shows a deviant typology, more similar to that found in French and other Romance languages.<sup>99</sup> In Dutch the contrast in the plosives is one of voice: /p, t, k/ vs. /b, d, ɡ/.<sup>100</sup> The voiceless consonants, unlike Modern Standard English, have no significant aspiration. Iverson & Salmons (2003) argue on numerous occasions that the Dutch system must be viewed as an innovation, drawing upon the idea that Dutch betrays other Romance influences (2003: 2).<sup>101</sup> While there may be some support for the notion of Romance influence on especially southern Dutch dialects, it would be wrong to single out Dutch as the only Germanic language with Romance-type stops. In particular, West Frisian has the same system as Dutch, excepting north-eastern dialects.<sup>102</sup> (It is more difficult to establish Romance influence in West Frisian, since it was beyond the pale of the Roman Empire; one wonders then whether Frisian phonation has been influenced by Dutch.) Apart from West Frisian, many Low German dialects also show the Romance-type system of

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<sup>98</sup> It should be noted that /b, d, ɡ/ do have voiced articulation in sonorous environments, especially intervocalically, but not initially and finally. Assuming the primacy of initial position, it is correct to represent these stops as /b̥, d̥, ɡ̥/.

<sup>99</sup> Some eastern Dutch dialects, e.g. the (Saxon) dialect of Groningen, contrast plosives in terms of aspiration vs. non-aspiration. Similar contrastive aspiration has also been observed in some South Hollandic dialects (see van Bree 2004: 68).

<sup>100</sup> Excepting word final position, where most Dutch dialects have final devoicing.

<sup>101</sup> The idea that Dutch has been subject to Romance influence has often been argued for, but has never really been subject to a large-scale study. Iverson & Salmons draw attention to several studies, yet the nature of the posited contact is disputed. For instance, Kloeke (1954) holds French influence responsible not only for the Dutch stops but also for fronting of ⟨u⟩ to [y:] (e.g. Du. *nu* [ny:] < WGmc \**nū*) and vocalisation of /l/ in codas (e.g. Du. *koud* [kaut] < WGmc \**kald*). Other suggested French features in Dutch dialects are velar or uvular /r/ (Weijnen 1958: 262–3) and, especially in southern Dutch dialects, *h*-dropping (and non-etymological *h*-insertion) (van Coetsem 1988: 144–62). Van Haeringen (1934: 97) suggests that such changes began in southern dialects and spread north and east. Others have suggested that substrate languages were responsible for the innovations (e.g. Gysseling 1981, Schrijver 1999).

<sup>102</sup> The situation in conservative island dialects, such as that of Schiermonnikoog, is less clear. My impression, from the few recordings of Schiermonnikoog Frisian which I have heard, is that plosives in this dialect contrast in terms of weak aspiration, in a similar manner to South Hollandic dialects (cf. note 99 above).

voice distinction. Kurt Goblirsch has drawn attention to southern Low German and northern Middle German dialects. Though he accepts that Romance or Celtic influence could be posited for Dutch (he also accepts that Finnish could have influenced eastern Swedish dialects where voiceless plosives are not aspirated), he argues that neither Romance nor Slavic influence could explain the lack of aspiration in Riparian, South Westphalian, South Eastphalian, North Thuringian and northern Upper Saxon (2005: 78–80; but see Kortlandt 2007 for a different view). Important in the present context, is that English dialects also present a mixed picture, for it is a well-known tendency for northern and Scottish dialects to have unaspirated voiceless stops too.

The lack of aspiration in voiceless plosives in northern English dialects and Lowland Scots has often been noticed by phoneticians and dialectologists, e.g. Wells (1982: 370): ‘There are some kinds of northern accent which have little or no aspiration of /p, t, k/ before a stressed vowel (the environment where most other accents do have aspiration)’, and Johnston (1997: 505): ‘early authorities are united as to the unaspirated nature of Scots voiceless stops in syllable onsets’.<sup>103</sup> Unfortunately, this dialectal feature was not targeted specifically in either the *Survey of English Dialects* or the *Survey of Scottish Dialects* (cf. Orton *et al.* 1962–71, Mather *et al.* 1975–86); however, in the former, the fieldworkers note the reduced or complete lack of aspiration among many of the Yorkshire and Lancashire informants (a list of these fieldworkers’ notes is provided in Jones 2007: 1).<sup>104</sup> Despite the fact that the feature is rather well-known, to my knowledge only one detailed study has so far used advanced instrumental analysis to measure voiced onset timing in such non-aspirating dialects, namely Jones’ recent analysis of /p, t, k/ and /b, d, g/ spoken by a speakers from Barnsley in the West Riding of Yorkshire (2007). In brief, Jones’s study confirms that the voice onset timings of one speaker of the older, traditional Barnsley dialect are strikingly different from those of conventional southern English or Received Pronunciation speakers, but he also notes that this feature is now recessive among younger speakers. The feature is also recessive in Lowland Scots, especially in the cities of Glasgow and Edinburgh as well as surrounding areas (see Johnston 1997b: 505).

The question that must now be posed is whether unaspirated plosives were a dialectal feature of the Northumbrian variety of Old English. If so, one wonders whether they could have arisen as a result of contact with Brittonic. These questions are impossible to answer with certainty. For one thing, subphonemic features are rarely indicated in writing systems. Spaargaren (2008), however, argues that languages which rely on a voice contrast in plosives show completely different processes of assimilation from those that use an aspiration contrast. Drawing attention to the fact that in Old English voicing assimilation occurs when a voiceless

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<sup>103</sup> For northern English see Lloyd (1899: 8), Klein (1914: 6–7), Ward (1929: 3) and Jones (1964: 139); for Lowland Scots see Dieth (1932: 85, 100–1), Wettstein (1942: 5, 20), Zai (1942: 20) and Wells (1982: 409).

<sup>104</sup> ‘Impressionistically,’ Wells associates ‘non-aspiration particularly with the Pennine valleys north of Manchester; I knew someone from Burnley whose name was *Parker* [p̄a:kə]’ (1982: 370). However, it is clear that the feature is more widespread in the North.

plosive is followed by /d/ (e.g. in the preterite of class 1 weak verbs, when /i/ is syncopated after a heavy syllable, e.g. Pre-OE *\*slāpide* > OE *slāpte* ‘he slept’), Spaargaren (2008) reasons that the glottal feature of aspiration inherent to /p, t, k/ (= [p<sup>h</sup>, t<sup>h</sup>, k<sup>h</sup>]) spread to the following consonant, i.e. /d/ becomes /t/. Yet in the Northumbrian dialect of Old English as attested in the *Lindisfarne Gospels*, numerous exceptions to this rule occur, e.g. *gegrippde* ‘he gripped’, *slēpde* ‘he/she slept’, *slēpdon* ‘they slept’, *genēolecde* ‘he approached’.<sup>105</sup> These exceptions to the general Old English trend have been viewed as irregular, unaccountable exceptions by Spaargaren (2008), yet they may be regular outcomes in early Northumbrian English based on the evidence of the laryngeal features that exist in traditional present-day dialects. If so, it must be determined whether the feature was an inherited trait of varieties of Pre-Old English which were brought over from the Continent (cf. Goblirsch 2005, 2009), or whether it was an innovation of Northumbrian varieties of Old English resulting, possibly, from Brittonic substratal influence.

Against the idea of Brittonic influence is the fact that especially Welsh is noted for its strong aspiration of voiceless plosives, a feature which also characterises varieties of Welsh English (Filppula *et al.* 2008: 208). Nonetheless, it is worth pointing out that, according to one reconstruction of Late British, aspiration as a contrastive laryngeal feature was in the process of developing in the Late British period and so may not have been as prominent a feature during the period of early contact. In 4.2.2.3, I considered whether the very prominent aspiration found in Welsh was a development of West British, which never really got off the ground in South-West British, based on the fact that Breton and Cornish only attest weakly aspirated or unaspirated plosives. If so, it is possible that some northern Late British dialects also had only weakly aspirated voiceless plosives at the time of Anglo-Saxon contacts,<sup>106</sup> and this phonetic feature may have entered certain English and Scots varieties as a substratum feature.<sup>107</sup> It is especially

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<sup>105</sup> Examples outside the *Lindisfarne Gospels* are rare (see Campbell 1959: 323 and Hogg 1992a: 300).

<sup>106</sup> Peter Schrijver reminds me of the devoicing of voiced obstruents by Proto-British provection, e.g. *\*kloko-penno-* > *\*klogobenno-* > *\*klopenn* > B *klopenn* ‘skull’; *\*ati-daw-ino-* > *\*adiðawino-* > *\*etewin* > MW *etewyn* ‘torch, firebrand’. Based on Spaargaren’s (2008) paper, one could hypothesise that provection would take place if the Late British system of plosives had contrastive aspiration. The matter would need to be investigated in greater detail. It is rather odd that when syncope occurs between two homorganic obstruents in Brittonic, the result is always a voiceless plosive, even if the starting point was /ðVð/.

<sup>107</sup> Note, for instance, that the strong pre- as well as post-aspirated voiceless plosive consonants of Scots of the Highlands and Islands (in contrast to the non-aspirated voiceless plosives of the Lowlands) can easily be accounted for by Gaelic substratal influence, because in Scots Gaelic fortis plosives are pre- and post-aspirated too: ‘In the Gaelic-influenced speech of the Highlands and Islands [...] strong aspiration is the rule; and in this accent, indeed, not only are initial voiceless plosives in a stressed syllable post-aspirated, but final ones are pre-aspirated, so that we

striking that non-aspiration occurs precisely in areas where considerable Scandinavian influence is posited, the result thus being exactly the opposite of what one would expect, since Scandinavian languages are generally noted for their strong aspiration, more so than even Received Pronunciation and standard German.<sup>108</sup>

#### 6.2.1.4 Glottal stop

There is reason to believe that Old English, rather like Modern German, used glottal stop before stressed vowels to mark word and syllable boundaries. But since Old English orthography, like that of German today, did not indicate such glottal stop epenthesis, its presence is a construct, posited primarily on the basis of Old English metrics, a property of which was to alliterate on vowels of various qualities, e.g. *hū þā æðelingas / ellen fremedon*.<sup>109</sup> A thorough discussion of the issue has been offered by Minkova (2003: 135–91), who defends the view that Old English vowel alliterations were based on glottal stop, and that Old English required a filled stress syllable onset. This assumption gains further support from the lack of elision in Old English verse, the clear observance of morphological boundaries, and (though less certainly) sporadic spellings of non-etymological ⟨h⟩ in prevocalic positions, which Minkova interprets as representing examples of glottal stop epenthesis. All in all, there are enough compelling reasons to believe that there really was glottal stop epenthesis in Old English.

The Old English practice of alliterating on vowels became moribund in Middle English. When Middle English poets did have occasion to alliterate on vowels, there was an overriding tendency to alliterate on identical vowels. Minkova (2003: 150–6) thinks it is significant that, with the exception of the negative particle *ne-*, there is little or no evidence of cliticisation of prefixes such as *a-*, *be-*, *ge-* before vowel-initial words in Old English. This lack of cliticisation

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have for instance [luhk] *look*, [k<sup>h</sup>aht] *cat*’ (Wells 1982: 409; see also Bird 1997). This example illustrates that laryngeal features of consonants are prone to transfer in situations of language shift.

<sup>108</sup> Bailey & Maroldt (1977: 25) take a different view: ‘The fact that clear [l] as well as non-aspirated [p t k] are widespread in the North could be due to either Keltic or Nordic influence’. Of course, no supporting evidence for these views (and many others in their famous article) is given.

<sup>109</sup> ‘how the leaders / courage accomplished’ (*Beowulf*, line 3). Compare Standard German, e.g. *Theater* [te:ʔa:təʔ], *erinnern* [ʔerʔɪnərn], or contrast *vereisen* [fɛrʔaizən] with *verreisen* [fɛraizən]. For details on glottal stop in German, see Alber (2001). However, unlike in German, it is widely held that the Anglo-Saxons were more aware of glottal stop and alliterated on it, irrespective of vowel quality. The same metrical device of alliterating on (preferably dissimilar) vowels is found in Old Norse poetry. Possibly, glottal stop epenthesis was a property of Germanic, indeed some scholars trace its origin to the PIE laryngeals, e.g. Scharfe (1972: 156–9), but see Liberman (2000: 328).

may demonstrate that ‘the integrity of the word was kept intact by the presence of glottal stop’ and that Old English alliteration ‘respects the morphological boundaries even when the two successive words fall within the same syntactic unit’ (*ibid.* 167). By contrast, Middle English compositions often support an assumption that ‘pre-vocalic glottal stops were either disappearing or were completely abandoned as a feature of the spoken language’ (*ibid.* 168). This conclusion is supported by examples of so-called *Stab der Liaison*, which involves resyllabification within clitic groups where the stressed syllable is vowel initial, e.g. *And non eire of myn own / neuer yet I hadde* (see Minkova 2003: 169 for more examples).<sup>110</sup> Further evidence for the abandonment of glottal stop as an indicator of word boundaries in Middle English is provided by examples of nunation, namely the addition of unetymological final <-n> added before word beginning with a vowel or *h* to avoid hiatus, for example *Her ich azeuen ælche cnihten; is cunden & his rihten* (see Minkova 2003: 173).<sup>111</sup> Closely related to *Stab der Liaison* and unetymological nunation are examples of ‘false junctures’, often involving *n* in most varieties of English, e.g. *an ewt* > *a newt*, *an eke name* > *a nickname*.

All in all, Minkova’s argument carries weight so long as one assumes the metrical rules which have changed in the history of English reflect actual changes in the spoken language, with Middle English being the watershed. But one wonders what the motivation for this typological change was. Some earlier scholars came to the conclusion that it resulted from Middle English speakers talking faster.<sup>112</sup> As Minkova (2003: 156–7) notes, loss of obligatory glottal stop before stressed vowels would ‘speed up the production of the particular strings of function + lexical words’, but argues that the loss of glottal stop emphasis itself was the cause of this acceleration of speech, not the other way around. In other words, the typological change in syllable structure would still require an explanation. After surveying the locus of the change, Minkova (2003: 159) notes that ‘northern and the East Midlands documents preserve uncontracted forms longer than the corresponding southern and West Midlands texts’ and suggests that this geographical distribution ‘might have been influenced by external factors’. Ultimately, Minkova (2003: 166–7) proposes that French influenced the change:

The new practice emerged as a corollary of a typological change in the syllabic structure of the language under the influence of Anglo-Norman loan phonology: from being obligatory in Old English, glottal stop epenthesis had become optional in Middle English.

While it is true that the emerging syllable structure type is akin to French, in a review of Minkova’s book I questioned this source of influence on the early development of English syllable structure, principally because I doubted that such low-level phonetic evidence could have been induced by a Norman-French speaking upper class minority, and within such a short

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<sup>110</sup> ‘And no heir of my own / I (n)ever had’ (*Destruction of Troy*, line 5315).

<sup>111</sup> ‘Here I give each knight his lands and his dues’ (*Lagamon’s Brut*, line 8445)

<sup>112</sup> See Jordan/Crook (1974: 151), Luick (1914–40: 503–4).

period of time (see Laker 2003). As the bulk of the population remained English speaking in the centuries following the Conquest, it seems far from certain whether borrowing of Romance words and English–Anglo-Norman bilingualism among socially prestigious speakers could have ousted this subphonemic feature among the masses.

The reduction of glottal stop epenthesis that led to a blurring of lexical morphemes and word boundaries is characteristic of Middle Flemish texts too, whose underlying dialects were affected by centuries of close contact with Vulgar Latin/Medieval French. But since glottal stop epenthesis is not registered in orthographically and there is no alliterative poetic tradition in Medieval Flanders, modern dialects provide the best evidence for the loss of glottal stop in Belgian Dutch. The loss of glottal stop as a syllabification marker in especially French Flemish and Western Flemish has in fact been investigated in some detail by Noske (2005), who identifies a definite prosodic contrast between ‘Northern Dutch’ (principally the Dutch of the Netherlands) and ‘Southern Dutch’ (principally of Flanders). It is possible that underlying Vulgar Latin substratal influence could have led to early loss of glottal stop epenthesis not only in southern Dutch but also in English dialects. Furthermore, there is to my mind no evidence for glottal stop epenthesis in older and modern varieties of Brittonic either; hence the complete loss of glottal stop epenthesis in English as compared to Frisian, German and Northern Dutch may have resulted from early contact with either British Latin or British Celtic.

## 6.2.2 *Fricatives*

### 6.2.2.1 Interdental fricatives /θ, ð/

In a lecture dealing with Anglo-Saxon and British contacts, Tolkien (1963: 20, 32) points out that English has retained the interdental fricatives /θ, ð/ since Old English times, while other varieties of Germanic lost them (excepting Icelandic). He goes on to suggest that the presence of /θ, ð/ in Brittonic may in some way have facilitated the conservation of these consonants in English and wonders how the two languages, Brittonic and English, might have affected one another. More recently, Tristram (2002b) and Filppula *et al.* (2008: 119–20), have spoken out in favour of Tolkien’s proposal of Brittonic influence. Isaac (2003: 50–3), in contrast, dismisses the idea.

On the whole, it seems fair to say that interdental fricatives are comparatively unstable phonemes. They were lost in the histories of many languages, e.g. Latin, Irish, varieties of Arabic, and they are subject to on-going change in present-day British English (i.e. by the development known as TH-fronting /θ, ð/ > /f, v/). Furthermore, it has been observed that children acquire interdental fricatives very late (Weisler & Milekic 2008: 28) and that they are rare consonants cross-linguistically (Maddieson 2008). Consequently, their loss in most Germanic languages does not immediately arouse suspicion. Nonetheless, one wonders what factors encouraging the loss of /θ, ð/ in Continental Germanic were absent in the British situation.

Samuels’s (1971: 13–14) remarks on the geography of the loss of /θ, ð/ in Germanic languages may provide part of an explanation. Samuels sees the loss of the /θ, ð/ as ‘a matter of

geographical spread'. He notes that the process started in southern Germany in the eighth century and then spread northwards, reaching Middle German in the ninth and tenth centuries, Low Franconian in the eleventh, Low German in the twelfth, Danish in the fourteenth and Swedish in the fifteenth. Interestingly, south-eastern most Middle English dialects of Kent, east Sussex and east Surrey also evidence loss of the voiced interdental /ð/ > /d/, while /θ/ was unaffected. According to Samuels the change which brought about elimination of /θ, ð/ ceased once it reached England, and it did not reach Icelandic<sup>113</sup> at all (though it did reach Faroese, which no longer has interdental fricatives). By this interpretation, loss of /θ, ð/ was a product of diffusion: language contact between Germanic dialects catalysed the loss of /θ, ð/ and provides an explanation for its geographical spread.<sup>114</sup>

Although Samuels thesis on the ordered loss of /θ, ð/ is convincing, one still wonders why the processual loss of /θ, ð/ was stopped in its tracks in England. Could Tolkien's initial idea of Brittonic contact influencing the survival of /θ, ð/ still be relevant? Problematic is the fact that, according to Samuels, the loss of /θ, ð/ only reached Britain in Middle English. Earliest Kentish examples of the change /ð/ > /d/ are dated ca. 1232, but most examples are from the fifteenth century (see Samuels 1971: 11–13). Thus, it would be difficult to claim that Brittonic was still having a direct 'conserving' influence on English at this late date. Filppula *et al.* (2008) may be right in thinking that Brittonic influence could have reinforced the use of interdental fricatives already in early Old English, if we choose to assume that dialectal tendencies for their elimination may have already existed in undocumented spoken varieties, but this thesis cannot be proved in any way. One can therefore only argue that the existence of the interdental fricatives in Old English and beyond does not militate against the general notion of Brittonic influence on English. Nonetheless, if a general pattern emerges in English that phonemes shared by Pre-Old English and Late British were retained in Old and Middle English, while phonemes of Pre-Old English that were not present in Late British underwent change, the general argument for Brittonic influence is strengthened. The retention of phonemes – especially phonemes that are rare cross-linguistically – may therefore still form a small part of a larger argument for or against language contact.

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<sup>113</sup> Geneticists now contend that the Icelandic matrilineal gene pool is mainly of Irish and Scottish decent (about 60% according to recent estimates; see Helgason *et al.* 2009). To what extent Old Irish may have influenced Icelandic phonology is unclear, but it is at least worth noting that it too had interdental fricatives.

<sup>114</sup> One aspect that is not investigated by Samuels and could merit further investigation is how /θ, ð/ were lost along different lines in different dialects. It is not the case that /θ, ð/ were simply replaced by /d/, as first happened in southern Germany. Different dialects eliminated /θ, ð/ in different ways. For instance, Frisian replaced /θ/ with /t/, while /ð/ became either /d/ or it was deleted, especially between vowels. In Kentish, only /ð/ was lost.



#### 6.2.2.2 Voicing of initial fricatives

Voicing of initial fricatives represents one of the oldest consonantal isoglosses in English historical dialectology. The earliest evidence for initial voicing comes in the form of ⟨u, v⟩-spellings for etymological /f/, and these have now been subject to a thorough analysis by Dietz (1990: 296–307). He brings together a tally of about 75 instances of ⟨u, v⟩ spread over more than a dozen manuscripts from ca. 950–1150. The earliest examples are *uif*<sup>115</sup> ‘five’ (London, British Library, Cotton Cleopatra A.iii), written in Worcestershire ca. 925–950, and *uilmenum* ‘film’ (Bern, Stadtbibliothek 671), written in Canterbury ca. 950. Special mention must be given to two texts which together provide no fewer than 58 examples: the partial translation of *Genesis* (Cambridge, Corpus Christi 201), from Winchester ca. 1050, and the glosses of the *Salisbury Psalter* (Salisbury Cathedral 150), probably glossed at Shaftesbury (or nearby) ca. 1100. As expected, all examples of initial fricative voicing stem from southern manuscripts or manuscripts with southern connections (Dietz 1990: 306).

A finer-grained picture of the geography of the change can be gathered from the more abundant Middle English evidence. Earlier investigations into the geography of initial fricative voicing in Middle English by Oakden (1930) and Moore *et al.* (1935) have been subject to much revision. In particular, evidence from the *Lay Subsidy Rolls* led Kristensson to posit an isogloss much more northerly than previously thought, running approximately from mid-Shropshire in the west to the Essex–Suffolk border in the east (see Map 8). Later data collected for *LALME* broadly corresponded with Kristensson’s map in the West, but far fewer ⟨u⟩ and ⟨v⟩ spellings were found north of the Thames in the East, indicating, perhaps, the gradual retreat of initial voiced fricatives from these areas (see *LALME* maps 1180, 1181). The linguistic geography of initial fricative voicing based on traditional southern and south-western dialects of Modern English is provided in Wakelin & Barry (1968), which summarises the findings of Ellis (1889) and the *Survey of English Dialects*.

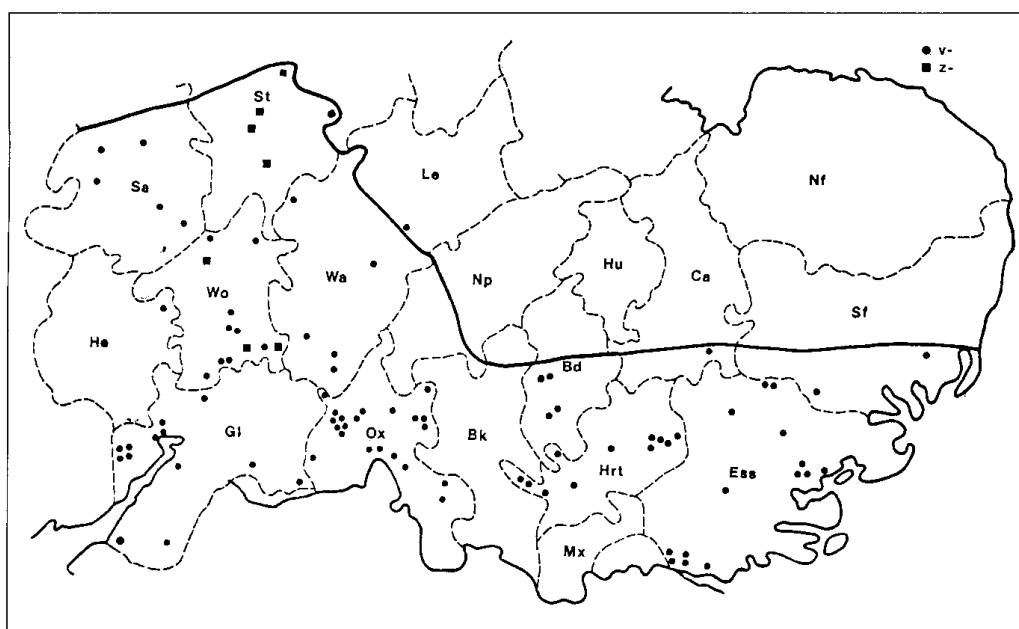
Two investigators have argued that in prehistoric times initial fricative voicing was found over a much larger area than is indicated in the medieval textual records. Noticing that initial voicing of fricatives is found south of the area of Viking settlement (i.e. roughly south of Watling Street, the Roman road which runs from London to Chester), Poussa (1985) and Kristensson (1986, 1997) hypothesise that voicing of initial fricatives was once a feature of all Old English dialects but was ousted in the Danelaw as a result of language contact with Norse.<sup>116</sup> Yet by the same token it could be argued that the feature of initial voicing represented a genuine

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<sup>115</sup> Prior to this attestation, first noted by Förster (1941: 790), scholars regarded initial fricative voicing as an eleventh-century change (cf. Luick 1914–40: 933, and even Campbell 1959: 181 note 3). According to Dietz (1990: 302), earlier *u*-spellings for initial *f*- in early continental glossaries, e.g. *Erfurt*, are unreliable, and represent a different scribal tradition.

<sup>116</sup> The northern frontier in the West is not entirely clear: ‘Some scholars include in the Danelaw parts of Staffordshire, Cheshire and Lancashire; but it may be doubted if a definite line was ever fixed in the west where mountains provided a natural frontier zone’ (Ekwall 1936: 134).

dialectal divide in Old English. In fact, the best-mapped phonological isogloss in Old English, that reflexes of PGmc \*/æ:/ (see 9.2.2 and Map 12), corresponds just as well with the proposed isogloss – actually much better than the Watling Street boundary suggested by Poussa and Kristensson. Significantly, there is no evidence for there ever having been initial fricative voicing in Anglian dialects, even in those dialects outside of the Danelaw proper, namely in north-east England above the Tees.<sup>117</sup> In brief, it is unlikely that Norse settlers were able to completely eradicate initial fricative voicing as Poussa and Kristensson seem to think. Other phonological influences attributed to Scandinavian settlers are found in a more piecemeal manner throughout various dialects. Yet there is not even a trace of evidence to suggest that there was ever initial fricative voicing in Middle and Modern English dialects of the former Danelaw area or in other northern dialects beyond the Danelaw, e.g. Northumberland. More likely, initial fricative voicing was never a feature of Anglian dialects.



Map 8. Limits of initial fricative voicing (Kristensson 1995: 199, map 16)

While no evidence has been found to support the idea that there was initial fricative voicing in Anglian territory, ample evidence can be cited to show that the phenomenon is (or was)

<sup>117</sup> There is no evidence for initial fricative voicing in Frisian, and nobody has suggested that voicing was blocked or removed from Frisian due to foreign influence. Poussa's and Kristensson's proposals are built on the unproven assumption that there was no dialectal variation in Pre-Old English. Further problems of the Scandinavian repression thesis are highlighted by Dietz (1990, 1997).

an areal feature which links southern English dialects with Dutch dialects of French Flanders, Belgium and the southern Netherlands. The feature is found in the earliest Dutch sources as well as in Modern dialects (see Schönfeld/van Loey 1970: 56; Goossens *et al.* 1998–2005: maps 111–12).<sup>118</sup> Some dialectologists choose to view the convergence of adjacent English and Dutch dialects as a fluke – wilfully or not – by simply ignoring it. But it has been noted that several other linguistic features found in dialects of southern England are also found in Dutch dialects of especially French Flanders and West Flanders (see 6.2.1.4, 6.2.2.4, 6.2.5.1, 9.2.2).<sup>119</sup> So was voicing of initial fricatives a shared development of some Continental Germanic varieties or a later post-Anglo-Saxon-Conquest change?

Bennett (1955) argued that Saxons and Jutes first settled along the Lower Rhine and the *Litus Saxonicum* before arriving in Britain. According to Bennett (1955: 370–1), the language of the Saxons and Jutes was apparently influenced by a prehistoric form of Old Dutch during this time and thereby acquired the trait of initial fricative voicing. However, it has been pointed out that initial voicing in south-western dialects must have been late, because in these dialects /ʃ/ (< \*/sk/) was also voiced to /z/ in word-initial position (Flasdieck 1958: 365). Against this view, it could be argued that /ʃ/ fell in line with the typology of other fricative consonants in initial position.<sup>120</sup> The main problem with Bennett’s thesis is probably the fact that earlier historical sources – in particular Gildas, Bede and the *Anglo-Saxon Chronicle* – do not provide any substantiation for a colonisation of southern England from areas of the Lower Rhine. Only the name *Litus Saxonicum* might possibly indicate that there were already considerable numbers of Saxon mercenaries working within the Roman Empire in northern France and West Flanders – a notion which has at least found some archaeological support (Johnson 1977: 63–7).

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<sup>118</sup> As pointed out in the note 117, Frisian does not evidence initial fricative voicing and the same is true for certain dialects of Dutch, especially in the province of North Holland.

<sup>119</sup> It is normally accepted that at earlier periods, Germanic languages were more similar – note the recurring debate about mutual intelligibility between Anglo-Saxons and Vikings; but intelligibility among Anglo-Saxons and North Sea Germanic varieties in Flanders and the Netherlands must have presented few problems. Buccini (1992) views southern Old English as one part of a dialect continuum, separated only by the English Channel.

<sup>120</sup> It is likely that a new voiceless fricative would adapt to the existing system of having voiced fricatives word initially. The possibility for new, foreign phonemes to adapt to a sound system is illustrated by dialects of North Wales, which have incorporated the alien affricate /tʃ/ into their lenition system (/tʃ/ > /dʒ/), see Ball & Williams (2001: 20). Flasdieck (1958: 363–4) also gives another reason for rejecting Bennett’s proposal. He states that devoicing of voiced plosives when next to voiceless fricatives at morpheme boundaries in West Saxon rules out such early initial fricative voicing, e.g. /df/ > /tʃ/ (*gesuntful* beside *gesundful* ‘successful’). Yet it could also be argued that Flasdieck’s argument carries no weight if one assumes that fricatives were not voiced word internally after non-sonorants.

Furthermore, North Sea Germanic linguistic traces are still found in the toponymy and dialects of these areas (Taeldeman 1982), which could possibly date back to the Late Roman period.

As an alternative to Bennett's proposal, Nielsen (1985: 247) has argued that 'cross-Channel relations' during the Old English period might have brought about considerable Dutch influence on the phonology of southern Old English dialects, such that initial fricative voicing 'may have crossed the channel'. Possibly, Nielsen was thinking about trade-relations along the south coast of England. Such contact would have brought some English speakers in touch with Dutch speakers, which could have led not only to a trading of goods but also to an exchange of linguistic features. Within just a few generations, if we are to agree with Nielsen, initial fricative voicing would have spread over most of southern England. But what induced masses of people to change their pronunciation of fricatives? Nielsen does not detail the mechanism of language contact which he presumably has in mind. Nielsen, in contrast to Bennett, assumes that the development was 'late'. Yet it cannot have been too late, since French loanwords, which must have been adopted by the English after 1066, were often unaffected by the change. Thus, by Nielsen's analysis there was a rapid wave-development in late Old English within just a few generations. With such strong influence on the southern English consonantal system, there must surely have been other significant Dutch influence on Old English, but Nielsen does not provide specifics on this point, which turns out to be a weakness of his proposal. In conclusion, neither Bennett nor Nielsen's explanations of early contact are especially compelling, even if we can agree that initial fricative voicing is a striking areal feature of southern Britain and the southern Low Countries.<sup>121</sup>

Observing that there is no reason why initial voiceless fricatives should have voiced themselves spontaneously, Jespersen came to the conclusion that the change arose through assimilation of voiced sounds (vowels and sonorants) not only in word medial positions (see 5.2.4) but also across word boundaries in close syntagma. In support of this idea, Jespersen (1891: 173–6) found that there was a pattern to the distribution of [v] and [f] after voiced and voiceless consonants still observable in *Ancrene Riwe* (London, British Library, Cotton Nero A.xiv), e.g. *þe vifte* vs. *þet fife* 'the fifth', *mine uoan* 'my foes' vs. *his foan* 'his foes'. Jespersen's proposal was accepted by Luick (1914–40: 936–8) and Jordan (1974: 191), with the revision that the voiced fricatives were generalised and became the default pronunciation. As such, Jespersen's rule (or tendency) can be viewed as a devoicing rule of fricatives in non-sonorous positions (Lass 1991–93: 23).

Another Danish linguist, Brøndall (1917: 100–1, 110), suggested that voicing assimilation across word boundaries in close syntagma resulted from Celtic influence and that English and southern Dutch were particularly prone to this sandhi phenomenon. It is difficult, however, to substantiate Brøndall's thesis. Brøndall mentions the concept of Celtic sonority, referring to Celtic lenition as a sandhi phenomenon not only word internally but also across word

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<sup>121</sup> Initial fricative voicing is not alien to northern German either: here initial /s/ became voiced /z/.

boundaries;<sup>122</sup> but while it is true that Insular Celtic languages do show sandhi phenomena word medially and across word boundaries (4.2.2), no voicing of voiceless fricatives is attested in early Brittonic. It may be supposed that a Celt learning an early form of West Germanic may have applied a similar sandhi rule to voiceless fricatives, but then one would at least expect such a sandhi rule to have applied to plosives too, because such sandhi phenomena really are posited for Brittonic plosives. As it is, no such lenition of plosives is attested in English. And if Celtic was spoken throughout Britain, why then is fricative voicing found only in southern Britain?

One answer to the last question was proposed by Falc'hun (1963). He believed that it was ultimately the ancient *Belgae* who were responsible for initial fricative voicing, recalling that, according to Caesar and Ptolemy, the *Belgae* settled on the Continent in the area between the Seine, the Marne and the Rhine, as well as in southern Britain. As such, initial voicing could have been a sandhi feature of this tribe's dialect of ancient Gaulish. Also, Falc'hun pointed out that initial voicing is a feature of some Breton dialects, which he explained was the result of early British migrations. Tristram (1995a: 282–3, 286) observes in a critical discussion of Falc'hun's ideas about initial fricative voicing that he later abandoned this hypothesis before tabling various other explanations (Falc'hun 1977, 1981, 1985). Significantly, Falc'hun's later proposals were based on the assumption that the direction of influence was opposite, i.e. from West Saxon into British Celtic and then by later migration to Brittany. This is also quite similar to the proposal set out in Tristram's investigation into initial fricative voicing in southern England and Breton dialects (1995a). More specifically, however, Tristram sees initial fricative voicing as a *sprachbund* type of feature which first connected West-Saxon and Old Dutch, but spread to include other languages and dialects such as Breton, and, we may possibly add, Cornish (see George 2009: 506), as a result of sustained cultural contacts.

From an areal linguistic perspective, Tristram's choice of viewing initial fricative voicing as a *sprachbund* phenomenon of West Germanic dialects as well as of neighbouring varieties of Brittonic is persuasive. And yet it does not get us any closer to providing a motivation for the development in these areas. Tristram places the focal area of the change within a larger 'West Saxon and Low Franconian' federation. But why, one wonders, was the focal area there? Do these two areas have something in common? Can, for instance, a shared substrate be assigned them? One option to consider would be that provinces below the Rhine were within the Roman

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<sup>122</sup> English as well as southern Dutch (i.e. roughly speaking, Dutch spoken to the south of the old River Rhine) have in their recorded history blurred the distinction between word and morpheme boundaries in ways different to Standard German and northern Dutch. This prosodic change is difficult to assess from earlier written sources, however. It is nonetheless clear that both English and southern Dutch show early loss of glottal stop epenthesis, a suprasegmental feature used to signal word and morpheme boundaries (see section 6.2.1.4). Blurring of word boundaries could also explain the presence of initial fricative voicing as a sandhi phenomenon in other Germanic dialects thought to have been subject to Romance influence, e.g. the Walser dialects in Switzerland (Bohnenberger 1913: 168).

Empire and that the assumed Celtic variety formerly spoken in this area ceded to Latin fairly early. Similarly, it is well known that southern Lowland Britain was the most romanised area of Britain during the Roman period (see 2.2), and Schrijver (2002, 2007) has argued that actually a British variety of Vulgar Latin had become the main everyday language in this area prior to the Anglo-Saxon colonisation during the fifth century. As an alternative solution, therefore, we might hypothesise that the variety of Vulgar Latin spoken in southern Britain and the Netherlands south of the Rhine in some way favoured initial voiced fricatives over voiceless fricatives or catalysed voicing as a result of sandhi phenomena. It is difficult to provide any linguistic substantiation for such a thesis, however, since so little is known about the variety of Vulgar Latin spoken in these former Celtic-speaking areas.

Still, it may be worth bearing in mind that in chronological terms an early variety of British Celtic would have ceded to Latin in parts lowland Britain (i.e. not Late British but Early British), and that a similar language shift could have occurred in the region of the southern Low Countries too (Schrijver 1999). Further, it is possible that, with the exclusion of /s/ and /xw/, voiceless fricatives were non-existent in Early British in initial position,<sup>123</sup> unlike the voiced initial fricatives /v, ð, ɣ/. However, it is probable, that both voiced fricatives /v, ð, ɣ/ and voiceless fricatives /f, θ, x/ existed in medial positions, namely from other sources not connected to British spirantisation, e.g. PCl. \*/-sb-/ > \*/f/, PCl. /-Csf-/ > \*/θ/, PCl. /-Csg-/ > \*/x/ (see further 4.2.3). Consequently, some early varieties of British Latin may have been influenced by this constraint. Assuming that southern varieties of Old English, which show voicing of initial fricatives (also varieties of southern Dutch), could have been influenced by a process of Early British > Vulgar Latin substratal influence, Germanic initial /f/ and /θ/ may have been substituted for native voiced fricatives, i.e. /v, ð/ (though this leaves out /z/). In the highland zone, by contrast, initial voiceless fricatives arose by about the fifth century (4.2.4), and so no initial voicing would be expected in these areas. If this was so, the division between southern voicing of initial fricatives in England and the lack of it would roughly correspond to the line of the Latin vs. Late British speech, and in the Netherlands, i.e. roughly the division between the Roman Empire (the Rhine) and adjacent Germanic speaking provinces.

Though in some respects persuasive, the wholesale replacement of initial voiceless fricatives seems to undermine the evidence for voicing as a sandhi phenomenon, namely that it took place after vowels and sonorants but not, for instance, after voiceless obstruents. On the other hand, it will be recalled that it is now widely held that voiced fricatives were generalised and became the default pronunciation in English and that Jespersen's sandhi rule (or tendency, see examples above) can be viewed as a devoicing rule of fricatives in non-sonorous positions (Lass 1991–93: 23). To sum up this discussion: there is a slight possibility that early

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<sup>123</sup> Some scholars would reconstruct another initial voiceless fricative for Proto-British, namely \*/f/ (< PIE \*/sp-/). But since the Latin loanwords *Febrarius* and *fibula* were taken into Proto-British with initial /xw/, cf. W *Chwefrōr* and MW *hual* beside OW *fual*. It is possible that /f/ deriving from PIE \*/sp-/ did not exist in earliest Proto-British.

Brittonicised Vulgar Latin was influential in the rise of initial voiced fricatives in southern English and southern Dutch dialects; however, there is no evidence to support any notion of direct Brittonic influence.

### 6.2.2.3 Phonemicisation of a voice contrast in English fricatives

Old English fricatives were either voiceless or voiced, depending on their phonetic environment. Basically, fricatives were voiced between voiced sounds, except when at some morpheme boundaries (for details see 5.2.4).<sup>124</sup> These rules also applied to Old Frisian (see Bremmer 2009: 49–50), and continue almost unchanged in Modern West Frisian. In English, however, voiced fricatives became phonemes in their own right at a very early stage indeed. And while it is difficult to gauge precisely when this process of phonemicisation arose – due to the fact that Old English orthography does not signal the contrast<sup>125</sup> – there are at least some clues to suggest it may have arisen even in Old English. For example, Fulk (2001) claims that a phonemic distinction between /s/ and /z/ came to exist in Old English, on the basis of forms such as *cærse* (< \**cræsse*) ‘watercress’, *hyrse* (< \**hruss(i)j-*) ‘mare’ and *Horsa* (< \**hrossa* = a personal name), which show simplification of -ss- following *r*-metathesis but, apparently, no subsequent voicing of *s* in accordance with the rule that voiceless fricative are voiced between voiced sounds (cf. 5.2.4).<sup>126</sup> Similarly, Late West Saxon *blosm* ‘blossom’ (< *blostm*) shows syncope of /t/ but no subsequent voicing of /s/ according to the voicing rule either. Since such a phonemic distinction between voiceless and voiced fricatives is more established in English than in other Germanic languages, and at such an early date, several explanations have been proposed to account for the discrepancy. In the next few paragraphs, I shall survey various explanations for early phonemicisation of the voicing contrast, before turning my attention to the question of Brittonic influence.

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<sup>124</sup> Naturally, voicing of initial fricatives in southerly Old English dialects is an additional consideration here (see 6.2.2.2).

<sup>125</sup> In Old English, the fricatives appear as ⟨f, þ/ð, s⟩ regardless of whether they are voiceless or voiced. Note that ⟨þ⟩ and ⟨ð⟩ were used interchangeably and were not employed in such a way as to signal a voicelessness or voicedness. Even in Modern English, ⟨th⟩ indicates a voiceless and a voiced interdental fricative, while ⟨s⟩ can also denote both a voiceless and a voiced sibilant.

<sup>126</sup> Fulk (2001: 61–2) concedes that the modern pronunciation of *Horsa* (i.e. with a voiceless sibilant) could be bookish. He notes, however, that voiceless sibilants are also found in place-names containing the Old English elements *Horsa*, *cærs* and *gærs*, and these, in his view, demonstrate retention of [s], e.g. Horsington (Lincolnshire) < OE *Horsing* + *tūn* ‘farmstead associated with a man named Horsa’; Cassington (Oxfordshire) and Carsington (Derbyshire) < OE \**cærsen* + *tūn* ‘farmstead where cress grows’; Garsden or Garsdon, (Wiltshire) and Garsington (Oxfordshire) < OE \**gærsen* + *dūn* ‘grassy hill’.

Following suggestions by Jespersen (1928, 1933a, 1937), many scholars hold French responsible for the phonemicisation of a contrast of voice in fricatives. According to this thesis, the distinction of voice in French was quickly understood by English speakers, who were very perceptive to the contrast, rarely encountering any problems when adopting French loans with either voiceless or voiced fricatives. Most significantly, French introduced a contrast of voice in initial position. Northern and most Midlands dialects adopted French loans with initial voiced fricatives into their phonemic system, e.g. *vine* (< Old French *vi(g)ne* ‘vine’), while southern dialects, with their voiced initial fricatives (cf. 6.2.2.2), introduced initial voiceless fricatives, e.g. *fine* (< Old French *fin* ‘settlement, payment’). However, numerous cases of voicing of initial voiceless fricatives from French loans were found in modern dialects until quite recently, suggesting that such voicing was even more widespread in Middle and Early Modern English. Britton, in a discussion of Nielsen’s 1994 paper, offers the following remarks about this discrepancy (discussion in Nielsen 1994: 56):

In the South you have this tendency for French words with initial [f] to be anglicised to fit the phonotactic rules of English by becoming voiced. So you get [varmər] ultimately out of [farmər]. But this did not happen in all the items. Whereas, seemingly outside the South, French loanwords with initial <v> never appear to have been devoiced to fit in with the pattern word-initially.<sup>127</sup>

While, as Britton notes, the southern voicing of initial voiceless fricatives in French loans can simply be viewed as phonotactic alignment, it is curious that speakers of Northern and Midlands dialects did not devoice voiced fricatives to fit their native consonantal distribution too; after all, this is what happens when French, Dutch or English words with initial voiced fricatives are borrowed into Modern Frisian (see Visser 1997: 49–50). Apparently, at the time of borrowing, the voice contrast was better established in Northern and Midlands dialects of English than in the South.

A second explanation for the phonemicisation of the voicing contrast was set out by Trnka (1934–35, 1936, 1938). Trnka accepted that French loanwords were borrowed into Middle English with contrasting voiced and voiceless fricatives, but thought that such loans remained marked non-native members of a voice correlation. He contended that the voice contrast was ‘felt as a characteristic feature of foreign words and both *z* and *v* continued to be secondary variants of the phonemes *s* and *f* in the phonological structure of Middle English’ (1936: 62). According to Trnka, the loss of unstressed vowels in final syllables ultimately phonemicised voiced fricatives in Middle English. Apocope brought voiced fricatives into final position, and rather than these becoming voiceless in accordance with the phonotactics of Old English, voice was retained because English speakers took a dislike to homonymy, e.g. *leaf* : *leave*, *sooth* :

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<sup>127</sup> See also Wakelin (1988: 636) for more examples of voicing of initial voiceless fricatives from French loans.



*soothe, rice : rise* etc. (Trnka 1936: 63).<sup>128</sup> Trnka concluded that phonemicisation of voiced fricatives proceeded from north to south, following loss of final *-e* in early Northumbrian Middle English and its later apocope in central and southern dialects, such as in London at the turn of the fifteenth century (1934–35[1982]: 213). Only then, according to Trnka, were French loans which contained contrasting voiced and voiceless fricatives assimilated to the native stock.

A third explanation for the phonemicisation of the voice contrast in fricatives – usually attributed to Kurath (1956) – is the argument that simplification of intervocalic geminate fricatives, which remained voiceless, brought about a phonemic distinction of voice in fricatives in medial positions.<sup>129</sup> Consequently, contrasting voiced and voiceless singleton fricatives arose in intervocalic position. However, there are several problems with this analysis. As Sledd pointed out already in 1958, the long voiceless fricatives occurred only after short vowels, while, after lengthening of short vowels in open syllables, the voiced fricatives occurred only after long vowels. Since the distribution of voiceless and voiced fricatives can be predicted according to their alternate phonetic environments, it is doubtful whether this explanation could accurately be described as phonemicisation.

Finally, it has been argued that the three explanations for the phonemicisation of the voicing contrast outlined above need not be mutually exclusive. For instance, Lass (1992: 57–61; 2006: 62) thinks that all three factors contributed to the characteristically stable voicing contrast of English fricatives in initial, medial and final positions of words. Thus, a voice contrast was established in initial position through French loanwords, in medial position by degemination, and in final position as a result of apocope of unstressed vowels. In spite of this, it would be fair to say that French influence is usually considered the earliest and most decisive phonemicising factor among scholars. Even Trnka acknowledged that French loans were generally adopted without reversion to the Old English voicing rules set out at the outset to this section. Other scholars have criticised the degemination theory, such as Nielsen, who concluded that ‘the influx of French loanwords into Middle English played a much greater role than anticipated by Kurath’, such that ‘the phonemic opposition between voiceless and voiced fricatives could simply have been imported along with the numerous loans’ (1994: 24–5). Indeed, the notion that French gave rise to the voicing contrast in English fricatives is now so well established that it is sometimes given as an illustrative example of phonological borrowing in books on language contact (see Thomason & Kaufman 1988: 124, 308, Thomason 2001: 79, Winford 2003: 54).

Elsewhere (cf. Laker 2009a), I have reasoned that language contact and subsequent language shift of native Brittonic speaking populations would provide a straightforward explanation for the phonemicisation of the allophonic alternation of voiceless vs. voiced fricative at a very early stage in the development of English. Since it is agreed that [f, θ, s, v, ð] were all

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<sup>128</sup> This is not to deny that there were local tendencies to devoice fricatives in line with the existing phonotactic system, and a few words preserve such devoicing in Modern English, e.g. *sheriff* (< Old English *scīrġerēfa*). See Dietz (1997: 482–4) for further examples and discussion.

<sup>129</sup> Actually the idea was already suggested by Trnka (1934–35[1982]: 212), though in less detail.

phonemes in Late British, just as in Old Welsh, Middle Welsh and today in Modern Welsh, Britons learning early Old English would interpret the allophonic voiced fricative variants of early Old English as phonemes, thus imposing a phonemic split on English, at least in their own varieties of the language. The development suggested here is well known from situations of second language acquisition. Weinreich (1953: 18–19) refers to this kind of external phonemicisation as ‘over-differentiation of phonemes’ and lists it as one of four basic types of possible phonological/phonetic interference to be expected in situations of second language acquisition and language shift. In Weinreich’s own words, the process ‘involves the imposition of phonemic distinctions from the primary system on the sounds of the secondary system, where they are not required’ (1953: 18). A recent description of overdifferentiation is found in Major (2001: 32):

The L1 has distinctions that the L2 does not. Although this does not usually cause nonnative pronunciation, it results in a different mental representation from that of the NS [native speaker, SL] (see Zampini 1994). English /d/ and /ð/ are separate phonemes whereas in Spanish they are allophones (/d/ → [ð] after vowels). An English speaker thinks of the [d] in *dia* “day” as a different sound from the [ð] in *nada* “nothing,” whereas the Spanish speaker thinks of them as the same sound, because they are allophones of the same phoneme. The reasons for these psycholinguistic differences are that allophones are usually not at the level of consciousness of a NS, but phonemes are.

Thus, the same type of acquisition process which takes place when English native speakers learn Spanish would have applied when speakers of Late British (and later Old British dialects such as Old Welsh) learned early Old English as a foreign language: the voiced fricative allophones of early Old English had the status of phonemes in Late British<sup>130</sup> and so would have been understood as such during the acquisition process. The distribution of the fricatives /f, θ, s, v, ð/ in Late British and Middle Welsh is outlined in Table 13<sup>131</sup> (note that in Late British, as well as in later Medieval Welsh, fricatives contrast for voice initially, medially and finally).

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<sup>130</sup> Late British \*/v, ð, γ/ originate following lenition of Proto-Celtic \*/b, d, g/ in sonorous environments 4.2.2). British \*/s/ always existed as a reflex of unlenited Proto-Celtic \*/s/. \*/f, θ, x/ arose variously (see Schrijver 1995: 460–1), and very early from /s/ + consonant clusters (see Table 3, section 4.2.3, and especially Schrijver 1995: 374–458). By apocope these medial fricatives could also come into final position. Voiceless fricatives also derive from spirantisation (see 4.2.4). Initial /θ/ arose via initial spirantisation, which is posited for Late British, as it is attested in Cornish, Breton and Welsh (4.2.4). \*/f, s/ also entered Late British in numerous Latin loans during the Roman period.

<sup>131</sup> The forms and reconstructions given here are largely taken from Schrijver (1995). The orthography of Middle Welsh (in contrast to Modern Welsh) is ambiguous; importantly, the graphemes represent the phonemic value of fricatives as given in the Late British reconstructions.

Position	Fric.	Late British (< Proto-Celtic, Latin)	Middle Welsh
Initial	/f/	* <i>fer</i> (< PCl. * <i>sϕeret-s</i> )	<i>fer</i> ‘ankle’
	/θ/	* <i>a θeyw</i> (< PCl. * <i>ak tegwo-</i> )	<i>a thew</i> ‘and fat’
	/s/	* <i>ser</i> (< PCl. * <i>ster-</i> )	<i>ser</i> ‘stars’
	/v/	* <i>eið vux</i> (< PCl. * <i>esjo bukkos</i> )	<i>y fwch</i> ‘his buck’
	/ð/	* <i>eið ðadl</i> (< PCl. * <i>esjo datlā</i> )	<i>y dadyl</i> ‘his meeting’
	/z/	N/A	N/A
Medial	/f/	* <i>difer</i> (< PCl. * <i>dī-eks-ber-</i> )	<i>differ-</i> ‘defend’
	/θ/	* <i>nerθið</i> (< PCl. * <i>nertesī</i> )	<i>nerthy</i> ‘you will strengthen’
	/s/	* <i>wosarn-</i> (< PCl. * <i>wostarnati</i> )	<i>gosarn-</i> ‘litter’
	/v/	* <i>oer</i> (< PCl. * <i>au-beros</i> )	<i>ofer</i> ‘vain’
	/ð/	* <i>beðar</i> (< PCl. * <i>budaros</i> )	<i>byddar</i> ‘deaf’
	/z/	N/A	N/A
Final	/f/	* <i>korf</i> (< L * <i>corpus</i> )	<i>corf</i> ‘body’
	/θ/	* <i>niθ</i> (< PCl. * <i>nisdo-</i> )	<i>nyth</i> ‘nest’
	/s/	* <i>is</i> (< PCl. * <i>esti</i> )	<i>ys</i> ‘is’
	/v/	* <i>duv</i> (< PCl. * <i>dubus</i> )	<i>du</i> ‘black’
	/ð/	* <i>blēð</i> (< PCl. * <i>bleidā</i> )	<i>blwydd</i> ‘year’
	/z/	N/A	N/A

Table 13. Voiceless and voiced fricative phonemes in Late British and Middle Welsh

One argument which can be raised against the proposal of Brittonic influence is that there are no grounds for assuming that Late British had a voiced sibilant [z], either phonetically or phonemically (see Table 13), such that phonemicisation of the Old English variants [s(:)] vs. [z], which only co-occurred in medial positions, cannot be directly explained by this analysis. Rather, one would expect to find some evidence for substitution of [z] with [s]. There is indeed some evidence that the /s/ vs. /z/ contrast is the least stable in Modern English. Varieties of Northern English and Scots show a particular tendency for Standard English [z] to be realised as [s] (see Jones 1997: 324);<sup>132</sup> but /s/ and /z/ are rarely differentiated in the orthography at earlier periods except initially, hence it is difficult to gain much historical insight into this matter.

Importantly, it is known from more recent contact situations that if a phonetic feature is already utilised in a language contrastively, then it can be more readily transferred to other speech segments too. Illustration of this point is provided by the language shift of Irish to (Irish)

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Initial /θ/ is formed by spirantisation. Initial /v/ and /ð/ are derived from initial lenition (3.2.2). Although spirantisation and soft mutation are triggered by preceding words, e.g., *a(k)* ‘and’ or *y* ‘his’ (see Table 13), phonemic status of /θ/, /v/ and /ð/ is assumed due to the fact that these are independent phonemes in medial and final positions.

<sup>132</sup> Kay, drawing particular attention to Scots and northern English dialects, also notes in the appended discussion to Nielsen’s article (1994: 57): ‘[s z] particularly is unstable.’

English, which took place mainly in the eighteenth and nineteenth centuries. In brief, speakers of Irish had a larger consonantal inventory than English, and often found equivalents or near-equivalents for Modern English consonants from their native Irish language, yet Irish possessed neither the voiced alveolar /z/ nor the voiced postalveolar fricative /ʒ/. Nevertheless, these voiced sibilants were generally acquired by Irish speakers on account of the fact that a voicing contrast was already well established for other fricatives in Irish, such that speakers effectively learned to voice native /s, ʃ/ in line with other fricatives. As Bliss (1984: 137) explains: ‘No sounds corresponding to English /z, ʒ/ existed in Irish, but since these are merely the voiced equivalents of /s, ʃ/ they were easily articulated’. Thus, the lack of a voiced sibilant /z/ in Late British and Medieval Welsh need not constitute as significant a problem as might first be presumed, given that voice was well established as a distinctive feature within the Late British consonantal system.

In conclusion, early phonemicisation of a voice contrast in fricatives through early language shift offers several advantages over previous accounts. First, it can provide an explanation for early indications of phonemicisation even in Old English (Fulk 2001, 2002). Secondly, preservation of voice in final consonants after apocope of unstressed syllables probably has little to do with avoidance of homonyms, *pace* Trnka (1936: 63). More likely, phonemicisation of voice was already instituted before apocope occurred, e.g. *bathe* /beið/, *house* /hauz/ (< Old English *bapian*, *hūsian*) vs. *bath* /bɑ:θ/, *house* /haus/ (< Old English *bæp*, *hūs*). In fact, there has been a tendency for English speakers to extend this contrastive feature analogically by creating new verbal forms from nouns, e.g. *E mouth* and *grease*, i.e. pronounced /mauθ/ and /gri:s/ as nouns, but /mauð/ and /gri:z/ as verbs (see *OED* s.vv. for the derivation of these forms).<sup>133</sup> Such a productive extension of the voice contrast in fricatives to morphology demonstrates how crucial the voice distinction in fricatives became in English, unlike its closest relatives Frisian, Dutch and German. Thirdly, phonemicisation of allophonic contrasts – especially at so rapid a rate and across all dialects – is more likely to occur as a result of language shift than through lexical borrowing and diffusion. Early phonemicisation due to Brittonic language shift accounts for why the English were so adept at adopting French voiceless and voiced fricatives in loanwords without any large scale sound substitution. The introduction of numerous French loanwords enhanced the number of voice oppositions in English, notably in the highly salient initial position, but the phonemic contrast of voice in fricatives was clearly in place long before any large scale French borrowing.

#### 6.2.2.4 Glottal fricative

The loss of initial /h/ in English has long been a topic of investigation and much speculation has arisen about how foreign influence may have accelerated the change in some dialects of English. Since initial /h/ existed in Late British, the possibility of Brittonic causing such *h*-dropping has

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<sup>133</sup> Of course, many speakers of English pronounce *mouth* and *grease* with voiceless final fricatives even when they are used as verbs.

not generally been considered (even though there is evidence to suggest that /h/ was unstable in Old Welsh). Instead, recent scholarship has entertained the possibility of Vulgar Latin influence on especially East Midlands and southern dialects of English, and this particular line of enquiry will be taken up here because it could strengthen the case for other possible Vulgar Latin influences suggested in sections 6.2.1.4, 6.2.2.2, 6.2.5.1. However, before turning to any account of external influence, a review of the relevant Old English and Middle English evidence for *h*-dropping before vowels in stressed syllables is in order.

The most comprehensive study of initial ⟨h⟩ in Old English remains Scragg (1970). Scragg's aim was to collect and evaluate instances of *h*-dropping and *h*-insertion<sup>134</sup> in pre-Norman-Conquest texts. He gathered a considerable number of examples of *h*-dropping and *h*-insertion scattered throughout over a dozen manuscripts, and even in some of the earliest, e.g. the eighth-century Épinal and Erfurt glosses yield the forms *aesil* (OE *hæsel*) 'hazel', *ofr* (OE *hofer*) 'swelling', *hynni-læc* (OE *ynne-lēac* < L *unio*-) 'onion', *gihiodum* (cf. Corpus Glossary *ge-eodon*) 'they went'. Yet only in a few manuscripts are such examples recurrent, and principally in the *Exeter Book* (Exeter, Cathedral Library 3501). As Scragg points out: 'Only in the Exeter Book is there any sign of real uncertainty about the historical appearance of *h*' (1970: 179). On the whole, Scragg found no firm grounds to conclude that there was general variability in the use of /h/ in Old English, though he did point out that the phenomenon mainly involved 'a limited group of words' (1970: 195).

Indeed, examples of *h*-dropping very frequently occur with unstressed words and prefixes, in particular the masculine possessive pronoun *his* (as well as other pronouns), the verb *habban* 'have' and the prefix *hund-* in the decades 70–90, e.g. (*h*)*undseofontig* '70', while examples of *h*-insertion are common word-initially in the substantive verb *is* 'is', before pronouns, and in between vowels (presumably as a hiatus breaker). All these instances are undoubtedly genuine, but they do not indicate that *h*-dropping was a general phenomenon throughout the Old English lexicon. Scragg thinks that many examples are 'mechanical errors or the replacing of one OE word by another' (1970: 190).<sup>135</sup> As such, *is* 'is' could be confused with *his* 'his' and vice versa, and often in the same manuscript. The cause of confusion is likely to result from the pronoun *his* becoming, when unstressed, a homonym of the verb *is* 'is', thus leading to potential spelling errors among less able scribes. Possessive pronouns, usually unstressed anyway, presumably had allegro forms in speech and were no doubt prone to *h*-dropping (note that *h*-dropping is also recurrently found in Old Frisian for all third person pronouns, although the language does not show general *h*-dropping, see Bremmer 2009: 56). As in Modern English, *h*-dropping in pronominal forms may well have been common in spoken Old English, as occasional spellings

<sup>134</sup> *h*-insertion refers here to the use of [h] or appearance of ⟨h⟩ in non-etymological contexts.

<sup>135</sup> Quite a few of Scragg's sporadic (i.e. non-recurrent) examples can be explained by this means, e.g. *her* 'here' for *ær* 'before' and vice versa in *Ælfric's Homilies* (Scragg 1970: 180); *healle* 'whole' for *ealle* 'all' and vice versa in *Exeter Book* and *Blickling Homilies* (Scragg 1970: 175, 179); *in* 'in' for *hin* 'hence' in the *Junius Manuscript* and *Exeter Book* (Scragg 1970: 174–75).

would suggest. Examples of reduced forms of *habban* ‘have’, such as *æfð* ‘hath’ and *æfdon* ‘have (pl.)’, are found several times in the *Pastoral Care* (Oxford, Bodleian Library, Hatton 20) and the Mercian sections of the *Rushworth Gospels*. Several examples of *h*-dropping are also attested in the prefix *hund-*, which was used for counting decades, such as *unsefuntig* ‘70’ which appears in various spellings five times in the *Lindisfarne Gospels* (Scragg 1970: 182). Again, due to the recurrence of such forms, these examples can also be viewed as genuine instances of *h*-dropping, especially since the same reduction of the decade counter *hund-* is found in Old Frisian and Old Saxon (Bremmer 2009: 69; Gallée 1910: 235). These examples therefore demonstrate that there was *h*-dropping in Old English in ‘a limited group of words’, namely unstressed, usually monosyllabic words, and prefixes (see further Lutz 1991: 37–9), some of which show similar loss of /h/ in continental Germanic dialects too. However, some manuscripts also show some examples of unexpected *h*-dropping not just in a limited group of words, e.g. in the Exeter Book, which suggests that *h*-dropping may have been more general in some dialects.

As regards *h*-insertion, quite common is the use of ⟨h⟩ as a hiatus breaker (see Scragg 1970: 167–87).<sup>136</sup> Scragg draws attention to the fact that such *h*-insertion could be Latin influenced: ‘after the loss of the aspirate in speech in Latin, *h* was used occasionally as a diacritic to indicate that two consecutive vowel symbols belonged to separate syllables’ (*ibid.* 186). Furthermore, Scragg thinks that *h* served as a hiatus breaker across word boundaries.<sup>137</sup> Häcker (2004) has also investigated cases of *h*-insertion in Old English and argued that <h> in such examples really was an aspirate, not a redundant diacritic or a glottal stop, and she supports her argument by citing recurring instances of *h*-insertion in hiatus position in late Middle English and early Modern English wills, mainly from the southern counties of England, but also other sources. Furthermore, Häcker draws attention to instances of such /h/-insertion in Modern English dialects,<sup>138</sup> noting also that /h/ in British English often has a voiced allophone [ɦ]

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<sup>136</sup> This usage is also found in Old High German. The presence of /h/ is also confirmed by the fact that this hiatus-breaking /h/ also induces the same vowel changes in Notker texts as with usual etymological /h/, see Braune/Reiffenstein 2004: §152b, §154 note 8.

<sup>137</sup> Scragg (1970: 192) notes that ‘many of the other examples occur initially when the preceding word ends in a vowel: Tanner Bede *helde* and one example of *his*, Kentish Proverbs *his* and *hup*, WS Gospels B manuscript *hyfelan*, Paris Psalter prose *hanweald*. The occurrences seem too frequent to be coincidental, especially since they parallel so closely the use in Late Latin of *h* as a diacritic signifying hiatus’.

<sup>138</sup> Häcker (2004) refers to examples in Cockney and Yorkshire dialects. The phenomenon has also been well described by Campion with reference to Lincolnshire dialects (1976: 27): ‘In Lincolnshire it is common practice to employ “a” and “the” almost always, even when the next word begins with a vowel, but **a** apple, **a** egg, **a** iron, **the** orange and **the** umbrella do not flow readily off the tongue. The difficulty is overcome by using h to improve the fluency, so we say a **h**apple, a **h**iron, the **h**orange and the **h**umbrella. This function of the aspirate is entirely divorced from Standard English usage’.

between voiced segments (cf. Sweet 1907: 56, Cruttenden 2001: 191). As such, Häcker thinks /h ~ f/ extended its function quite naturally to that of a linking sound even in Old English, rather like the linking consonants /r, j, w/ found in many varieties of English, including Received Pronunciation (Cruttenden 2001: 289–90).

In summary, Scragg's Old English findings highlight the special tendency of *h* to disappear (*h*-dropping) and appear (*h*-insertion) which together led to a unique status of /h/.<sup>139</sup> This variation, no doubt, would have varied from speaker to speaker and from area to area and may have affected different lexical items more so than others, but, in general, some lexical items crop up time and again, so the chameleon-like status of /h/, in lexical items such as pronouns with variable stress can already be accepted for dialects of Old English. Early Middle English evidence tends to support the idea that /h/ already had an ambivalent phonemic status in some Old English dialects. Orm<sup>140</sup> – one of the most careful of scribes – also has *h*-dropping in pronominal forms: consistently in *itt* (< OE *hit*), but also in *iss* 'his' (twice corrected to *hiss*), *īm* 'him' (corrected to *himm*) as well as the verbal form *affd* 'had' (corrected to *haffde*). Yet in addition to these examples Johanneson (2000) has drawn particular attention to the form *Allflinngess* 'partly' (corrected to *halfflinngess*), since the form *Allflinngess* (*Allf*- 'half') occurs at the beginning of the verse and is even written with a capital ⟨A⟩. Johanneson seeks a connection between Orm's East Midlands dialect and the Mercian Old English section of the *Rushworth Gospels*, thus lending weight to the idea that East Midlands dialects were especially prone to *h*-dropping during the Middle English period. However, excepting *Allflinngess*, all the examples of *h*-dropping in the *Ormulum* are restricted to common unstressed pronouns and the verb *have*. These examples alone do not show that there was consistent *h*-dropping throughout the lexicon. Nonetheless, Orm's regular versification seems to tell otherwise, for it would indicate that he deletes weak final *-e* (= [ə]) regularly not only before vowels but also before <h> (see Lass 2006: 66). Thus it seems that there was more variable use of /h/ in Orm's dialect than the few examples of *h*-dropping in his orthography would suggest.

Milroy has shown how several other early Middle English texts (e.g. *Poema Morale*, *The Owl and the Nightingale*, *Genesis and Exodus*, *King Horn*, *Havelok*) could support the notion of 'h-instability' in early medieval English, noting that the 'geographical distribution of relevant texts from ca. 1190–1320 is from Lincolnshire or Norfolk (in the north) to the southern counties, but the instability seems to be greatest in the East Midlands' (Milroy 1992: 140). Several other studies into the variable use of ⟨h⟩ in especially Middle and Early Modern English that have since appeared also tend to support Milroy's view. For instance, Markus (2002) utilised the *OED* as a database to locate instances of *h*-dropping and *h*-insertion before different vowels in words of native and French origin. After studying words beginning with /h/ followed by /a/ Markus found that *h*-dropping occurred earlier in Germanic words than in French words, and this finding

<sup>139</sup> In Modern English personal pronouns and the verb 'to have' also have variants with and without *h*, e.g. British English 'he has' [hi(:) hæz], [hi(:)<sup>h</sup>æz] or [hi:z].

<sup>140</sup> East Midlands dialect, southern Lincolnshire, ca. 1200.

has since been confirmed by a much larger corpus investigation undertaken by Schlüter (2009). Furthermore, Markus (2002: 20) observed that hypercorrective insertion of ⟨h⟩ was also seen to set in earlier in lexical survivals of Old English (namely in the first half of the fourteenth century) than in French words (in the fifteenth century). In order to assess the linguistic geography of the same phenomena, Markus scrutinised the *LALME* data. His investigation revealed that *h*-dropping was more often found in ‘remote provincial areas of the East (Essex to Norfolk) and West (Devonshire to Warwickshire),’ while *h*-insertion ‘predominates in what used to be the Danelaw’ (Markus 2002: 20).<sup>141</sup> In brief, the Middle English evidence for more widespread *h*-dropping lends credibility to the advanced *h*-dropping as found in the Exeter Book and Mercian sections of the Rushworth Glosses. Thus, we may have to reckon with the possibility that *h*-dropping may have been more common in some regional varieties of Anglo-Saxon speech than the Anglo-Saxons indicated in writing. Furthermore, if *h*-dropping is especially typical of East Midlands dialects in the Middle English period, as is often suggested, there are obvious difficulties in establishing the dialectal situation of this region for the Old English period, due to the dearth of East Mercian manuscripts in existence.

Assuming, then, that there was already some degree of variability in the use of ⟨h⟩ in Medieval English dialects, an obvious candidate for influence on English in this respect would seem to be French. This idea has been argued especially by Milroy in numerous publications. In brief, Milroy argues that *h*-dropping was a feature of the English speech of the Norman French that was to become prestigious among the English and was subsequently imitated by the lower classes. However, Markus (2002), Häcker (2002) and Schlüter (2009) dismiss this idea on several counts. First, in all likelihood Anglo-Norman had /h/ as a phoneme, albeit in a small number of (*h* aspiré) words which in the main were of Germanic stock (Pope 1934: 433, Häcker 2004: 111). Secondly, there is some evidence for *h*-dropping in Old English manuscripts, e.g. in the *Exeter Book*, which cannot have been influenced by French (Häcker 2004: 112). Thirdly, the Middle English evidence for /h/-dropping is attested earliest and far more often in words of Germanic origin (Markus 2002; Schlüter 2009). These three points of criticism are certainly to the point. But in Milroy’s defence it could at least be argued, with Schlemilch (1914), that while *h*-dropping and *h*-insertion predated French influence, confusion over the use of ⟨h⟩ can only have been exacerbated by the introduction of numerous loans from French and French scribal habits.<sup>142</sup>

Milroy was certainly aware of some of the problems of his proposal of French influence and considered whether *h*-dropping may have also come about ‘through voicing of the voiceless onset to a vowel segment, then it could be associated with the voicing of initial fricatives’ (cf.

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<sup>141</sup> Tentatively, Markus (2002: 18) suggests that *h*-dropping is a hallmark of urbanised areas of south-east England (curiously, however, manuscripts from London show barely any signs of *h*-dropping during the Middle English period).

<sup>142</sup> Confusion results from the fact that there was not a one-to-one correspondence (⟨h⟩ = /h/) in French orthography.



6.2.2.2). However, he also conceded that ‘the ME texts that have most instability of *h* are not usually those that show fricative voicing’ (Milroy 1983: 50). Still, it is possible that /h/ – in line with voiceless fricatives – could have been subject to initial voicing too. After all, this is what appears to have happened in Dutch, where the glottal aspirate is typically the voiced variant /ɦ/. Yet in Dutch this does not appear to have led, in the first instance, to *h*-dropping in all Dutch dialects, since many dialects still have the voiced aspirate /ɦ/, as in the Standard variety. To be sure, the many-faceted phenomenon of the glottal aspirate in Belgian Dutch dialects could help shed light on similar posited cases in the history of English and deserves further discussion in the present context.<sup>143</sup>

It is well known among Germanists that /h/-dropping and /h/-insertion are attested in Old Dutch (what few fragments of this language there are) as well as in Middle Dutch and Modern Dutch dialects (Schönfeld/van Loey 1970: 97 and Weijnen 1991: 124–6).<sup>144</sup> Indeed, the majority of Middle Dutch texts originate from Flanders, where *h* lacks phonemic status to this very day (see Goossens *et al.* 1998–2005: maps 214–15).<sup>145</sup> Grootaers, in his classic study on the phonemic status of *h* in Belgium (1944), presents the dialectal situation roughly as follows. In the west of the country – in East and West Flanders, western parts of Antwerp province and Flemish-Brabant (as well as French Flanders, i.e. the Dutch speaking area of France which borders on Belgium) – *h* has no phonemic status. In the east of the country – especially in dialects of Limburg, eastern parts of Antwerp province and Flemish-Brabant – *h* is phonemic. In between these areas there is what can be described as a transition zone in which dialects tend to show variable use of *h*. The variation in *h* in this area is dependent on many factors such as word-stress, often resulting in hypercorrect usage, while social issues such as age and religious background also play a role.<sup>146</sup>

The most fascinating aspect about the aspirate in Belgium is that the isogloss which divides western *h*-less from eastern *h*-full Dutch dialects in northern Belgium does not stop at the Dutch–French-speaking border, which cuts horizontally through the middle of Belgium, but continues its course through into southern Belgium, dividing *h*-less western French dialects from eastern dialects which have *h* as a phoneme in loanwords usually of Germanic origin (so-called *h* aspiré). South-eastern French dialects of Belgium have preserved /h/ just like neighbouring

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<sup>143</sup> Without considering Dutch, Milroy stated: ‘English is the only Germanic language that is widely subject to [h]-loss’ (Milroy 1992: 144).

<sup>144</sup> The first to condemn such usage in Dutch Flanders is probably Erasmus of Rotterdam (1529 [1978]: 160–1).

<sup>145</sup> It is usually assumed that *h*-dropping in northern Netherlandic dialects (i.e. north of the Rhine) is younger than in southern Netherlandic dialects, see further Scholtmeier 1997.

<sup>146</sup> Cf. Grootaers (1942: 222): ‘Wij kunnen hieruit afleiden dat in de randstrook, waar de *h* als differentieerend phoneem verdwenen is, ze een toevluchtsoord heeft gezocht in het gebied van het gevoel’ [we can conclude from this that in the area where *h* as a distinguishing phoneme has disappeared, *h* has found a refuge in the area of feeling].

Germanic dialects to their north and east; as such, /h/ must be viewed as an areal feature extending beyond language boundaries. On the other hand, large swathes of (Dutch-speaking) Flanders, especially in western Belgium, have lost the aspirate as a phoneme. It is this loss of /h/ which van Coetsem – a Fleming himself – once argued could be due to French influence (1988: 89). In particular, van Coetsem emphasises that *h*-dropping ‘is found in the southwestern dialects of Dutch, that is, in areas adjacent to the French language community’, and he went on to note that ‘the county of Flanders remained for a long time in the French political and cultural sphere of influence’ (1988: 89).

In principle, van Coetsem’s idea seems quite plausible, and it lends some support to the proposal that French influence brought about ‘*h*-instability’ in Middle English. Yet the influence of French must have been early, because even the oldest fragments of Dutch from this area provide instances of *h*-insertion, which indicates the phenomenon was already well-established by ca. 1100. Because Germanic dialects spoken in areas of Flanders have been in contact with early forms of Romance (i.e. Vulgar Latin) since the early centuries AD, an earlier date for Romance influence on southern Dutch, during the first millennium AD, can hardly be ruled out either. Overall there are enough reasons to believe that some form of contact with late Romance could have effectuated *h*-dropping in southern Dutch dialects.<sup>147</sup>

Returning again to England, we may ask whether earlier forms of language contact could account for *h*-dropping and *h*-insertion in English too. Tristram (2008) has argued that *h*-dropping could be due to earlier, pre-Norman French, language contact, namely with British Latin. The proposal seems viable in theory, since there is some evidence for *h*-dropping and *h*-insertion in British Latin (see Smith 1983: 912). And if British Latin was the majority language in highly-Romanised Lowland Britain by the fourth and early fifth century AD, Tristram’s theory

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<sup>147</sup> *H*-insertion also occurs in Old High German western Franconian dialects, suggesting that the variable use of [h] in these areas is also an areal feature shared with, and possibly influenced by, neighbouring Romance dialects. Schützeichel (1968: 69–70) lists dozens of Old High German manuscripts which show non-etymological *h*-insertion before summarising the dialectal situation as follows (69): ‘Bemerkenswert ist jedoch noch eine konsonantische Erscheinung, die auf romanische Beeinflussung und damit womöglich auf die Nähe der germanisch-romanischen Sprachgrenze deuten könnte, in diesem Falle also auf das westliche/südwestliche Mittelfränkische [...] Die *h*-Prothese ist im Althochdeutschen sehr verbreitet; doch tritt sie nur in den westlichen, der Sprachgrenze benachbarten Gebieten auf, und sie läßt sich in vielen Texten der Rheinlandschaften beobachten’. [Notable, however, is a consonantal phenomenon which could point to Romance influence and therewith the proximity of the Germanic-Romance language border, i.e. in this case western/south-western Central Franconian [...] *h*-insertion is very common in Old High German, but appears only in western areas next to the language border, and it can also be seen in many texts of the Rheinland areas’]. To this day there is *h*-dropping in Lower Franconian dialects from Cologne to Luxembourg (as noted by Häcker 1998: 74, with reference to Newton 1990: 168).

gains in plausibility. In short, Tristram's idea could explain the tendency, especially in southern and (East) Midlands dialects of English, for *h*-dropping in the Old English and Middle English sources, in general contrast to South-Western, Northern and West Midlands sources. Tristram's thesis could also account for why *h*-dropping and *h*-insertion already appear to have taken a foothold in Old English and early Middle English before French influence had made its mark. As such, the areal convergence between English and Dutch dialects of Flanders need not be coincidental but interrelated since both early Germanic varieties of England and Flanders could have come into contact with varieties of Vulgar Latin. Thus, '*h*-instability' in these areas would be due to Vulgar Latin substratal influence rather than French superstratal influence. In support of this thesis one could point to a number of parallel cases of substrate languages influencing *h*-dropping, for instance, in a number of *h*-dropping 'islands' within the German speaking areas of central Europe, especially German dialects in former Slavic-speaking areas, such as the Hanoverian Wendland and in the Lausitz (at the German–Polish border), or in South Tirol (northern Italy), in an area surrounded by *h*-less Rhaeto-Romance dialects and Italian (see Veith *et al.* 1987: 191). In a wider context, Tristram's alternative account would also support the notion that the lowland south-eastern quarter of Britain was highly Romanised before the Anglo-Saxon invasion, as has been argued on the basis of linguistic and archaeological evidence, see 2.2 and 2.4.

Initial /h/ does not seem to have been lost at any early stage in dialects outside the East Midlands, though it is interesting to note that Markus (see above) considered *h*-insertion to be more common in the former Danelaw areas. This observation could, potentially, agree with the notion that there was more Brittonic influence on English phonology in the highland zone, for it is also the case that there are a great many unexpected instances of initial *h*-insertion in Old Welsh (see Morris-Jones 1913:186–7). In this regard, Old Welsh contrasts with Middle Welsh, where usage is generally etymologically correct, though there are exceptions (e.g. MW *heusawr* 'shepherd' < \**owi-st-ārjo-*, MW *herwyd* 'according to' < \**are-wid-*). The numerous instances especially of *h*-insertion in Old Welsh suggest that it may have been more than just orthographical, and this leads one to ask whether similar usage may have occurred in Late British too. Furthermore, it is perhaps worth recalling Häcker's suspicion that *h* was voiced when *h*-insertion occurred in the history of English. This would, I think, correspond with Morris-Jones' views about the usage of [h] in Old and Middle Welsh: 'an initial vowel or a medial vowel in hiatus seems to have been pronounced with a distinct breathing which is often represented by *h*. This breathing was voiced' (1913: 186). To conclude: *h*-insertion in English dialects is paralleled by a similar process in Old Welsh (and possibly Late British) and thus may have resulted at least in part from earlier Brittonic influence. On the other hand, *h*-dropping as well as *h*-insertion, occurring mainly in Medieval English dialects of south and south-east, shows a greater resemblance to Vulgar Latin usage.

### 6.2.3 Nasals

Two nasal phonemes existed in Pre-Old English: /n/ and /m/, of which the former also had a velar nasal allophone, [ŋ], before the velar plosives /k, g/ (5.2.1). All three nasal consonants appear to have had the status of phonemes in Late British: /n, m, ŋ/. Hence phonological influence ought not to be immediately apparent in a situation of language shift. Nevertheless, some phonetic and distributional issues involving these consonants may be relevant and will be explored in the following two sections.

#### 6.2.3.1 Phonetics of /n/ and [ŋ]

Both in (Pre-)Old English and Late British /n/ had phonemic status. In (Pre-)Old English, /n/ contrasted for length in medial position, e.g. Old English *manna* ‘men (gen.pl.)’ (< PGmc \**mannan*) vs. *mana* ‘exhort (impv.sg.)’ (< PGmc \**manō*). Geminate consonants also came to exist in final position of stressed monosyllabic words as a result of Pre-Old English apocope of unstressed vowels, e.g. *mann* ‘man’ (< PGmc \**mannō*) vs. *man* ‘one (pronoun)’ (< \**man*). However, double consonants in final absolute position are written inconsistently in Old English; the double consonant spellings in final position could be influenced by dissyllabic forms within the same paradigm, where geminates really did exist, cf. inflected forms *beddes* ‘bed’s’, *cynnes* ‘kin’s’ (both gen.sg.) vs. uninflected forms *bed(d)* ‘bed’, *cyn(n)* ‘kin’ (both nom.sg.). Kurath reasoned that, due to the inconsistency of spellings, geminates were no longer phonemic in absolute final position, ‘for if OE had preserved long consonant phonemes at the end of words, they would be written with the same consistency as long consonants between vowels’ (1956: 435). The situation with long and short consonants is similar to that posited for Late British, Old Welsh, and Middle Welsh: compare Old Welsh *cannuill* (< L *candela*) ‘candle’ vs. *canam* (< PCl. \**canami*) ‘I sing’, OW *penn* ‘head’ (< PCl. \**k<sup>w</sup>ennom*) vs. *hen* (< PCl. \**senos*) ‘old’. It is unclear, however, whether in Late British we have to do with a phonological length contrast or rather a difference in syllable contacts, i.e. syllable cut, as is the case in some Modern Welsh dialects (see Morris-Jones 1913: 30 and section 6.2.1.2 above). A similar drift of phonological quantity of segments to a quantitative distinction based on syllable contacts has also been proposed for varieties of Old English (see Fulk 1996: 498ff.).

One property of /n/ which might be of potential interest is its place of articulation. In this context, it is noteworthy that many Scots and traditional northern dialects of English have dental rather than alveolar articulation of /n/, and the same holds true for /t/ and /d/, i.e. [n̪, t̪, d̪] (see Johnston 1997b: 505). It is conceivable, for example, that dental rather than alveolar place of articulation could have resulted from contact with northern varieties of Brittonic, given that /n, t, d/ are also dental in northern Welsh and not alveolars as in southern Welsh (see Ball 2001: 63). But while this parallelism is striking from a present-day areal perspective, it is of course impossible to determine whether or not it pertained to older periods too, as such it is uncertain whether this areal parallelism is of older or more recent origin.

As already noted, in Old English the velar nasal, [ŋ], is usually considered an allophone of /n/ before the velar plosives /k/ and /g/, i.e. /ng, nk/ = [ŋk, ŋg]. In the history of English, the velar nasal gained phonemic status in most dialects, due to the simplification of the cluster [ŋg] > /ŋ/, in medial and final positions.<sup>148</sup> The same reductive process is also posited for Late British. It is difficult to date the change in English and Brittonic, due to the fact that its reduction did not generally lead to any orthographic change in either language. In Brittonic, the simplification of [ŋg] > /ŋ/ is usually thought to be contemporaneous with similar reductive changes, namely /mb/ > /m(m)/, /nd/ > /n(d)/, which more often led to orthographic change (Jackson 1953: 513; also in English, see Luick 1914–40: 1035). There is inscriptional evidence to show that simplification of /mb/ had already occurred in Late British in some but not in all dialects (Jackson 1953: 509–11). Similarly, there is some evidence to show that /mb/ had been simplified in unstressed syllables in Old English, while oldest northern Middle English documents evidence simplification in all positions (Luick 1914–40: 1033–4, 1036–7 note 1). From this perspective, it looks as if the simplification of such nasal clusters, and the creation of the phoneme /ŋ/, was ongoing in both languages from quite an early period, though somewhat earlier in Brittonic. Jackson (1953: 696–7) thinks that simplification of the Brittonic clusters /nd, ng, mb/ initiated in the late fifth century and that the process was complete a century later.<sup>149</sup> From this perspective, it may be worth contemplating whether the earlier and more thorough processes of reduction of /ng/ (= [ŋg]), as well as /mb/ and /nd/, in northern English and Scottish dialects may in some way have been catalysed by early Brittonic contact. It is worth pointing out that in traditional Modern English dialects the complete reduction of [ŋg] to /ŋ/, even in words such as *finger* or comparative forms such as *stronger*, corresponds with the familiar Northumbrian vs. ‘Southumbrian’ division running roughly from the Humber along the Aire Valley to the River Lune (see Orton *et al.* 1978: Ph. 240–1; for details on Scots see Johnston 1997b: 510). It appears likely, therefore, that this early Middle English isogloss, like many others dividing Northumbria and ‘Southumbria’, could have its origins in the Old English period, though, admittedly, the orthographical evidence is neither able to support nor dismiss such an analysis.

#### 6.2.3.2 Phonetics of /m/

The bilabial nasal /m/ was present in Late British as in later attested Brittonic languages. However, /m/ did not contrast for length in Late British, while it did so in English, e.g. Old English *fremman* ‘do, aid, provide’ vs. OE *fremu* ‘use, advantage’. Singleton /m/ did not exist in Late British since it had been lenited to a nasal fricative /ṽ/, such that only an original geminate

<sup>148</sup> Not so in some present-day West Midlands dialects, e.g. in dialects of Greater Manchester, where [ŋ] still only occurs before /k/ and /g/ and can still be viewed as an allophone of /n/.

<sup>149</sup> The cluster /ŋg/ was soon recreated in Welsh by the coming together of /ŋ/ and /g/ in compounds like *unglust* ‘one-eared’ (< *un-* ‘one’ + *clust* ‘ear’) or in the place-name Bangor /baŋgor/ (< *ban* ‘high-point’ + *côr* ‘fence’) (see Morris-Jones 1913: 23).

/m/ [m:] existed in sonorous environments (see discussion in 4.2.2.1). For this reason, it is possible that Pre-Old English /m/ may have been replaced by Brittonic /m/ which probably retained phonetic length [m:].<sup>150</sup> There is some spelling evidence to suggest that this may have been the case in Northumbrian varieties of Old English, just as there is some evidence to suggest that the plosives /p, t, k/ and, though more rarely, /s/ were likewise not simply regular singleton consonants (see 6.2.1.2). Spellings such as *forcummen* ‘come’, *niommanna* ‘take’, *summer* ‘summer’, *frumma* ‘beginning’ (< OE *forcuman*, *niomanne*, *sumor*, *fruma*), which appear quite frequently in the Lindisfarne Gospels, as well as other northern texts such as the *Rushworth Gospels* and the *Durham Ritual*, would receive an explanation within this context (for more examples see Luick 1899: 59–61). Further, in Late British only short vowels occurred before /m/, since it was phonetically a long consonant. It is therefore possible that /m/ may have had the effect of shortening preceding long (Pre-)Old English vowels too, as perhaps in words like *plum*, *thumb* or northern dialectal *wum* or *yam* ‘home’ (< OE *plūm*, *þūm*, *hām*) demonstrate. In addition, lengthening of etymological short vowels in open syllables may also have been curtailed, e.g. *come*, *summer* and northern dialectal *gam* ‘game’ (< OE *cuman*, *sumor*, *gamen*).<sup>151</sup> But while such developments may have taken place, it is also possible that speakers of Late British ‘managed’ to acquire a length contrast for /m/ by the fact that a phonological length contrast was found among other consonants in the Late British phonological system as well as in later dialects. As was argued in 6.2.2.3 above, once a phonetic feature is utilised in one part of the phonemic system, then it is easier for language learners to extend that feature to other areas of language too. Furthermore, although long vowels before /m/ were non-existent in Late British, we may note that this situation changed in Welsh, namely through later contraction of disyllables (e.g. *bu-um* > *būm* ‘I have been’) and the later integration of English loans (e.g. *ffrâm* ‘frame’, *gêm* ‘game’).

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<sup>150</sup> Late British /m/ had phonetic length [m:] but not phonological length, since it was not part of a quantitative contrast /m/ vs. /m:/, as is posited for Old English.

<sup>151</sup> It is curious that in German some words also show lack of open syllable lengthening before /m/, e.g. *Sommer*, *Hammer* (< PGmc *\*sumeraz*, *\*hamaraz*). This is unusual because nasals are not known to have shortening effects on preceding vowels (Vincent van Heuven, p.c.). The situation in Middle Dutch dialects of especially Flanders is much more similar to Northumbrian English, however. Here, as well as blocking open syllable lengthening, /m/ (also /p, t, k/) often caused shortening of preceding long vowels. Furthermore, /m/ (in addition to /p, t, k/) is often written as a geminate consonant when it was not a geminate historically. As already mentioned above (see note 96), Schrijver (1999: 31–3) proposes that Brittonic had an influence on Dutch phonology, especially in coastal regions.

#### 6.2.4 Liquids

In Pre-Old English, the lateral /l/ and rhotic /r/ existed in initial, medial and final positions of words. Contrastive length was also found medially. The situation appears to have been very much the same in Late British. Only the possibility of phonetic mismatches between the two languages need be entertained.

##### 6.2.4.1 Phonetics of /l/

It is usually assumed that, as in Modern Standard English, /l/ differed phonetically according to position in Old English. So-called clear [l] presumably occurred before vowels and /j/. Dark (i.e. velarised) [ɫ] occurred before all other consonants and word finally. Clusters of /l/ + consonant groups caused breaking of front vowels, which could indicate that /l/ in this position was velarised (see 8.2.5). In this regard, Howell (1992: 72–3) has noted that some Modern Germanic dialects with dark [ɫ] also exert a backing and diphthongising influence on front vowels in ways similar to Old English breaking. While acknowledging that it may be speculative to telescope Modern dialectal data back into Old Germanic, Howell notes that dark [l] is very common in the North Sea Germanic area in general: Dutch, Low German, Low Saxon as well as Danish dialects of Schleswig have a similar dark [ɫ] in the syllable rhyme (Howell 1992: 73).<sup>152</sup> It has also been observed that a geminate lateral derived from West Germanic gemination, i.e. by a following /j/, did not generally cause breaking of front vowels in Old English, e.g. PGmc *\*taljan* yields OE *tellan* ‘count, tell’ (not OE *\*\*tiellan*). This might suggest that there was a phonemic palatal vs. velar contrast in the Old English <ll>. If this were so, such a distinction was subsequently lost; however, no such distinction has survived in any other Germanic language either.

No distinction of palatal and velar consonants is assumed for Late British, but beyond this observation little is really known about the phonetics of its lateral consonants. Welsh English is often noted for its clear /l/ in positions where Received Pronunciation has dark /l/. However, light /l/ is in fact a typical trait of southern Welsh as well as southern Welsh English; northern Welsh tends to have velarised /ɫ/, and even more so in the syllable coda or when adjacent to central or back vowels (Ball 2001: 21). Interestingly, the more generalised use of dark /ɫ/, as in Northern Welsh, is also characteristic of many north-west Midlands dialects, especially of Lancashire, though this feature is seldom remarked upon in the literature (but see Beal 2004: 130 for a note on Lancashire usage). Like other instances of shared areal phonetics (e.g. 6.2.1.3), it is rather unclear whether these could be ascribed to early Late British influence. In this regard, it is

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<sup>152</sup> Smith (2007: 99) draws attention to velarised /l/ in the Danish dialect of east Jutland and thick or /r/-like /l/ in some northern Scandinavian varieties (cf. Haugen 1976: 274–8) and suggests that Anglian, since it was ‘the variety of West Germanic closest to West Germanic, could have developed its early velarised /l/ through contact with Pre-Scandinavian while the Angles were still living in their continental homeland’. However, Smith omits to mention, let alone account for, velar /l/ in Dutch, Low German dialects and Frisian.

worth mentioning that most contemporary Scots dialects, unlike Northern English dialects, now tend to have a dark /l/ in coda positions rather than light /l/, which is posited for earlier periods and which is still found in some peripheral dialects (see Johnston 1997a: 107–8, 1997b: 510); this indicates that laterals have the potential to change phonetically. In conclusion, the distribution of the lateral as a phoneme was similar in Late British and (Pre-)Old English. Some phonetic influence may have been induced by Brittonic contact but can hardly be ascertained on the basis of orthographic evidence.

#### 6.2.4.2 Phonetics of /r/

Old English was fully rhotic: /r/ appeared in all positions of the syllable, including final positions (i.e. both pre-consonantly and in absolute final position), e.g. *car*, *cur*, *care* or *card*, *curd*, *cared*, as still in Scots, Irish English and standard American English, but not in Received Pronunciation. In addition, single vs. geminate /r/ was differentiated in medial position.<sup>153</sup> The situation was very similar in Late British, and so no phonemic influence is to be expected and none has been detected. There is general agreement that English has remained rhotic throughout most of its history and that the reduction and loss of /r/ in syllable rhymes is a later development of especially East Midlands dialects during the Modern English period. Ellis's survey of nineteenth century dialects shows that at that time there were only three areas in the east of the country which did not have postvocalic /r/ (for a discussion and map see Trudgill 2004: 67–72). From the *Survey of English Dialects* of the 1950s, a further reduction in the use of postvocalic /r/ can be observed (see e.g. Orton *et al.* 1978: Ph. 20, Ph. 224), and this trend has continued in England into modern recent times.

It is conceivable that Brittonic could have influenced early English /r/ in some phonetic way. The problem here, however, is that there is dispute about the phonetic realisation of /r/ in Old English. As recounted in 5.2.2, Pre-OE /r/ derives from two sources, from inherited Proto-Germanic \*/r/ and from the voiced sibilant \*/z/, by rhotacism. It is clear from the older runic script as well as from other sources that the two 'r's were differentiated in early North and West Germanic, yet there is no evidence in Old English or other West Germanic languages to show that this continued into the historical period; hence I shall assume that the merger had taken place already before or during the early settlement of Britain. It has usually been assumed that /r/ in older Germanic languages, including Old English, was a tongue tip trill, as in Scots and in some traditional Yorkshire dialects (as well as in many varieties of Dutch, Frisian and German). Nevertheless, some scholars have maintained that Old English /r/ was everywhere a retroflex [ɽ] similar to that found today in traditional West Country dialects or the bunched-*r* of American English (see Brunner 1965: 146, Pilch 1970: 55); other realisations of /r/ in varieties of Modern

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<sup>153</sup> Some scholars think that geminate consonants may also have occurred word finally in earliest Old English (see Hogg 1992a: 42); this is uncertain but at any rate Late British and Old Welsh also had the opposition in word final position for the resonants /l, r, n/.



English, such as trills, taps, uvular fricatives and approximants would then be viewed as modern innovations. The prevailing view now seems to be that Old English did have a trill in initial position but a weakened reflex, such as an approximant or retroflex /r/, in syllable rhyme positions. In particular, some investigators now think that a weakened approximant articulation of /r/ in syllable rhymes would have been more conducive to Old English Breaking (Howell 1992: 107, Denton 2003: 22; for details on breaking see 9.2.5). Yet it would almost certainly be misguided to think that there was no other phonetic variation of /r/ in Old English dialects, especially as /r/ is the most phonetically variable consonant cross-linguistically.<sup>154</sup>

The most distinctive phonetic variants of /r/ in the English dialects which have been the subject of recent discussion are retroflex [ɽ] of the south-west of England (Tristram 1995b) and the uvular fricative [ʁ] of Durham, Northumberland and the Scottish borders (Gąsiorowski 2007). Some recent publications argue that these variants may be of some antiquity in the areas concerned. As for retroflex-*r*, the *Survey of English Dialects* recorded it throughout the south-west of England (Orton *et al.* 1978: Ph. 224) and still further north and west postvocally (Orton *et al.* 1978: Ph. 20). As pointed out above, some scholars have argued that retroflex-*r* was normal Old English pronunciation, adding that [ɽ] is still common in Modern dialects and arguing that it would be more likely to cause Old English breaking than a trill. Tristram (1995b) points out that retroflex-*r* is not particularly common in other Germanic languages, though we can note that it is becoming quite common in varieties of Dutch, especially in the provinces of North and South Holland, even though its history is debated. Tristram (1995b) speculates that retroflex-*r* was a ‘spontaneous’ innovation of West Saxon dialects which subsequently spread. She goes on to speculate that it may have been blocked by Norse influence because retroflex-*r* is not found north of Watling Street. (Tristram also points to the lack of initial fricative voicing north of Watling Street which both Poussa and Kristensson argue is due also to Norse influence; for a rejection of this claim see 6.2.2.2 above.) It seems to me unlikely that Norse speakers would have affected the phonetics of the rhotic consonant throughout the Danelaw without causing other significant phonetic and phonological changes. The phonetics of Cornish /r/ are no longer retrievable, but inferences can of course be made, especially on the basis of Breton. Tristram notes that the apical trill is the most common rhotic of Breton dialects; but, singularly, the northern dialect of Trégor has the retroflex-*r*. Rather than the Trégor variant being an archaism, Tristram thinks it more likely that it was introduced through maritime contacts between England and Brittany. In short, the whole matter is one of speculation and cannot be decided either way.

Uvular /r/ of Northumberland and Lowland Scots was famously reported by Daniel Defoe, who stated that the natives of Northumberland were unable to utter the rhotic consonant ‘without

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<sup>154</sup> Koen Sebregts (p.c) records about twenty phonetic variants of /r/ (including a zero variant) in Dutch alone, and his doctoral research has shown that such a degree of phonetic variation of /r/ is not specific to Dutch.

a hollow Jarring of the Throat' (1724–27, III, 232–3). Recently Gąsiorowski (2007) has argued that uvular /r/ may date back to the Old English period. He gives two reasons. First, he notes how the uvular /r/ has a uvularising or backing influence on vowels, drawing attention to the fact that only in Northumbrian Old English was /e/ backed to /o/ in the sequence /wer/ when a coronal or labial consonant followed, e.g. \*werþa- > *worþ* 'property'; he also notes similar modern instances of backing, such as [bɔ̃ːdz] *birds* and [wɔ̃ːmz] *worms* (cf. Wells 1982: 396, Orton *et al.* 1978: Ph. 30, 31). Secondly, he points to late Northumbrian examples of rhotic metathesis and anaptyxis in /Vrxt/ sequences, e.g. *breht* and *berec(h)t* 'bright', both deriving from (< \**berht*). He argues that the sequence /rxt/ was avoided only in Northumbrian because this would be 'entirely natural in a dialect with /r/ realised as uvular [ʁ] or a similar sound, whose combination with a directly following /x/ would be very awkward both articulatorily and perceptually' (2006: 73). But in actual fact, to judge from the Middle and Modern English situation, such clusters have been simplified by metathesis in all dialects, and we would not like to suggest that uvular /r/ was once common to all dialects. Gąsiorowski's compatriot Welna (2002: 512) suggested that metathesis of /r/ in /rxt/-groups 'may have been a northern phonological rule, [which] became a common process all over the country in Middle English'. One suspects that it might simply be a case of late Northumbrian documents indicating change at an earlier date than elsewhere, as with many other innovations of phonology and grammar. Curiously, the change of /r/ in /rxt/-groups is also found in Old Frisian, Old Saxon and Old High German.

Nothing in theory rules out the possibility of [ʁ] being a feature of medieval Northumberland dialects, but it is difficult to argue that it arose as a result of language contact with Brittonic, since we do not know what kind of /r/ existed in Northern British. In most Breton and Welsh dialects, the most typical variant is the trill in initial and prevocalic positions with the tap in syllable rhymes. The uvular fricative [ʁ] and trill [ʀ] is found in North Walian dialects as well as Welsh English varieties of the same area (see Ball 2001: 21, 64, Wells 1982: 290). However, Welsh scholars generally regard the uvular variant as a speech defect. For instance, Morris-Jones remarks that some speakers 'never acquire it [i.e. trilled *r*, SL], but substitute a guttural *r* [...]. This is the only defect of speech to be found among speakers of Welsh; it is called *tafod tew* "thick tongue"' (1913: 19). In conclusion: /r/ occupied a similar phonological role in both Late British and Pre-Old English. It is conceivable that some phonetic variations, such as retroflex and uvular /r/, emerged in English dialects as a result of contact with Brittonic, but the phonetics of /r/ in varieties of Late British are not directly recoverable to back up any such propositions.

#### 6.2.5 Approximants /w/, /j/

It is generally assumed that the Modern English labial-velar and palatal approximants /w/ and /j/ have remained virtually unchanged since Old English and Germanic times. Both /w/ and /j/ were

also part of the Late British consonant inventory, just as they still are in Modern Welsh and Modern Breton, therefore no change resulting from Brittonic contact is expected.

#### 6.2.5.1 Labial-velar approximant /w/

The English voiced labial-velar approximant /w/ is thought to continue the original Proto-Germanic pronunciation that was usually lost in other Germanic languages (Luick 1914–40: 1022–3). In standard German, most Low German dialects, as well as in North and East Frisian, the usual outcome is a labiodental fricative /v/. In Standard Netherlandic Dutch as well as West Frisian, a labiodental approximant /ʋ/ is the usual reflex; but in Standard Belgian Dutch and some southern Dutch dialects the voiced bilabial approximant /β/ is found. In other varieties of Dutch, such as the Standard Belgian Dutch variety described by Verhoeven (2005: 245) or the dialect of Katwijk aan Zee (South Holland), a labial-velar articulation is found, which approximates English /w/ quite closely.<sup>155</sup> In Old Norse \*/w/ developed to a labiodental fricative /v/ or was lost before rounded vowels (see Noreen 1923: 169, 184).

Since the English labial-velar approximant /w/ is viewed as a conservatism, it therefore seems wrong to dwell upon it in this investigation. However, some scholars have remarked that the stability of the semivowels in English is remarkable within the context of other Germanic languages (see Lutz 2006: 212).<sup>156</sup> Their unchanged status in English as compared to other Germanic languages could therefore be relevant. In this context it has been observed (e.g. by Tolkien 1963: 20) that older and modern Brittonic languages also had a labial-velar approximant /w/, such that no changing influence from Brittonic on English /w/ would be expected.<sup>157</sup>

Despite the general conservatism of /w/ in English, two dialectal developments of /w/ have been noted. First, many south-western dialects lost /w/ in word initial position before the back rounded vowel /u/ (for a similar change involving /j/ see 6.2.5.2 below). First evidence for this change comes from Late Middle English, several such relic forms were also recorded in the *Survey of English Dialects* (see Wakelin 1977: 94–5). While it could be argued that such a development is quite common – a similar change is attested in Old Norse and Old Frisian

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<sup>155</sup> Unfortunately, Goossens *et al.* (1998–2005: map 194) do not provide detailed phonetic analyses for the distribution of ⟨w⟩ in Belgian and Netherlandic Dutch but signals only whether a labiodental or a bilabial approximant is produced (on the island of Terschelling the labiodental fricative [v] is also recorded). But it is quite clear that the phonetics of the bilabial approximant in Belgian Dutch differ quite significantly in detail; compare, for example, the online sound recordings to Peters' (2006) description of the dialect of Hasselt in Limburg to those of Standard Belgium Dutch by Verhoeven (2005).

<sup>156</sup> The stability of the semivowels /w/ and /j/ is not be especially unique to English, for other languages have also preserved them over long stretches of time, e.g. Arabic and Japanese.

<sup>157</sup> It may not be coincidental that for centuries Belgian Dutch has been in close contact with French, which has a labial-velar approximant similar to that of English.

(Noreen 1923: 169, Bremmer 2009: 50) as well as in some Dutch dialects (Weijnen 1991: 157) – it is nonetheless interesting to note that the same change occurred in neighbouring Middle Cornish and Late Cornish, cf. George (2009: 505): ‘Initially, /j-/ and /w-/ were in variation with zero; e.g., *yethewon* ~ *ezewon* “Jews”, *worth* ~ *orth* “at”’. It is not entirely clear whether this development initiated first in Cornish before spreading to south-west varieties of English or vice versa (see the discussion in 6.2.5.2 below). Northern English dialects do not indicate any variation similar to that found in south-western English cited above, even though Scandinavian loans demonstrate that loss of initial /w/ had occurred before rounded vowels in the Norse that was spoken in England, leading one to expect that Nordic speakers might have had problems in acquiring /w/ before rounded back vowels.

Secondly, an interchange of /w/ and /v/, as indicated by the interchangeability of the graphs <w> and <v>, has been noted in dialects of the southern East Midlands and East Anglia especially. The spelling confusion is thought to result either from hypercorrection based on /v/ merging with /w/ or from both /v/ and /w/ merging at an intermediate phoneme /β/ or /β̥/, which was rendered both as either <v> or <w> (see Ellis 1889: 132). These developments cannot be explained with reference to Late British, though the later development, i.e. a merger of /v/ and /w/ on /β/ or /β̥/ may yet receive an explanation within the context of Vulgar (British) Latin influence, for /w/ and /b/ are thought to have merged on /β/ in Vulgar Latin (see Smith 1983: 913, 941). By this reasoning, the /β/ of a Vulgar Latin speaker would naturally have served as a replacement for the two alien pre-Old English phones /v/ and /w/. Finally, it may be noted that some older Scots texts seem to show a similar change, since /w/ is sometimes written as <v>. In this case, we find no reliable evidence from recently documented modern English dialects to confirm that this was anything more than a case of spelling variation. But if there really was a change of /w/ to /v/ in some dialects, it would be worth considering whether Gaelic influence might have been a cause, because Gaelic, despite having a much richer inventory of consonants than English, does not have /w/ but does have /v/.

#### 6.2.5.2 Palatal approximant /j/

The English palatal approximant /j/ is also thought to continue unchanged Old English and Germanic phonetics. The articulation of the palatal approximant is similar in German, Dutch and Frisian, though in these languages it is often realised with more friction, tending somewhat towards a voiced palatal fricative /ɟ/ (see Collins & Mees 2003: 173, Moulton 1962: 24). It is unclear precisely how old this frication is but there are some indications that it is of some age in Dutch and Low German, because some pronominal forms with etymological \*/j/ before the vowel /i/ have ‘derailed’ from their normal phonological development, merging with the velar fricative \*/ɣ/, which in Netherlandic Dutch is often devoiced and uvularised, e.g. Du. *ginder* ‘yonder’ is pronounced /ɣindər/ in standard Belgian Dutch but /χindər/ in standard Netherlandic Dutch (Lasch 1914: 181, Schönefeld/van Loey 1970: 101–2). Lutz (2006: 212) has argued that the unaltered state of the palatal approximant in English is remarkable. It could be assumed, that

contact with Brittonic, which also evidences stability of the palatal approximant, could therefore have supported conservation in English.

In terms of dialectal developments it can be noted that in south-western dialects of English /j/ has often been lost word initially before the front vowel /i/. The change is registered in Late Middle English and several such relic forms were recorded in the *Survey of English Dialects* (see Wakelin 1977: 94–5). Loss of /j/ before /i/ is not unusual cross-linguistically; a similar change is attested in Old Norse, Old Frisian, Dutch dialects, and Middle Cornish and Late Cornish (see George 2009: 505 cited above). But since the development in Cornish finds no parallels in Welsh, it is conceivable that the Cornish development was influenced by neighbouring English dialects, since, at the time, Cornish was becoming more and more influenced by English (and more and more extinct). Especially since other developments which appear in documents during the decline of Cornish (ca. 1500–1650), show parallels with southern and south-western English. One such example is ‘new lenition’, whereby ‘[f-] and [s-] became voiced to [v-] and [z-] when preceded or followed by /m, n, l, r/ or a vowel’ (George 2009: 506).<sup>158</sup>

### 6.3 Summary

The contrastive analysis presented at the beginning of this chapter revealed that almost all Pre-Old English consonants were present in Brittonic (the most obvious exceptions being palatalised velar plosives); the distribution of certain consonants brought additional variation to light. Due to the overriding similarities in the consonantal systems of both languages, not a great deal of phonological change was anticipated. However, close examination of developments of the individual consonant segments did reveal some potential candidates, of which the following may be noted: 1) lack of assibilation of palatalised velars in especially northern dialects; 2) unexpected geminate consonants /p, t, k, m/ in some Late Northumbrian English documents; 3) early phonemicisation of voiced fricative allophones; 4) non-etymological usages of [h]; 5) more extensive simplification of the nasal groups /nd, ng, mb/ in Northern dialects; 6) preservation of the approximants /w, j/. A number of other phonetic properties of consonants in English dialects were examined, such as the phonation of plosives, the articulation of liquid and rhotic consonants, and the assumed loss of glottal stop epenthesis, but in such cases not enough was known about the phonetics of Late British or (Pre-)Old English to make a very convincing case for Late British influencing developments in early English. Overall, this chapter has shown that a number of English consonantal developments may well have been influenced by contact with Brittonic, but on the whole the consonant inventories of both languages were highly similar such that no

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<sup>158</sup> New lenition is registered in Cornish spelling of the late sixteenth century (George 2009: 506). The development undoubtedly occurred much earlier in speech, though how much earlier is unclear. Breton also attests this change.

substantial restructuring of the English consonantal system would be expected to result from Brittonic contact in the first place.



## 7 Developments of English consonant clusters

Chapter 6 compared and contrasted the phonetics of individual consonant segments in Late British and Pre-Old English. This chapter analyses in greater detail how consonants in the two languages are distributed, ordered and combined. Attention is given first to finding out which syllable structures existed in both languages and what their respective levels of syllabic complexity were. This general evaluation of syllable structure complexity leads on to a more comprehensive survey which seeks to determine which consonants formed clusters in initial positions in Pre-Old English and whether or not these were present in Late British too. Finally, it will be established whether the identified Pre-Old English consonant clusters that were absent in Late British underwent any unexpected developments in the early history of English and, if so, whether a plausible case for Brittonic influence can be made.

### 7.1 Contrastive overview

Some discussion of the distribution of individual consonants as well as geminates has already been made in the previous chapter.<sup>159</sup> This discussion will be extended in Chapter 7 by focusing on how various consonants combined to form clusters. First, I would like to establish whether there were any major differences in syllable structure in the two languages under investigation,<sup>160</sup> not least because the syllable structure of a particular language may be just as distinctive as its phoneme inventory. For instance, some languages, such as Japanese or Hawaiian, do not permit complex sequences of consecutive consonants. In Hawaiian, for example, each consonant (= C) must be followed by a vowel (= V), thus CV, CVCV, CVCVCV, etc. By contrast, some languages, such as Georgian and varieties of Berber, allow for very complex syllable structures involving long strings of five or more consonants. In the context of the present study, it is significant that speakers of languages with simple syllable structures typically encounter difficulties when acquiring languages with more complex syllable structures, which often leads to various restructuring strategies (see Ternes 1978). It is possible to get an idea about what syllabic restructuring can occur by considering how loanwords from languages with more complex syllable structures are integrated into languages with less complex syllable structures. Take, for instance, Korean or Finnish, neither of which permit more than one consonant at the

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<sup>159</sup> See the overview in Table 12 and especially the discussion in 6.2.1.2.

<sup>160</sup> A syllable consists of a syllable nucleus and an optional syllable margin. The syllable nucleus typically consists of a vowel. The syllable margin consists of one or more consonants that either precede or follow the nucleus. As such, the nucleus may be characterised as ‘V’ (which will indicate here any vowel or diphthong) and ‘C’ for any consonant. By this symbolism, words like Modern English *toe*, *eat* and *street* can therefore be designated CV, VC and CCCVC respectively (see Vennemann 1988: 1–10, Ternes 1999: 185–8).



beginning of a word. When English loanwords beginning with two or more consonants enter Korean, the consonant group is split asunder by an epenthetic vowel, such as in /sC/-groups like *spy* /sip<sup>h</sup>a.i/, *style* /sit<sup>h</sup>a.il/ and *ski* /sik<sup>h</sup>i/. In Finnish, however, a different strategy is taken: all but the last consonant of the cluster is dropped, e.g. Finnish *lasi* ‘glass’, *likka* ‘girl’, *ressi* ‘stress’ from Swedish *glas*, *flicka*, and English *stress*.<sup>161</sup>

In order to determine the relative complexity of Late British and Pre-Old English syllables, I have collected all the possible syllable types of both languages along with selected representative examples in Table 14. It can be concluded from Table 14 that both languages had relatively complex syllable structures. Both languages allowed for up to three initial consecutive consonants. Up to three and possibly four consonants were permitted in final position in Late British, while in Pre-Old English only three were allowed originally, but following the effects of vowel reduction and deletion (in particular, syncope, ca. sixth century) some four-consonant clusters were also created (see Table 14). In brief, the syllable structures of Late British and Pre-Old English were roughly equally complex, such that no major changes in Pre-Old English syllable structure would necessarily be expected in a situation of language acquisition by speakers of Late British.

Now, although it can be agreed that the overall complexity of syllable structure in Late British and Pre-Old English was similar, it is important to look in more detail at the particular consonant clusters themselves, in order to determine the rules which govern the formation of such clusters, because ordering of individual consonants within consonant clusters is far from arbitrary. For instance, in Modern English up to three consonants can occur in initial position, e.g. /s/+p/+r/ in such in words like *spray*, *spread*, *sprawl*. However, /s, p, r/ clearly cannot be ordered in any other way: /srp, psr, prs, rsp, rps/ are all impossible combinations in English. Thus, it is crucial to establish which combinations of consonants were present in Pre-Old English and then to assess whether or not they were also found in Late British, for any differences between the two languages could potentially – though of course not necessarily – have led to change in a situation of second-language acquisition.

Examples of change resulting from differences in consonantal clusters of two languages in contact can be provided from known situations of second-language acquisition or loanword integration. Note, for instance, that a language like Spanish actually allows initial clusters of up to two consonants, e.g. *grande* ‘large’, *flor* ‘flower’, *clavo* ‘nail’. However, no initial /s/ plus consonant clusters exist in Spanish, despite the fact that /s/ and many other consonants form part of the Spanish phoneme inventory. One can observe that loanwords with initial /sC/ clusters from various languages taken into Spanish acquire an initial epenthetic vowel, e.g. Spanish *estrés*, *espaguetis*, *esnob* as compared with English *stress*, *spaghetti* and *snob* (the same strategy can frequently be observed among less advanced Spanish speakers of English). This characteristic adoption strategy of Spanish is likely to have been influenced by the fact that many words

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<sup>161</sup> However, in contemporary Finnish some plosive plus liquid clusters from recent loans are becoming acceptable to speakers of standard Finnish (see Sulkala & Karjalainen 1992: 370).

beginning with /esC/ already exist in Spanish and thus provide an adaptive model for change. Having said this, it is not always obvious whether the absence of a particular consonant group will lead to change. For instance, when learning Dutch, English speakers are also faced with several unfamiliar initial clusters, in particular /fn, kn, ps, sʁ, sʁr/. From my own observations, acquisition of the clusters /fn, kn, ps/ will rarely cause much difficulty at all for English speakers, presumably because, on the one hand, the consonant segments which make up these clusters already exist in English and, on the other hand, these clusters are not overly complex when viewed against English triple clusters such as /spl, spr, skr/. However, the Dutch initial clusters /sʁ, sʁr/, such as in *schip* ‘ship’, *Schiphol* (= name of airport) or *schrijven* ‘write’, prove to be a stumbling for many speakers, who will often use /sk/ and /skr/ as substitutes. The greater difficulty posed by the clusters /sʁ/ and /sʁr/ presumably stems from the fact that the uvular fricative /ʁ/ is not a phoneme in English and therefore puts an extra burden on the learner of Dutch.

Since phonotactic change can result from the different distributions of consonants in two languages in contact, it is important to establish exactly which combinations of consonants existed in Pre-Old English and to determine whether they existed in Late British too. Any clusters that were not present in Late British must then be looked at in more detail to see if any of them changed over time and whether the particular change could be due to contact with Late British. In this study we shall not, however, attempt to establish all the possible combinations of consonants in all positions of words (i.e. in initially, medially and finally). Instead, attention will be directed towards the developments initial clusters, because the initial clusters of Late British and Pre-Old English can be established with confidence.

Much scholarship has been dedicated to the development of consonant clusters in the history of English. The initial (and to some extent final) clusters have been surveyed and/or analysed in publications such as Harris (1954), Pilch (1970), Phillips (1978) and Lutz (1991). Unfortunately, comprehensive studies of the consonant clusters of Brittonic languages appear to be lacking. However, all initial clusters can be deduced relatively easily with the help of dictionaries and other reference works. For the present study, it has been sufficient to establish whether or not a particular initial cluster which existed in Pre-Old English was also present in Late British. The existence of a particular cluster in Late British is inferred in the first instance on the basis of word forms in the earliest attested Brittonic languages in combination with further evidence, such as from other related Celtic languages (e.g. Old Irish), which can help establish a word’s common Proto-Celtic basis. In addition, some words can be identified as early loans from Latin which must also have existed in Late British before the Anglo-Saxon advent, usually on account of their phonological form. A complete overview of the possible two and three consonant clusters of Pre-Old English is given in Table 15. Based on a detailed search of the Brittonic material, it has been possible to identify which clusters existed in Late British and which did not. As always, clusters absent in Late British are indicated by grey cells. The data used to produce Table 15 is provided in Table 16.

In general, it can be agreed that the majority of Pre-Old English initial clusters were also present in Late British: /sp-, st-, kn-, gn-, pl-, kl-, bl-, gl-, fl-, wl-, wr-, pr-, tr-, kr-, br-, dr-, gr-, fr-, θr-, wr-/. Furthermore, some similar or identical equivalents to /hl-, hr-, hn-/ and dialectally /hw-/ may have existed in Late British. However, some inherited Germanic initial clusters in Pre-Old English did not exist in Late British, and so could represent potential cases for imperfect acquisition, these were: /dw-, fn-, kw-, sl-, sm-, sn-, spr-, spl-, sw-, tw-, θw-/. The Pre-Old English clusters /hn, hl-, hr-/ may or may not have existed, and /hw/ was only found in South-West British, and there is a high probability that (Pre)-Old English /sk-/ was phonetically different from Late British /sk-/. It bears repeating, however, that because the overall complexity of consonant clusters in Late British and Pre-Old English was roughly equal, several of the above-mentioned unfamiliar Pre-Old English clusters may well have been acquired by Britons in a situation of second language acquisition, just as, for instance, a speaker of Modern English has no difficulty when acquiring many of the foreign two member sequences in Dutch (as noted above).

Syllable canons	(Pre-)Old English (< Proto-Germanic)	Late British (< Celtic)	Middle Welsh
V	<i>ā</i> (< * <i>aiw</i> ) ‘always’	* <i>ō</i> (< * <i>au</i> )	<i>o</i> ‘from’
CV	<i>cȳ</i> (< * <i>kōu-i-</i> ) ‘cows’	* <i>kȳ</i> (< PCl. * <i>kuno-</i> )	<i>ci</i> ‘dog’
CCV	<i>trēo</i> (< * <i>triu</i> ) ‘wood’	* <i>trī</i> (< PCl. * <i>trīs</i> )	<i>tri</i> ‘three (masc.)’
CCCV	<i>strēa(w)</i> (< * <i>stawa</i> ) ‘straw’	N/A	N/A
VC	<i>ād</i> (< * <i>aid-</i> ) ‘fire’	* <i>ad</i> (< PCl. * <i>ad</i> )	<i>ad</i> ‘and’
CVC	<i>rūm</i> (< * <i>rūm</i> ) ‘room’	* <i>rud</i> (< PCl. * <i>roudo-</i> )	<i>rud</i> ‘red’
CCVC	<i>drāf</i> (< * <i>draib</i> ) ‘drove’	* <i>drug</i> (< PCl. * <i>drukos</i> )	<i>drwg</i> ‘bad’
CCCVC	<i>strōd</i> (< * <i>strōd-</i> ) ‘bogland’	* <i>strad</i> (< PCl. * <i>strato-</i> )	<i>ystrad</i> ‘vale’
VCC	<i>inc</i> (< * <i>ink-</i> ) ‘you two’	* <i>orn</i> (< PCl. * <i>org-n-</i> )	<i>orn</i> ‘blame’
CVCC	<i>camb</i> (< * <i>kamba-</i> ) ‘comb’	* <i>cant</i> (< PCl. * <i>kantom</i> )	<i>cant</i> ‘hundred’
CCVCC	<i>stearc</i> (< * <i>starku-</i> ) ‘stark’	* <i>krēdr</i> (< PCl. * <i>krei-tro-</i> )	<i>crwydyr</i> ‘sieve’
CCCVCC	<i>strang</i> (< * <i>strang-</i> ) ‘strong’	* <i>skribl</i> (< L <i>scripulum</i> )	<i>yscopybl</i> ‘scruple’
VCCC	<i>lēhst</i> (< * <i>ēhtis</i> + <i>θū</i> ) ‘persecute 2.sg.’	* <i>entr</i> (< PCl. * <i>enter</i> )	<i>ithr</i> ‘between’
CVCCC	<i>beorht</i> (< * <i>berxt</i> ) ‘bright’	* <i>sumbl</i> (< L <i>stimulus</i> )	<i>swmbyl</i> ‘goad’
CCVCCC	<i>!pwehst</i> (< * <i>θwehis</i> + <i>θū</i> ) ‘wash 2.sg.’	N/A	N/A
CCCVCCC	<i>spreost</i> (< * <i>sprecis</i> + <i>θū</i> ) ‘speaks 2.sg.’	N/A	N/A
VCCCC	<i>!ieldst</i> (< * <i>aldis</i> + <i>θū</i> ) ‘delay 2.sg.’	N/A	N/A
CVCCCC	<i>!cierfst</i> (< * <i>karfis</i> + <i>θū</i> ) ‘cut 2.sg.’	* <i>rē(y)str</i> (< PCl. * <i>reigstro-</i> )	<i>rwystir</i> ‘hindrance’
CCVCCCC	<i>!stincst</i> (< * <i>stinkis</i> + <i>θū</i> ) ‘stink 2.sg.’	N/A	N/A
CCCVCCCC	N/A	N/A	N/A

Table 14. Syllable canons in Late British and (Pre-)Old English (note that Old English word forms are provided in this table). ‘!’ = indicates the cluster developed after syncope, and so probably emerged around the mid-sixth century

		Second consonant															
First consonant		p	t	k	b	d	g	f	θ	s	m	n	l	r	j	w	h
	p												+	+			
	t													+		+ <sup>4</sup>	
	k											+	+	+		+ <sup>4</sup>	
	b												+	+			
	d													+		+ <sup>4</sup>	
	g											+	+	+			
	f											+ <sup>1</sup>	+	+			
	θ													+		+ <sup>4</sup>	
	s	+	+	+							+ <sup>2</sup>	+ <sup>2</sup>	+ <sup>2</sup>			+ <sup>4</sup>	
	m																
	n																
	l																
	r																
	j																
	w												+	+			
	h											+ <sup>3</sup>	+ <sup>3</sup>	+ <sup>3</sup>		(+) <sup>4</sup>	

Three-member clusters: spl<sup>5</sup> spr<sup>5</sup> str skr

**Notes:**

1. The rare initial cluster /fn/, as in OE *fneosung* ‘sneezing’, was absent in Late British.
2. The clusters /sm/, /sn/, /sl/ and /sw/ did not exist in Late British in initial position (however, they did exist across morpheme boundaries).
3. The situation with /hn, hl, hr, hw/ in Late British is complex. Some near equivalent clusters – /xl, xn, xr/ – and the voiceless liquids – /l̥, r̥/ – existed in Late British. /hw/ probably existed in southern Late British.
4. Late British did not possess Old English consonant + /w/ combinations, e.g. OE *swā* ‘so’, *twā* ‘two’, *cwīc(u)* ‘quick’, *dwīnan* ‘dwine (dialectal), fade, wither’, *þwītan* ‘thwite (dialectal), whittle, cut down’, *hwelp* ‘whelp’. Late British did have the combination of the uvular fricative /χ/ + /w/, as in Modern Welsh ⟨chw-⟩, e.g. *chwech* ‘six’; in south-western British this may have been realised as [hw] as in (Pre-)Old English.
5. The three-member clusters /spl/ and /spr/ did not exist in Late British. /spl/ was exceptionally rare in Old English; it is found in just a few words of uncertain etymology.

Table 15. Initial double and triple consonant clusters in Pre-OE compared to LBr.

Cluster	(Pre-)Old English	Late British	Middle Welsh
/pl-/	<i>pliht</i> ‘plight’	* <i>plēf</i> (< L <i>plēbēs</i> )	<i>plwyf</i> ‘parish’
/pr-/	<i>prættig</i> ‘pretty’	* <i>prin-</i> (< PCl. * <i>k<sup>w</sup>rin-</i> )	<i>pryn-</i> ‘to buy’
/tr-/	<i>trēo</i> ‘tree’	* <i>trī</i> (< PCl. * <i>trīs</i> )	<i>tri</i> ‘three’
/tw-/	<i>twelf</i> ‘twelve’		
/kn-/	<i>cneō</i> ‘knee’	* <i>know</i> (< PCl. * <i>knuw-</i> )	<i>cneu</i> ‘nuts’
/kl-/	<i>clāþ</i> ‘cloth’	* <i>klōr</i> (< PCl. * <i>klāro-</i> )	<i>clawr</i> ‘plank’
/kr-/	<i>cræft</i> ‘craft’	* <i>krēdr</i> (< PCl. * <i>krei-tro-</i> )	<i>crwydyr</i> ‘sieve’
/kw-/	<i>cwēn</i> ‘queen’		
/bl-/	<i>blōd</i> ‘blood’	* <i>blēd</i> (< PCl. * <i>bleid-V-</i> )	<i>blwydyn</i> ‘year’
/br-/	<i>brād</i> ‘broad’	* <i>brōd</i> (< PCl. * <i>brātu-</i> )	<i>brawt</i> ‘judgement’
/dr-/	<i>drink</i> ‘drink’	* <i>drug</i> (< PCl. * <i>drukos</i> )	<i>drwg</i> ‘bad’
/dw-/	<i>dwellan</i> ‘dwell’		
/gn-/	<i>gnagan</i> ‘gnaw’	* <i>gnōd</i> (< PCl. * <i>gnā-to-</i> )	<i>gnawd</i> ‘customary’
/gl-/	<i>glæs</i> ‘glass’	* <i>glas</i> (< PCl. * <i>glas-to-</i> )	<i>glas</i> ‘blue, green’
/gr-/	<i>grund</i> ‘ground’	* <i>grōn</i> (< PCl. * <i>grānom</i> )	<i>grawn</i> ‘grains’
/fn-/	<i>fnesan</i> ‘sneeze’		
/fl-/	<i>flōd</i> ‘flood’	* <i>flayr</i> (< L <i>flagro</i> )	<i>ffleir</i> ‘stink’
/fr-/	<i>fram</i> ‘from’	* <i>frēn</i> (< L <i>frenum</i> )	<i>ffruin</i> ‘bridle’
/θr-/	<i>þrota</i> ‘throat’	* <i>a θrī</i> (< PCl. * <i>ak trīs</i> )	<i>a thri</i> ‘and three’
/θw-/	<i>þwītan</i> ‘thwite’		
/sp-/	<i>spān</i> ‘spoon’	* <i>spirid</i> (< L <i>spiritus</i> )	<i>yspryt</i> ‘spirit’
/st-/	<i>stān</i> ‘stone’	* <i>stōd</i> (< PCl. * <i>stā-tV-</i> )	<i>ystawd</i> ‘line, swath’
/sk-/	<i>scip</i> ‘ship’	* <i>skōd</i> (< PCl. * <i>skātV-</i> )	<i>yscawd</i> ‘shade’
/sm-/	<i>smiþ</i> ‘smith’		
/sn-/	<i>snāw</i> ‘snow’		
/sl-/	<i>sliht</i> ‘slight’		
/sw-/	<i>swimman</i> ‘swim’		
/hn-/	<i>hnecca</i> ‘neck’	* <i>a χneu</i> (< PCl. * <i>at-k<sup>w</sup>e knuw</i> )	<i>a chnu</i> ‘and nuts’
/hl-/	<i>hlāf</i> ‘loaf’	* <i>a χlōr</i> (< PCl. * <i>at-k<sup>w</sup>e klāro-</i> )	<i>a chlawr</i> ‘and(a) plank’
		* <i>Lu yr</i> (< PCl. * <i>lugarā</i> )	<i>lloer</i> ‘moon’
/hr-/	<i>hring</i> ‘ring’	* <i>a χrēdr</i> (< PCl. * <i>at-k<sup>w</sup>e krei-tro-</i> )	<i>crwydyr</i> ‘and (a) sieve’
		* <i>Rēō</i> (< PCl. * <i>roudos</i> )	<i>rhud</i> ‘red’
/hw-/	<i>hwēol</i> ‘wheel’	* <i>(hw/χw)ex</i> (< PCl. * <i>sweks</i> )	<i>chwech</i> ‘six’
/wl-/	<i>wlonk</i> ‘proud’	* <i>wlad</i> (< PCl. * <i>wlati-</i> )	<i>gwlad</i> ‘land’
/wr-/	<i>writan</i> ‘write’	* <i>wrūg</i> (< PCl. * <i>wroik-</i> )	<i>g(w)rug</i> ‘heather’
/spl-/	<i>splott</i> ‘plot’		
/spr-/	<i>spring</i> ‘spring’		
/str-/	<i>strang</i> ‘strong’	* <i>strad</i> (< PCl. * <i>strato</i> )	<i>ystrad</i> ‘vale’
/skr-/	<i>scrapian</i> ‘scrape’	* <i>scrīvenn</i> (< L <i>scriven</i> )	<i>ysgriven</i> ‘writing’

Table 16. Initial clusters in (Pre-)Old English and Late British counterparts

## 7.2 Developments of initial clusters

In this section, all Pre-Old English clusters that were either absent or probably phonetically different in Late British, i.e. /dw-, hl-, hn-, hr-, hw-, fn-, kw-, sk-, sl-, sm-, sn-, spr-, spl-, sw-, tw-, θw-/ , will be subject to a close analysis to determine whether they underwent any form of change in Medieval English dialects and whether any potential changes may be attributed to Late British influence. In so doing, it is possible, with the exception of the cluster /fn/, to classify these clusters into three consonant groups: /sC/-clusters, /hC/-clusters and /Cw/-clusters.

### 7.2.1 Loss of the cluster /fn/

The initial cluster /fn/ did not exist in Late British and was soon lost in Medieval English. Rather than seeking a connection with Late British influence, it may be more significant that this cluster was extremely rare in Old English. Among the few examples of words with /fn-/ are *fnæs* and *fnæd*, both meaning ‘fringe’, which were lost by the end of the Old English period, as well as a number of words relating to aspiratory phenomena which some scholars assume may ultimately have onomatopoetic origins: *fnæran* ‘breathe heavily, snore’, *fnæst* ‘blow, breathe’, *fnæstian* ‘puff’, *fneosung* ‘sneezing’, *fnesan* ‘sneeze’, *fnora* ‘sneeze’ (see Lutz 1991: 234). The so-called onomatopoetic formations are attested in Middle English, but during this time initial /fn/ appears to have been replaced in some words by the more frequent initial cluster /sn/, e.g. *snore* (< OE *fnora* ‘sneeze’), *snort* (< OE *fnæran* ‘snore’), *snatted* < ME *fnatted* ‘snub(nosed)’ (*MED* s.vv. *snatted*, *snōren*, *snorten*; Lutz 1991: 234–5). Other earlier attested words with initial /fn/ seem simply to have dropped out of usage. /fn/ has been lost in English, as well as in German (also in Low German dialects), but it exists as a rare cluster in most other Germanic languages – Swedish, Danish, Norwegian, Icelandic, Frisian and Dutch (Lutz 1991: 259, 264). Lutz (1991: 236) notes that the first attestation of <sn> (< /fn/) stems from a North Midlands text ca. 1330, while the last attestation of <fn> stems from a South-western text dated ca. 1465. But as Lutz points out, the difference between first and last attestations in comparison to attestations from other regions is usually a matter of just decades, and due to the low frequency of words with the initial /fn/ cluster anyway, it is difficult to argue for an ordered loss of the /fn/ cluster according to dialect. The only possible argument for external influence on the /fn/ cluster could come in the form of /sn/ substitutions. However, here only the argument of frequency can be used, i.e. /sn/ was a more frequently occurring cluster than /fn/. Even so, both /sn/ and /fn/ did not exist in Late British. We do know that /sn/ did enter Brittonic languages in some loanwords, while no examples of /fn/ appear to have been borrowed, though of course this situation may have more to do with the fact that words with initial /fn/ were so infrequent in English. In short, it seems unlikely that /fn-/ was lost in English as a result of Brittonic influence.

### 7.2.2 /sC/ clusters

A large number of /sC/ clusters existed in Pre-Old English. There were seven two-member clusters: /sp-, st-, sk-, sm-, sn-, sl-, sw-/ and four three-member clusters /spl-, spr-, str-, skr-/. Most of these clusters were inherited from earlier Proto-Germanic and ultimately from Proto-Indo-European. For similar reasons, a large number of /sC/ clusters also existed in Proto-Celtic, but far fewer of these survived into Late British, namely /sk-, skr-, st-, stl-, str-/ (see Table 17).

/sC/ cluster	Late British example	Middle Welsh
*/sk/ (< */sk/)	* <i>sk̥d</i> (< PCl. * <i>skātV-</i> )	<i>yscawd</i> ‘shade’
*/skr/ (< */skr/)	* <i>skrūd</i> (< PCl. * <i>skrou-to-</i> )	<i>ysgrud</i> ‘skeleton’
*/st/ (< */st/)	* <i>st̥d</i> (< PCl. * <i>stā-tV-</i> )	<i>ystawd</i> ‘line, swath’
*/stl/ (< C# */sl/)	* <i>stlis</i> (< PCl. * <i>slissu-</i> )	<i>ystlys</i> ‘side’
*/str/ (< */str/)	* <i>strad</i> (< PCl. * <i>strato-</i> )	<i>ystrad</i> ‘vale’

Table 17. Inherited /sC/ clusters in Late British

Most Celtic /sC/ clusters were lost before the Late British period, i.e. /sl-, sm-, sn-, sp-, spl-, spr-, sr-, sw-/.<sup>162</sup> Hence several Pre-Old English /sC/-clusters were not present in Late British when speakers of these languages came into contact.

Since a large number of the Pre-Old English /sC/ clusters were lacking in Late British, it is possible that several of these unfamiliar combinations may have been difficult to acquire. However, as in the history of English, where new /sC/ clusters have been introduced from languages such as Greek and Sanskrit (e.g. /sf, sθ, sv/ *sphere, sthenic, svarabhakti*), new /sC/ clusters may well have been acquired without too much difficulty by Britons. After all, some /sC/ clusters did already exist in Late British to serve as models. It can be seen from later attested Brittonic languages that British speakers did reintroduce several /sC/ combinations from Old English and Middle English, e.g. Cornish *snod* (< OE *snōd* ‘snood, head-dress’). Note, however, that this situation is less demonstrable for Welsh, since in the Old Welsh period an epenthetic vowel [ə] was introduced before all /sC/ clusters, regardless of their origins (compare the Late British forms against the Middle Welsh forms, with initial ⟨y⟩ = [ə], in Table 16 above).<sup>163</sup>

<sup>162</sup> For full details on the loss of these clusters see Schrijver (1995: 374–458). The following examples may be noted here: 1. PCl. /sl/ > LBr. /l/, e.g. PCl. \**slougos* > LBr. \**L̥θ: y* > W *llu* ‘troop’. 2. PCl. /sm/ > LBr. /m/, e.g. PCl. \**smeru-* > LBr. \**mer* > W *mer* ‘marrow’. 3. PCl. /sn/ > LBr. /N/, e.g. PCl. \**snij-* > LBr. \**Nið* > W *nyddu* ‘twist’. 4. PCl. /sϕ/ > LBr. /f/, e.g. PCl. \**sϕeret-s* > LBr. \**fer* > *fer* ‘ankle’. 5. PCl. /sϕl/ > LBr. /fl/, e.g. PCl. \**splītā* > LBr. *flet* > MW *flet* ‘trick’. 6. PCl. /sϕr/ > LBr. /fr/, e.g. PCl. \**sprag-to* > LBr. \**fraçθ* > MW *ffraeth* ‘swift, ready’. 7. PCl. /sr/ > LBr. /fr/. e.g. PCl. \**srognā* (or \**sroknā*) > LBr. *froyn* > MW *froen* ‘nostril’. 8. PCl. /sw/ > LBr. /xw/, e.g. PCl. \**swesūr* > LBr. \**xwoir* > MW *chwaer* ‘sister’.

<sup>163</sup> E.g. *ysmwcan* ‘fog, smoke’ (< OE *smēocan* ‘smoke’), *ysnodan* (< OE *snōd* ‘snood, head-dress’), *yslipanu* ‘polish’ (< OE *slipan* ‘slip, glide’).



However, epenthesis was a later phenomenon associated with Welsh and should not be regarded as a Late British phenomenon; indeed, epenthesis never occurred in the histories of Breton and Cornish. On balance, then, it is likely that the acquisition of new Pre-Old English /sC/ combinations caused few problems for speakers of Late British, provided that the second and third elements of each cluster were phonemes in Late British. No significant changes appear to have affected /sC/ clusters in Medieval English, which would point to external influence, with the possible exception of the cluster /sk-/, to be discussed in the next section.

### 7.2.2.1 The phonetic variability of the cluster /sk/

Through a series of changes which can be viewed collectively as a form of palatalisation, /sk/ generally became /ʃ/ in Old English (except medially before back vowels and, in most instances, finally after back vowels). Representative examples are *scīp* ‘ship’, *wasce* ‘I wash’, *fisc* ‘fish’, with palatalisation (palatalised /sk/ is indicated in this section as ⟨sc̥⟩); no palatalisation is found in *ascaþ* ‘he asks’, *tusc* ‘tusk’ which retain /sk/, as confirmed by Modern English pronunciations. There is a general consensus that the change took place via a number of stages, probably [sk] > [sc] > [sç] > [ʃ] (see Hogg 1992a: 272, Minkova 2003: 193). The problem is that it is difficult to put a date on each stage of the proposed development and regional and sociolectal differences must also have existed. Still, the frequent appearance of a diacritic ⟨e⟩ after the cluster ⟨sc̥⟩ in Old English sources – e.g. *sceacan* ‘shake’, *sceamu* ‘shame’ – is generally regarded as confirmation that a palatalised stage was reached, though it is of course unclear from such spellings precisely which supposed stage of palatalisation was reached, i.e. [sc], [sç] or [ʃ] (see Minkova 2003: 133).

One further way of gaining information about the palatalisation of /sk/ has been to investigate the effects of Scandinavian influence on English. It is generally held that several Old English place-names had a palatalised initial [ʃ] (< /sk/) but that this was later replaced with /sk/ by Norse speakers who had difficulty pronouncing /ʃ/. Representative examples are, for instance, Skipton (North and West Riding of Yorkshire) and Skirlaugh (East Riding of Yorkshire), instead of more frequently attested Shipton (Hampshire, Oxfordshire etc.) and Shirley (Derbyshire, Hampshire, Warwickshire), from Old English *scīptūn* ‘sheep farm’ and *scīrlēah* ‘wood belonging to the shire’ respectively. Yet, as Ekwall (1963: 89) argued years ago, it is unlikely that /sk/ had developed as far as /ʃ/ during the time of Scandinavian contacts (ca. 900) ‘for it is not quite easy to understand the common substitution of *sk*, if the stage [š] had already been completely reached’. According to Ekwall, if the stage /ʃ/<sup>164</sup> had indeed already been reached, a more natural substitution for this would have been Scandinavian /s/.<sup>165</sup> Consequently, Ekwall thought an intermediate stage of palatalisation, e.g. [sç], would have been more prone to Scandinavian replacement with /sk/. However, as an alternative scenario we may wonder

<sup>164</sup> I use the International Phonetic Association symbol /ʃ/ instead of Ekwall’s [š].

<sup>165</sup> Some such substitutions are posited by Ekwall (1963: 89), e.g. Silpho (North Riding of Yorkshire) < OE *scylfhoð* ‘ridge with a peak’.

whether the same blocking effect on the development of /sk/ to /ʃ/ could at least in some instances have resulted from earlier British influence, for, just like Norse, [sc], [sç] and [ʃ] were equally foreign to Late British speakers, who only had the cluster /sk/. The problem here is, naturally, that both Scandinavian and British influence can be posited throughout most of northern England, and so it is not easy to decide whether a British or Norse pronunciation of a place-name ultimately gave rise to a modern /sk/ pronunciation.

A more convincing argument for Brittonic influence can be made in areas where Norse influence was not particularly strong. In a recent article, Kristensson (2005) has focused on the frequency of place-names with initial /sk/ in Devon, where in fact many place-names (approximately one sixth of those listed in Gover *et al.* 1931–32) show unexpected initial /sk/, e.g. Landskerry, Scarhill, Skillaton, Score, Scruell. After surveying the evidence, Gover *et al.* 1931–32: 100) conclude that ‘the distribution of the names showing this development is such as to make it impossible to suggest that it is due to Scandinavian influence, which might perhaps be expected in some of the coastal districts’. Instead, Kristensson argues that Cornish speakers in Anglo-Saxon times (as well as subsequent arrivals of Cornish speakers after the Old English period) could instead have forestalled or reversed the development of /sk/ to /ʃ/.

Aside from place-names, hundreds of English words with initial /sk/ have also been viewed as being the result of Scandinavian influence. Numerous words with initial /sk/ are explained as being either Scandinavian loanwords with /sk/ (e.g. *sky*, *skirt*, *skull*) or as being English native words that were subject to Scandinavian phonological influence (i.e. Norse speakers reversed an earlier unfamiliar palatalised variant such as [sc], [sç] or [ʃ]). Yet in many instances it is not easy to decide whether we are dealing with a Norse loan or the effects of putative phonological influence, e.g. *skin* could simply be a Norse loanword (cf. ON *skinn*) or it could be a native English word (cf. OE *scīnn*) that was subject to the same substitution /sç/ > /sk/ as posited for some place-names (see Hogg 1992a: 275–6). Wright (1905: 247) noted that even when non-dialect words such as *scab* and *scaffold* are taken out of consideration, the *English Dialect Dictionary* contains 1,154 words with initial /sk/, leading him to conclude that ‘either the dialects contain a far larger number of Norse words than is generally supposed, or else it is not certain that initial *sc* has under all circumstances become *ʃ* in native words in the dialects’. If the latter possibility is indeed true, one wonders whether Late British influence may also have blocked the development of /sk/ to /ʃ/ in some English dialects. On the whole, some degree of British influence (in addition to just Norse influence) does appear to be a realistic possibility and could just as easily help to explain the presence of doublet forms such as *skift* vs. *shift* and *skelf* vs. *shelf* in dialects of Cumberland, Westmoreland, Yorkshire, Lancashire, Scotland and Ireland (see Wright 1905: 247). To sum up, many place-names and dialect words that have /sk/ instead of expected /ʃ/ could result not only (or exclusively) from the influence of Norse speaking settlers but also from earlier Brittonic influence on the English language.

### 7.2.3 /hC/ clusters

According to most handbooks and grammars, (Pre-)Old English started out with four preaspirated clusters /hn, hl, hr, hw/ (spelled ⟨hn, hl, hr, hw⟩ in Old English), these later became voiceless sonorants / $\text{h}_n$ ,  $\text{h}_l$ ,  $\text{h}_r$ ,  $\text{h}_w$ /, before ultimately merging with the already existing voiced sonorants /n, l, r, w/. In a detailed discussion of the orthographic evidence, Dietz (2006: 245–65) has reasoned that the (usually) sporadic appearance of ⟨nh, lh, rh, wh⟩ spellings (i.e. ⟨h⟩ follows the sonorant) around the turn of the first millennium could indicate that the preaspirated sonorants had become voiceless monophonemic sequences at around this time.<sup>166</sup> Probably soon after, in the eleventh and twelfth centuries (though later in Kentish and some other southerly dialects), / $\text{h}_n$ ,  $\text{h}_l$ ,  $\text{h}_r$ / merged with existing /n, l, r/. In Southern and South Midlands dialects, voiceless / $\text{h}_w$ / also seems to have become /w/ by about 1200, though only in unaccented function words, while the merger of / $\text{h}_w$ / at /w/ in accented words began around 1300 and continued for many centuries (Dietz 2006: 257–9). In northern dialects the development of OE /hw/ was very different and will be dealt with separately below.

Before investigating what effect, if any, contact with Late British may have had on the development of OE /hn, hl, hr, hw/, it will be useful firstly to survey what motivations for the loss of these initial clusters have been suggested in the literature. In the main, the development of the preaspirated consonants has been viewed as a natural process of phonological change, as such /hn, hl, hr/ and somewhat later /hw/ simply dropped out of usage over time. Since the same merger of /hn, hl, hr, w/ with /n, l, r, w/ took place in other closely related Germanic languages – Frisian, Dutch and German – at roughly the same period,<sup>167</sup> their development in English does not arouse particular suspicion. Only the fact that several varieties of English have held on to voiceless / $\text{h}_w$ / until the present day is noteworthy. Vachek (1976: 205–06) thought that the loss of the voiceless sonorants / $\text{h}_n$ ,  $\text{h}_l$ ,  $\text{h}_r$ / was unsurprising, due to their rarity and lack of functional load, while the delayed loss of the voiceless approximant / $\text{h}_w$ / could be put down to its important signalling function in a small but important set words, namely interrogative pronouns and adverbs *who*, *what*, *which*, *when*, *where*, *why*, etc. Alternatively, Lutz (1991) viewed the loss of the Old English preaspirated sonorants as part of an ordered process of /h/ loss in the language, arguing that /hw/ was retained longer than /hn, hl, hr/ because the sequencing of /h/ + /w/ is universally more preferred, and consequently more frequently attested, than /h/ + /n, l, r/.

Another impetus for the loss of /hn, hl, hr/ clusters has been suggested by Schreier (2005), who argued that while there is some evidence for early loss of preaspiration in Old English, the rapid increase in ⟨l, r, n⟩ spellings between 1080 and 1200 implies that Norman French contact provided an extra catalyst for the loss of the preaspirated sonorants and/or voiceless sonorants. A weakness of Schreier's account is that it is too Anglocentric. A similar sudden elimination of ⟨hn,

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<sup>166</sup> Dietz (2006) also makes a convincing case here and elsewhere in his monograph that the ⟨wh⟩ spelling (and often other similar spellings where a consonant is followed by ⟨h⟩) was influenced by Anglo-Latin scribal practices rather than those of Anglo-Norman.

<sup>167</sup> All Germanic languages lost /hn, hl, hr/, except for the notoriously conservative Icelandic.

hl, hr, hw) spellings also occurs in Old High German in the course of the ninth century and in Old Dutch in the eighth and ninth centuries (see Braune/Reiffenstein 2004: §153, Quak 2000: 715), without the effects of Norman Conquests into these territories. Importantly, Schreier does not explain why French speakers apparently did not also accelerate the loss of /hw ~ w/ too, which, according to his reasoning, would be expected since (Norman) French did not possess /hw/ either.<sup>168</sup>

Let us now address what effect contact with Brittonic languages might or might not have had on the development of the Old English preaspirated sonorants. First the possible effects of Late British on /hn, hl, hr/ will be considered, since aspiration in these clusters was lost earliest. In a situation of language shift, two replacement strategies for /hn, hl, hr/ may be envisaged. Firstly, Pre-Old English /hn, hl, hr/ could have been replaced by Late British /xn, xl, xr/. It is agreed that Late British /k/ became a velar fricative /x/ after certain words (e.g. *a(c)* ‘and’, *ni(d)* ‘not’, see 4.2.4). Thus, spirantisation of /k/ in the consonant clusters /kn, kl, kr/ yielded /xn, xl, xr/, and clusters of the type /xC/ would certainly have constituted close counterparts for Pre-Old English /hC/-type clusters.

As an alternative scenario, we may consider the existence of preaspirated or voiceless rhotic and liquid /hr ~ r̥/, /hl ~ l̥/ in Late British (Jackson 1953: 480); however, there is neither orthographic evidence from Medieval Brittonic languages nor phonetic evidence from modern Brittonic dialects to suggest there was ever a preaspirated or voiceless nasal /hn, ŋ/ in Late British. Thus, Pre-Old English /hl, hr/ could have been replaced by the Late British voiceless liquids /l̥, r̥/ and a new voiceless nasal /ŋ̥/ could have been created on their analogy. Let us now consider in greater detail the theoretical and evidential basis for this scenario. The origin of the preaspirated or voiceless liquids in Late British is complex and based mainly on the evidence of Welsh. The best hypothesis seems to be that Welsh /r̥<sup>h</sup>/ results from external sandhi (\*-/s/ + /r-/ > \*/-h/ + /r-/ > \*/hr̥-/ > Modern Welsh /r̥<sup>h</sup>-/) but became the default word-initial rhotic (see 4.2.2.3). A voiceless allophone /hr̥, r̥/ is also retained in some Breton dialects and appears to have survived in Cornish until the tenth century. The same sandhi phenomenon may also have applied to other consonants, giving rise to \*/l̥/ (< /hl/ < \*/s/ + /l/) and, in theory, possibly \*/ŋ̥/ (and even \*/m̥/). Furthermore, due to the fact that /s/ generally changed to /h/ in Brittonic in sonorous surroundings (see 4.2.2.2), the prehistory of /s/ + consonant clusters would seem to provide a good breeding ground for preaspirated clusters too. It is agreed that PCl. \*/sl/ yielded a voiceless lateral in Welsh /l̥/, e.g. W *llu* ‘troop’ (< Late British \**L̥h̥y* < PCl. \**slouga*).<sup>169</sup> On the basis of

<sup>168</sup> Other issues that beset Schreier’s proposal concern the numbers of Anglo-Norman settlers and their interaction (or lack of it) with the native English masses and the fact that French influence on English is not typically found in written English of the period 1080–1200.

<sup>169</sup> By a similar token, one may consider the developments of the Proto-Celtic initial clusters \*/sr, sn, sm/. In fact, there is no confirmation that these yielded Late British \*/hr, hn, hm/. Rather, \*/sn/ and \*/sm/ appear to have merged with /n/ and /m/ respectively, while \*/sr/ appears to have produced either /str/ or /fr/. See Schrijver (1995: 440–4) for detailed discussion on this point.

medieval Welsh, as well as possibly evidence from Cumbric, the voicelessness of both of the lateral and rhotic was sharpened and increased to the extent that they are now in present-day Welsh (Jackson 1953: 480). In brief, it is likely that Late British had equivalents to /hl, hr/, though these were by no means as prevalent as they came to be later in Welsh. There is no scribal evidence to suggest that /hn/ or /ŋ/ existed in Late British or in later attested Brittonic languages, though it seems impossible to rule out that it once existed as a result of the sandhi phenomenon described above. Nevertheless, even if /hn/ or /ŋ/ had not existed in Late British, the fact that Late British had other preaspirated or voiceless resonants would suggest that additional preaspirated or voiceless sonorants could have been acquired on their analogy. On the whole, then, the presence to some extent of voiceless sonorants and/or \*/xn, xl, xr/ in Late British could have facilitated the acquisition of Pre-Old English \*/hn, hl, hr/. But Late British contact need not necessarily have supported their long-term development, given that voiceless or aspirated /l/ and /r/ were lost in Cornish and in most dialects of Breton. In short, the development of /hn, hl, hr/ in Old English does not show any unexpected traits that would either confirm or dismiss any claim of Late British contact.

The situation with /hw/ is different. It is agreed that /sw/ yielded /xw/ in Late British and that it survives in medieval and modern dialects, e.g. OCo. *huir*, OB *guoer* /xwoer/, MW *chwaer* ‘sister’ (< PCl. \**swesūr*). Due to the fact that /hw/ was, with certainty, a stable cluster in Late British and has subsequently survived in all modern branches of Brittonic, it is reasonable to think that Old English /hw/ would have been acquired by Brittonic speakers who may indeed have helped prolong its survival in English, as opposed to Dutch, German and not much later in Frisian. However, more than this, there was also a development of Old English /hw/ to a uvular or velar fricative /χw ~ xw/ in northern and some Midlands English dialects. This development, as we shall see in 7.2.4.1, may add weight to the hypothesis of Brittonic phonological contact on English, since this English dialectal divide finds parallels in Brittonic dialects, with southern Welsh and Cornish displaying a preaspirated reflex /hw/ and Northern Welsh, and evidently other northern British dialects, attesting a uvular fricativised variant /χw/.

#### 7.2.4 /Cw/ clusters

Six initial /Cw/ clusters were present in (Pre-)Old English: /tw, kw, dw, θw, sw, hw/. The situation in Late British was different: only the cluster /xw/ existed.<sup>170</sup> In general, there do not appear to have been any significant changes that affected these clusters, at least not in varieties that were influential to the formation of English standard pronunciations. Yet it is uncertain whether any British influence would be expected anyway. After all, Late British did have as part

<sup>170</sup> As indicated in 7.2.3 above, a different realisation of /xw/, namely [hw], seems to have existed in southern dialects of Late British. In Proto-Celtic the labial-velar stop \*/kw/ existed too, but this famously developed to /p/ in Brittonic, e.g. MW *pymp*, MCo. *pemp*, B *pemp* ‘five’ (< LBr. \**pemp* < PCl. \**k<sup>w</sup>enk<sup>w</sup>e*).

of its consonantal inventory the very consonant segments which make up such clusters – /t, k, d, θ, s, h/ and /w/ – and it may not have constituted much of a challenge to string two such consonants together. There is, however, one development which took place in many dialects, and with probable beginnings in the Old English period, which involved the loss of /w/ in several such /Cw/ clusters. There was a tendency for /w/ to be lost in the cluster /sw/ when a back rounded vowel followed. Representative examples, which first appear in early Middle English manuscripts, include *such*, *so*, *also*, *sword* (< OE *swylc*, *swā*, *ealswā*, *sweord*). Other words that are attested in Middle English or appear in modern dialects include *suster* ‘sister’, *sūp* (dialectal) ‘sweep’, *sūmd* (dialectal) ‘swum (past tense)’ (< OE *swuster*, *swāpan*, *swum*).<sup>171</sup> As interesting as this development appears, similar developments can be found in other closely related Germanic languages, such as Old Frisian *sā* ‘so’, *salik* ‘such’, *suster* ‘sister’, similarly Old High German *sō*, *sulik*, *soster* and Middle Dutch *so*, *sulk*, *suster* (< PGmc *\*swā*, *\*swa-leika*-, *\*swester*-). However, more examples seem to occur before other vowels in English than in other related West Germanic languages, which could suggest that loss of /w/ before labial vowels was more widespread. In particular, /kw/ clusters were sometimes simplified, e.g. Old English variant forms *cuc*, *cucian*, *cudu* ‘quick, quicken, cud’ (< PGmc *\*kwik*-, *\*kwid*-), and there are a few examples of /w/ loss after other consonants, e.g. *tū* (< *\*twō*) ‘two’, *hū* ‘how’ (< *\*hwō*), *hō* ‘who’ (< *\*hwā*). Yet in these examples there seems to be a reasonable phonetic explanation for /w/ loss without the need for positing British phonological influence. The combinations of labial consonant /w/ plus labialised vowel /u, o, ɔ/ appear to have been prone to assimilation. Why this assimilation typically occurred when other consonants, and specially /s/, preceded /w/ is not entirely clear, but since such parallel developments are found in other older Germanic languages, these changes fall short of being credible candidates for Brittonic contact influence. A more likely candidate for Brittonic influence is the dialectal change involving the clusters /kw/ and /hw/ to be discussed in the next section. It is a change, or rather a merger, that does not rely on any phonetic conditioning and is not found in any other old or modern Germanic language.

#### 7.2.4.1 Merger of /kw/ and /hw/

An unexpected change in many northern dialects of English involves the fricativisation of Old English /kw/ to /χw/, and its subsequent lenition to /hw/ and /w/ in Modern English dialects. For instance, in dialects of northern England reflexes of Old English *cwic* ‘quick, active, alive’ or

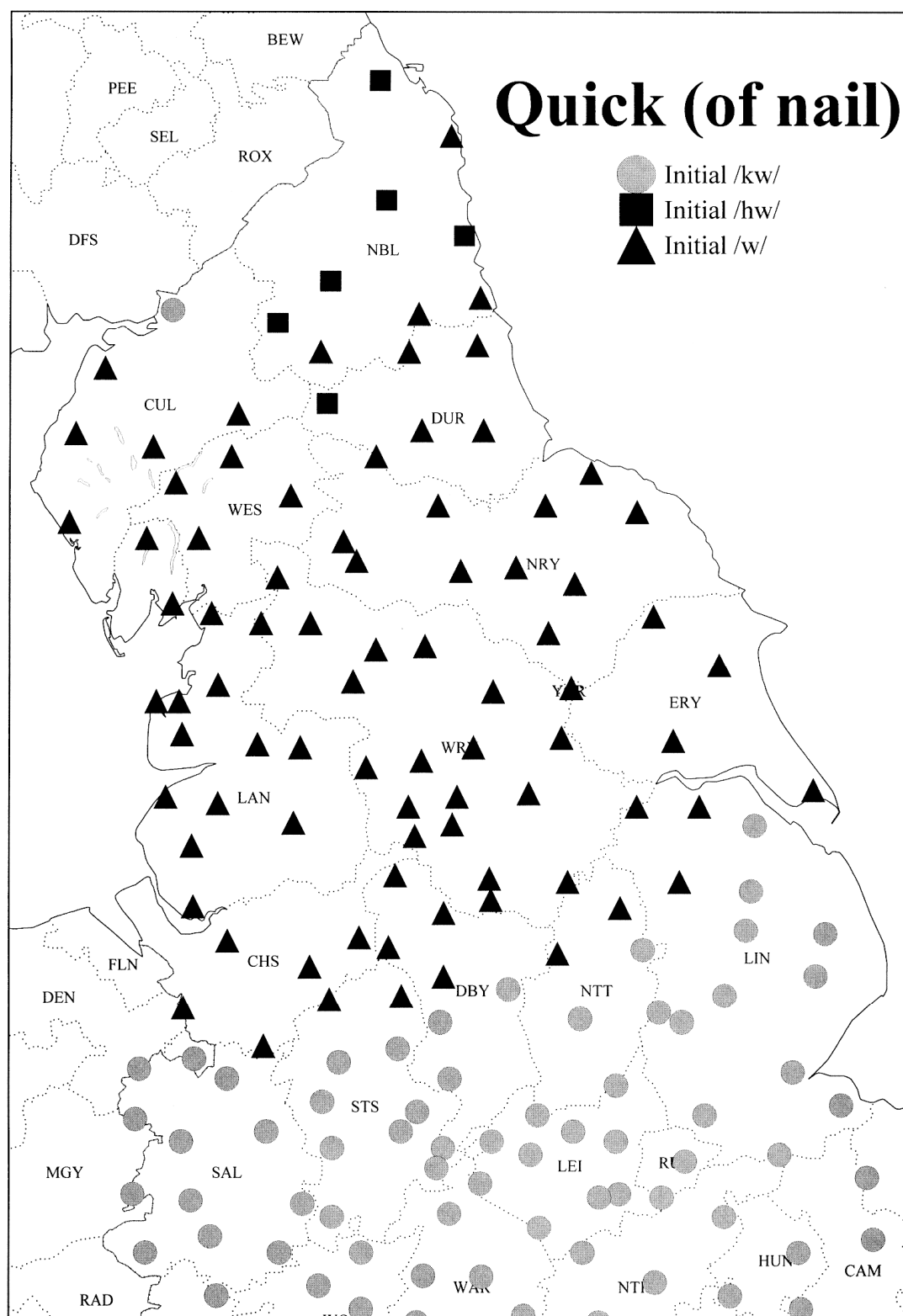
<sup>171</sup> It is usually held that the earlier form *suster*, *soster* was later replaced by the Old Norse loanword *syster*, from which Modern English *sister* derives (notice that the Old Norse word also evidences loss of /w/). Dialectal forms with long /u:/, e.g. *sūmd* ‘swum’, do not indicate that loss of /w/ post-dated diphthongisation of /u:/(> /au/) as a result of the Great Vowel Shift in Late Middle English. Such dialect forms stem from Scottish and Northern English dialects, where /u:/ did not diphthongise as result of the Great Vowel Shift (see 10.2.2.4; also Wright 1905: 208, Luick 1914–40: 1060–1, Welna 2006).

Old English *cwēme* ‘queem, pleasant’ have initial /hw/ or /w/: /(h)wɪk/ and /(h)wi:m/. An example of the distribution of the change in traditional dialects as spoken around the mid-twentieth century based on the word *quick* (of the nail) is presented in Map 9. Nowadays such pronunciations are rarely heard, either because a particular word has been replaced by a standard English pronunciation or has dropped out of usage altogether. Nonetheless, evidence of the change is retained in the spelling and/or pronunciation of numerous place-names throughout the North, as illustrated in Map 10.

Traditionally, the development of /kw/ to /χw/ has been viewed in connection with the development of /hw/ in Northumbrian Old English. As noted above, /hw/ in words such as *what*, *where* and *whether* became an uvular or velar fricative /χw ~ xw/ in northern and some Midlands English dialects. Some evidence for this /χw/ can be gleaned from the occasional scribal forms ⟨chu ~ chw⟩ in the Lindisfarne Gospels (ca. 950),<sup>172</sup> but the assumption relies more heavily on spellings, such as ⟨qu(h) qw(h)⟩, in Northern and Midlands Middle English dialects (cf. Kristensson 1967: 211–15 and *LALME*, I, 270–3). Furthermore, there is also modern dialectal evidence for the initial velar fricative /xw/ in some English dialects of the North West and Scotland (see Ellis 1889: 542, Jones 1991: 141). Indeed, the very fact that preaspirated or voiceless /w/ [hʷ ~ ʷ] has been preserved longest in the North may also point towards an earlier fricativised northern pronunciation.

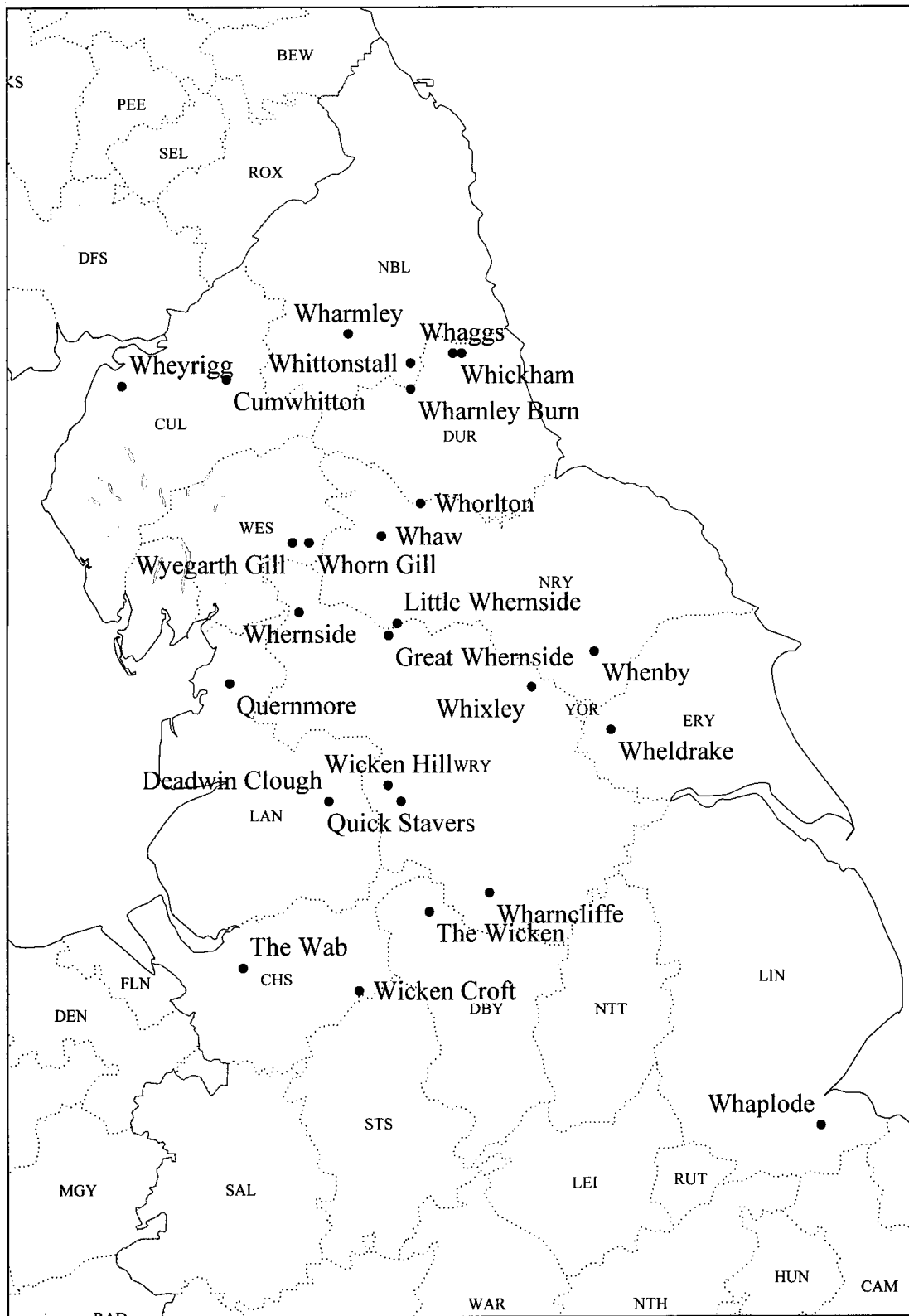
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<sup>172</sup> E.g. *to chwæm* Matthew (preface) 9, 13; *to chwæs* Mark XII, 23, *suachua* Matthew V, 41, *to chwælc* Matthew (preface) 3, 13, *suachuelc* Matthew XV, 5, *sua chuælc* Luke IX, 48, *suæ chuæt* Matthew XVIII, 18 and 19 (see Skeat 1871–87, Blumbach 1974: 81).



Map 9. Responses to *Survey of English Dialects* question VI.7.9: 'Some boys have the habit of biting their nails down [to the] ...' (Orton *et al.* 1962-71)





Map 10. Place-names which evidence the change /kw/ (> /χw/) > /(h)w/

Research has so far been unable to confirm whether Northumbrian Old English /χw/ simply preserved an earlier Germanic pronunciation or represented a secondary development in especially northern English dialects. However, the majority of scholars consider a secondary development more likely (see Luick 1914–40: 939, Berndt 1960: 173, Blumbach 1974: 85–7, Lutz 1991: 50–4, Dietz 1989: 165). Both Lutz (1988: 50–1, 1991: 50–4) and Dietz (1989: 165, 2006: 284) have suggested that fricativisation of /hw/ may have been due in some way to Scandinavian influence. Immediately striking, for example, is the geographical distribution of ⟨qu(h), qw(h)⟩ spellings, which, it has been inferred, must reflect either Middle English [xw] or [kw] pronunciations; the presence and absence of such spellings corresponds quite closely to the southern boundary of the Danelaw (though not its northern boundary).<sup>173</sup> Furthermore, a similar development of /hw/ to /χw/ occurred in West Scandinavian languages, namely in Norwegian (excepting eastern dialects), Faroese and Icelandic. In fact in all these languages /χw/ ultimately resulted in /kv/.<sup>174</sup> Due to chronological disparities and the fact that East Scandinavian varieties – specifically Danish – are thought to have exercised a greater influence on English in the Danelaw than West Scandinavian varieties which show fortition of /hw/ to /kv/, the notion of Scandinavian influence on Old English /hw/ has been rejected by Benskin (1989: 30):

To judge by some recent publications, the mere coincidence of distribution could be taken as sufficient in itself to prove Norse origins. Modern dialects of W. Norse have [kv-] from PGmc \*χw, and a similar development could be argued for Middle English. – It should therefore be noted that Scandinavian settlement in England was mostly E. Norse, the development of PGmc \*χw- is not to [kw], but to [hw] or [hv] in most of Jutland, and to [v] (from [w]) in the Danish islands, S. Sweden, and E. Norway (Brøndum-Nielsen 1951, Kort 17; 1957 §382.2). The dating, moreover, tells decisively against ME adoption of [kv-] even from W. Norse, for if spelling be any guide, W. Norse [kv-] was not established until the later thirteenth century (Noreen 1970, §243). If OE *hw* > [kw-] in ME, then it did so in parallel with W. Norse, and cannot be attributed directly to Norse contact.

Equally aware of the difficulties associated with Norse influence, but at a loss to find any other explanation for the northern dialectal development of /hw/, Dietz has pleaded that the possibility of influence from (West) Scandinavian on the first segment of the Old English cluster /hw/ should not be completely ruled out (1989: 169):

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<sup>173</sup> The northern boundary stopped roughly at the Tees in the North East; ⟨qu(h), qw(h)⟩ do not stop at the northern boundary of the Danelaw but continue into Scotland.

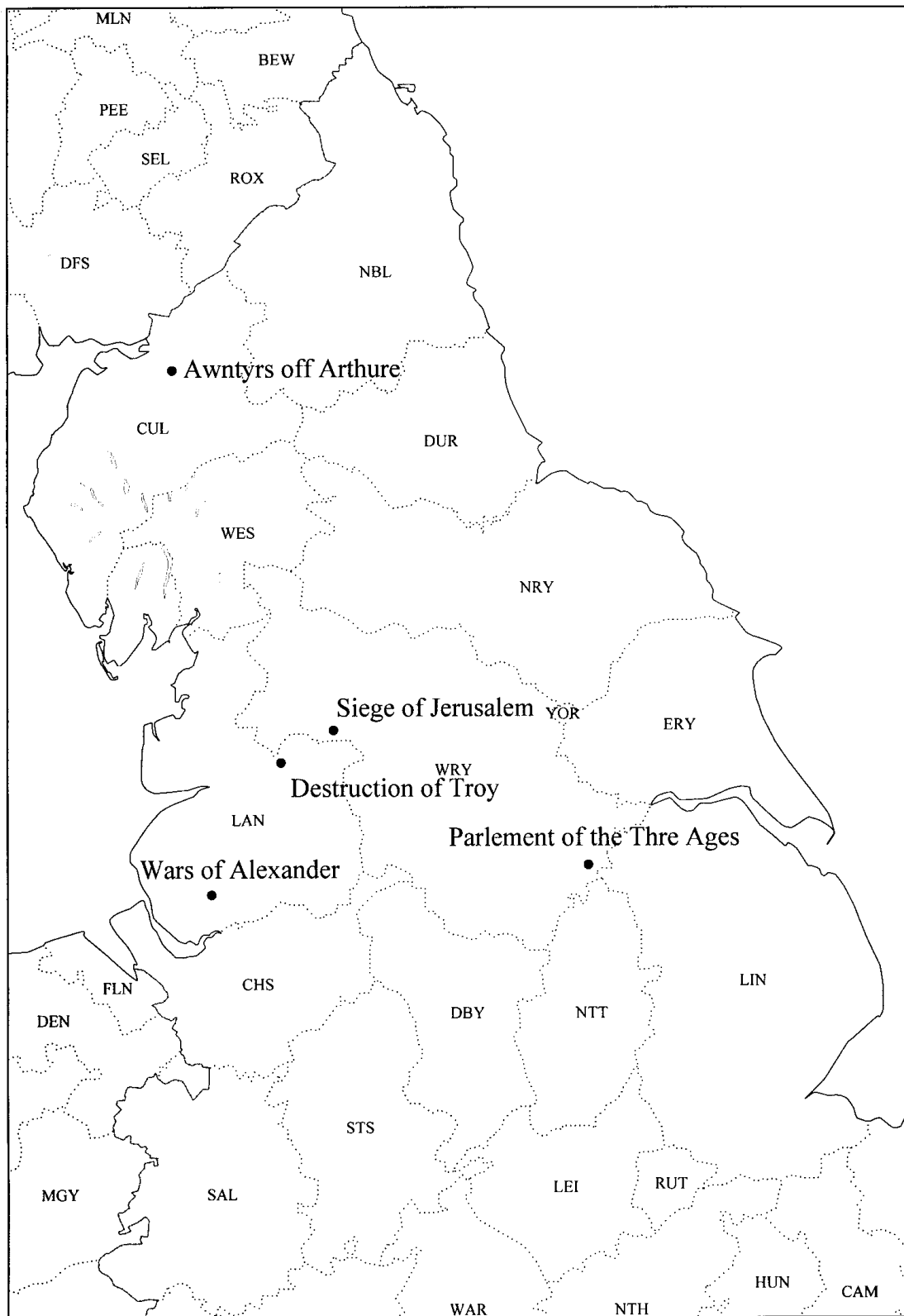
<sup>174</sup> The only exception being conservative southern Icelandic dialects (not including Reykjavik), which retain [xw].

Diese Daten und sprachgeographischen Fakten sprechen nicht eben für die Annahme, die schon Mitte des 10. Jahrhunderts in der nordhumbrischen Interlinearglossierung des Lindisfarne-Evangeliars greifbare Entwicklung  $hw > \chi w$  sei exogenen Ursprungs, schließen sich andererseits aber auch nicht völlig aus. Da sich Norweger hauptsächlich im Nordwesten Englands niederließen, wäre /xw/ am ehesten dort zu erwarten. Es tritt jedoch gleichermaßen im dänisch besiedelten Norden und Osten auf. Sprachliche Kontaktwirkungen können hier erst zu Beginn des 10. Jahrhunderts eingetreten sein. Gleichwohl darf zumindest die Möglichkeit fördernden skandinavischen Einflusses nicht rundweg ausgeklammert werden.<sup>175</sup>

In a more recent publication, Dietz (2006: 246, 263–4, 284) has stated once again that there may have been large scale phonological influence on the phonology of Northern and Midlands dialects but in what seems to me a slightly more assertive manner (or possibly this impression is gained from the fact that he no longer draws attention to the chronological and dialectal difficulties as in his earlier publication). Crucially, however, Dietz is unable to muster any additional evidence to strengthen his notion of Scandinavian phonological support; so again he has to rely on geographical inference, namely the assumed correspondence with the southern boundary of the Danelaw alluded to above.

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<sup>175</sup> ‘These data and the language-geographic facts do not exactly support the assumption that the development  $hw > \chi w$  – posited on account of the Northumbrian interlinear gloss to the Lindisfarne Gospels dating from the mid tenth century – is due to foreign influence, yet it cannot be ruled out entirely. Because Norwegians settled predominantly in the north-west of England, we would most likely expect to find /xw/ there. But it is found to an equal degree in the Danish settled North and East. In these areas language contact influence cannot have taken effect before the tenth century. Nevertheless, the possibility of supporting Scandinavian influence cannot be wholly dismissed’.



Map 11. Locations of the authorial dialects of five compositions evidencing alliterations of etymological /kw/ with /hw/

One advantage of the Scandinavian contact hypothesis has been the recognition that frication of /hw/ to /χw/ and ultimately its merger with /kw/ could explain why only in Northern and North Midlands alliterative compositions etymological /hw/ (< OE /hw/) alliterates with /kw/ (< /kw/ OE/ON/OF) (see Kluge 1901: 991, Lutz 1991: 54).<sup>176</sup> Five compositions evidence such alliterations – *Awntyrs off Arthure, Siege of Jerusalem, Wars of Alexander* and *Parlement of the Thre Ages* and *The Destruction of Troy* – the authorial dialects of which are plotted on Map 11.<sup>177</sup> The following alliterative lines, from *The Destruction of Troy* (Glasgow, UL, Hunterian v.2.8, dated ca. 1400) are representative; they also demonstrate that the scribe of the manuscript spelt words such as *white* (< OE *hwīt*) and *queam* ‘pleasant’ (< OE *cwēme*) with interchangeable ⟨qw- ~ qwh- ~ wh-⟩, which also suggests that no phonological distinction existed between the previously distinct clusters /hw/ and /kw/ (lines cited below are from Matsumoto’s edition, 2002):

**Wherfore** I be**qwethe** me to your **qweme** spouse (633)  
 þat **qwaint** was & **qwem** all of **white** syluer (776)  
**Qwherfore** to **qweme** **qwyt** of all other (108)  
**Qwerfore** vs **qwemes** nocht now his **qwaint** speche (1927)  
**Wherfore** **wheme** kyng for **what** þat may come (2648)  
**Qwitter** to **qweme** þen þe **white** snaw (3027)  
 Also **qwyte** & **qwem** as any **qwalle** bon (3054)  
**Who** is now so **qweme** or **qwaint** of his wit (4202)  
 With **qwistlis** & **qwes** & other **qwaint** gere (6051)  
 And the **whelis** full **whem** all of **white** aumbur (6203)  
**Wherfore** to **qwheme** & to **white** vs of skate (11510)  
 To **whyte** vs of **whete** **qwarters** þai aske (11727)

<sup>176</sup> In this way, the merger of /hw/ at /kw/ in northern English could be seen as almost identical to the merger of Old Norse /hw/ at /kv/ in Norwegian, Faroese and Icelandic dialects.

<sup>177</sup> For further details on how the locations of the authorial dialects have been deduced, see Turville-Petre (1988: 264–9), Gates (1969: 30), Hanna (1974: 50), Ginsberg (1992: 1–2), Hanna & Lawton (2003: xxvii–xxxv), Duggan & Turville-Petre (1989, xlii). *Sir Gawain and the Green Knight* (London, British Library, Cotton Nero A.x) is noted for the spellings *whene* ‘queen’ (at lines 74 and 2492) and *whyssynes* ‘cushions’ (line 877) (see Tolkien & Gordon 1967). However, in the poem /kw/ is always found to alliterate with itself or with /k/, but never with /hw/. Furthermore, the poet alliterates /hw/ with itself and with /w/. In fact, even when etymological /hw/ is rendered in the manuscript as ⟨qu⟩ it can alliterate with /w/ (255, 257, 1186, 1227). These facts indicate that in the scribe’s dialect /kw/ and /hw/ had probably merged, but not in the *Gawain*-poet’s dialect (Oakden 1930: 79). Indeed, it so happens that for *Gawain* there is enough circumstantial linguistic evidence which does point towards a scribal transmission more northerly than that of the poet (see Duggan 1997: 241–2). In short, scribal dialects must be distinguished from authorial dialects (see Laing 2004 for further discussion).

Of **qwhete** & of **qwhite** syluer **qwemly** to gedur (11784)  
 Vn**qwemys** his **qwate** & þe **qwele** turnys (11682)

As appealing as the above West Scandinavian interpretation is (i.e. putative alliteration on /kw/), it is remarkable to note the dearth of words which exhibit /kw/ (or /kv/) as a reflex of older /hw/ in English dialects of the Early Modern English and Modern English periods. In fact, only three words from Wright's dialect grammar (1905: 209) apparently serve as evidence: *whiff* 'a slight puff or gust' (Yorkshire, Lancashire), *whig* 'a yokel' (Northumberland) and *whims* (plural of *whim*) 'fanciful configurations' (North Riding of Yorkshire). More alarming is the fact that none of these words has the hint of a reliable etymology: *whiff* (first recorded 16th century) is considered to be onomatopoeic, while *whig* (recorded 17th century) and *whim(s)* (recorded 16th century) have no historical cognates whatever. Because these words have no secure Germanic or even Medieval English pedigree,<sup>178</sup> the genuineness of these words as evidence for the change /hw/ > /kw/ is cast in serious doubt. If the development of /hw/ > /kw/ did take place, it is necessary to assume that all words (excluding *whiff*, *whig* and *whims*) underwent subsequent frication to /χw/ and finally further lenition to /hw/ or /w/. I have attempted to provide an illustration of this suggested series of changes in Fig. 4:

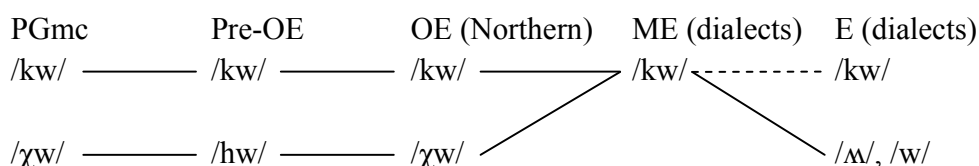


Figure 4. Phonological developments assumed by the Scandinavian contact theory

The above battery of changes can account for the merging of the two distinct Old English clusters /kw/ and /hw/, as confirmed by the dialectal alliterative verse, but fails to provide any explanation for why /kw/ was subsequently fricativised to /χw/ and finally /hw/ and /w/ in English dialects as in Maps 9–10. Furthermore, Scandinavian influence fails to explain instances of the change /kw/ > /w/ in southerly dialects, in which Norse influence could hardly have been

<sup>178</sup> It can be inferred that *whim* did exist in Medieval English if the *University of Wales Dictionary* (GPC s.v.) is correct in assuming that the Middle Welsh *chwim*, *chwimp* (attested in the fourteenth century) is an English loanword, even though this word first surfaces in sixteenth century English as *whim-wham* and in the seventeenth century as *whim* (see *OED* s.vv. *whim-wham*, *whim*). The putative North Riding of Yorkshire form *quiams* 'whims' is mentioned once in a later edition of Robinson's *A glossary of words used in the neighbourhood of Whitby* (1876) and has simply cited as a North Riding pronunciation by others ever since. No other experts on the North Riding dialect from the period mention the form. Alfred Edward Pease (1928: s.v.), born 1857 and a native of the Riding, acknowledges that the form is in Robinson's glossary, but indicates that he has never heard the pronunciation in his life.

an influential factor, such as in Devonshire, Northamptonshire, Flintshire, Denbighshire, Warwickshire, Shropshire (see Table 18). In addition, we may note sporadic attestations of initial /w/ in *quick* in traditional dialects of Cornwall, Hertfordshire, Oxfordshire and Somerset (Orton *et al.* 1962–71: VI.7.9). To summarise the above points: Scandinavian influence, besides being already dubious on account of chronological and dialect-specific aberrations, is unable to provide an explanation for the subsequent frication of /kw/, nor the distribution of this change.

As I have set out in Laker (2002), a more straightforward explanation for the dialectal change can be found if one compares the Pre-Old English phonotactic system with that of Late British. Whereas (Pre-)Old English had the two clusters /kw/ and /hw/, varieties of Late British had neither of these. Instead, a similar but by no means identical uvular fricative cluster /χw/ was found, as today in Modern Welsh and Modern Breton. Due to its obvious similarity to the unfamiliar Pre-Old English clusters, a process of sound substitution would seem very likely, especially as there is evidence to suggest that the acquisition of similar sounds is often harder than acquisition of obviously different sounds (see 3.2). Furthermore, the difficulty would have been compounded by the fact that speakers of Late British would have been faced with the difficulty of acquiring not one but two new phonotactic combinations, which were in many respects phonetically similar to a native cluster /χw/. The likelihood of substitution finds confirmation in the fact that the phonological form of Old English and Middle English loanwords containing /kw/ and /hw/ that were taken into Welsh underwent substitution to /χw/, spelt <chw> (see Parry-Williams 1923: 221–2, 228–9). The examples presented below are all considered English loanwords by the *University of Wales Dictionary* (see *GPC* 838–63; note that dates of first recorded use are given in parentheses). As long as the same type of sound substitution took place when early Britons acquired English (and there is no reason to suppose this was not the case), this interpretation presents no complications and makes comprehensible the previously inexplicable merger of /kw/ and /hw/ in English dialects.

English	Welsh
quail	chwail (1780)
quarrel	chwarel (1445–75)
quarrelle	chwarel (14th century)
quart	chwart (1545)
quarter	chwarter (1445–75)
(to) quarter	chwarteraf (15th century)
quintain	chwintan, chwintyn (1547)
quit	chwit (1547)
quittance	chwitans (1547)
(to) quit	chwitiaf, chwitio (16th century)
whale	chwâl, whâl (16th century)
whap	chwap, whap (16th century)

(to) <b>whey</b>	<b>chweaf</b> , <b>chweu</b> (1632)
<b>whelp</b>	<b>chwelp</b> , <b>chwelff</b> (1823)
<b>wharve</b>	<b>chwefan</b> , <b>chwarfan</b> (14–15th century)
<b>whew</b>	<b>chwiw</b> (1776)
<b>wherry</b>	<b>chweri</b> (1732–6)
<b>whither</b>	<b>chwidr</b> (16th century)
<b>whiff</b>	<b>chwiff</b> (1592)
<b>whig</b>	<b>chwig</b> (1592)
<b>whig</b>	<b>chwig</b> (1752)
<b>whim</b>	<b>chwym</b> , <b>chwimp</b> (14th century)
<b>whimsy</b>	<b>chwimsi</b> (1757)
<b>whip</b>	<b>chwip</b> (16th century)
<b>whirligig</b>	<b>chwirligwan</b> (15–16th century)
<b>whit</b>	<b>chwît</b> , <b>chwîd</b> (13th century)
<b>whittle</b>	<b>chwitl</b> (1794)
<b>whitling</b>	<b>chwitlyn</b> (1741)
<b>whin</b>	<b>chwyn</b> (1455–85)
(to) <b>whirl</b>	<b>chwyrliaf</b> (1592)

Thus, the (Pre-)Old English clusters /kw/ and /hw/ would have been replaced by /χw/. The uvular fricative /χw/ (or a similar variant thereof, such as a velar fricative /xw/), then survived into the Middle English period. By this analysis, etymological /kw/ (< OE/ON/OF /kw/) and /hw/ (< OE /hw/) in the Northern and North Midland compositions mentioned above alliterated with a fricative variant /χw ~ xw/, not /kw/. Middle English spelling variants for etymological /kw/, namely ⟨wh, quh, qwh⟩, may also indicate the change and can help us to assess its geographical distribution; however, these variants are not considered in *LALME*, despite being quite frequently found in Northern and North Midlands texts and sporadically in East Midlands and West Midlands texts.<sup>179</sup> Over the course of time, Middle English dialectal

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<sup>179</sup> Under these circumstances, the best way of getting some inkling of the distribution of these orthographic forms in Middle English is to search through the detailed entries of the *Middle English Dictionary* (*MED*) and the *Dictionary of the Older Scottish Tongue* (*DOST*), which aim to register all known spelling variants of words (though these dictionaries do not attempt to register every known spelling variant in every manuscript investigated). In particular, *MED* (s.v. *qu-* cons[onant] clust[er]) provides a useful survey of manuscripts which contain ⟨wh⟩ variants for etymological /kw/ (see Laker 2009b). Dietz (2006: 284) has claimed that ⟨wh⟩ spellings for etymological /kw/ show the same Northern and East Midland distributions as the ⟨quh, qwh⟩ spellings for etymological /hw/. This ignores the fact that ⟨wh⟩ spellings for /kw/ are attested with some frequency in several central West Midlands texts, as can be seen when one goes through the *MED* entries one by one.



/χw/ (< /kw/, /hw/) weakened to become /hw/, and this ultimately merged in most northern dialects with the inherited labial-velar approximant /w/. Most of the place-names identified in Map 10 signal the earlier pronunciation of an initial preaspirated or voiceless /w/, i.e. /hw/ or /ʍ/, with the spelling <wh>. Furthermore, early dialect writers also use <wh> spellings, e.g. *why* ‘quey’, *whickens* ‘quicks, roots of weeds’, *wheean cat* ‘tabby-cat’ (Meriton 1697: 122–3). Ellis (1889: 621, 631) documented initial /hw ~ ʍ/ pronunciations for the word *quean* ‘female’ in Muker, Dent and Howgill in the north-west of rural Yorkshire in the late nineteenth century. However, by the time of the *Survey of English Dialects*, the isogloss for initial preaspirated /hw ~ ʍ/ had moved further north and included Northumberland, East Cumberland and north-west County Durham, i.e. in the same area where words such as *where*, *wheel* and *white* also preserve initial preaspiration. For the rest of the North only initial /w/ was found (see Map 9).

As a result of both Scandinavian settlements from the ninth century and the Norman Conquest of 1066, further words with initial /kw/ were in due course borrowed into English. Although Brittonic was no longer spoken even in the North and Midlands by this time, the phonotactic system of the English spoken in these areas still did not possess /kw/. For this reason, /kw/ from Norse and French borrowings also underwent substitution to /χw/, as Middle English spellings and alliterations and traditional Modern English dialects demonstrate. It is noteworthy that the hypothesis of Late British influence also explains a number of other problems associated with the origins of loanwords that also underwent the change of /kw/ > /χw/ > /hw/ > /w/, for when a comparison of dialects evidencing shifted forms of Old English as against Old Norse and Old French loanwords is made, a pattern of distribution becomes apparent (see Table 18).

Evidently, there is a greater distribution in English dialects of fricativised Old English words, while fricativised Old Norse and Old French words are restricted to Northern dialects only. For instance, the frication of /kw/ > /χw/ and ultimately the latter’s merger with /w/ took place in Lincolnshire dialects, cf. the dialect words listed in Table 18 and at least one place-name in Map 10. Yet there is no evidence that Old Norse or Old French loanwords underwent such change in Lincolnshire, as was the case in, for example, Yorkshire, Cumberland and Northumberland dialects. These facts tend to indicate that the development of /kw/ > /χw/, which can be seen in the context of a merger /kw/, /hw/ > /χw/, took place in the Old English period and probably at an early stage during that period. The change continued with the integration of Old Norse and French loanwords with great regularity throughout the north of Britain but less so in Midlands dialects, which were under the continuing influence of southern dialects which did not partake in the change at all or at least only in rare instances.

Origin	Etymon	Derivative	Dialect																
			Flintshire	Denbighshire	Devon	Northamptonshire	Warwickshire	Worcestershire	Shropshire	Lincolnshire	Nottinghamshire	Derbyshire	Cheshire	Yorkshire	Lancashire	Lakeland	Westmoreland	Durham	Cumberland
Old English	<i>cwacian</i>	quake(r)						•											
	<i>cwēme</i>	queem(ly)			•				•	•									
	<i>cwene</i>	quean				•													
	<i>cwicu</i>	quick					◇			•	•								
	<i>*cwicen</i>	quicken (tree)								•	•								
Old Norse	<i>qviga</i>	quey											•	•	◇				
	<i>qvirkja</i>	querken									•		•	•					
Old French	<i>coissin</i>	cushion											•	•					
	<i>*quarte</i>	quart(ern)										◇			◇				
	<i>queinte</i>	quaint(ly)											•	•					
	<i>quiete</i>	quiet											•	•					
	<i>quiter</i>	(re)quite											•	•				◇	
	<i>quareia</i>	quarry											•	•				◇	
	<i>querel(l)e</i>	quarrel(some)																	•

Table 18. OE, ON and OF words that evidence the change /kw/ > /(h)w/ in dialects of England and Wales, ca. 1700–1900 (after Wright 1905: 209; the symbol ‘◊’ indicates additions made after checking the relevant *EDD* entries and publications from the English Dialect Society series)

Finally, it is worth considering why the confounding of /kw/ and /hw/ was a particular trait of northern and north Midland dialects. The geography of the change can probably be explained by the fact that the reflexes of /hw/ (< PCl. \*/sw/) were different in Brittonic dialects themselves, since North Walian and Standard Welsh varieties of the language attest the uvular fricative [χw], i.e. a variant that is roughly intermediate between /kw/ and /hw/. On the other hand, south Walian dialects and also Cornish attest from an early stage a preaspirated labial-velar /hw/ which would have represented an identical match to Pre-Old English /hw/. This variant would not, however, have likely served as a close enough substitute for Pre-Old English /kw/, thus leading as a general rule to its correct acquisition by southern Brittonic speakers. By contrast, northern Late British speakers would have been faced with the challenge of learning two alien clusters while at the same time having as part of their phonotactic system an initial cluster that represented a close phonetic match to both.<sup>180</sup>

### 7.3 Summary

The goal of this chapter was to build on the previous chapter's comparative analysis of consonant phonemes in Late British and Pre-Old English by surveying the relative complexity of consonant clusters and the specific ordering of the consonants that make up initial clusters. An analysis of the possible syllable canons in both languages led to the result that both languages under investigation were roughly equally complex and that consequently no major restructuring or resyllabification would likely be expected in a situation of Late British to (Pre-)Old English language shift. Following on from a general analysis of syllable structure, a comprehensive analysis of the initial consonant clusters in Pre-Old English and Late British was set out. Here it was observed that as many as fifteen consonant cluster combinations of Pre-Old English were absent from Late British. In most such instances, the individual consonant phonemes that made up the unfamiliar Pre-Old English clusters were present in Late British as individual phonemes and may therefore have been acquired without great difficulty. However, three Pre-Old English clusters may have posed problems from the perspective of the Late British phonotactic system.

It is likely that the second member of the cluster /sk/ had already begun to palatalise and possibly fricativise in Pre-Old English before the whole cluster became a postalveolar fricative /ʃ/ towards the end of the Old English period, i.e. [sk] > [sc] > [sç] > [ʃ]. Late British, by contrast,

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<sup>180</sup> It was noted in 1.2 that in second language acquisition it is harder to learn a new phoneme if there is a similar phoneme already in the native L1 language; furthermore, it is undoubtedly harder to learn two new phonemes of a language if one phoneme is present in the native language which is phonetically close to both target phonemes. Compare, for example, the situation that Japanese speakers are faced with when learning English /l/ and /r/. Japanese has neither of these liquid consonants but does have a voiced alveolar lateral flap /l/, which bears a phonetic similarity with English /l/ and /r/. As is well-known, the acquisition of English /l/ and /r/ constitutes a severe problem for Japanese learners of English.

only had the cluster /sk/ and it is possible that this would have represented the most likely substitute for [sc] or [sç] in a situation of language shift. There is indeed some evidence from northern and south-western dialects, in the form of vocabulary and place-names, that /sk/ did not develop as expected to /ʃ/, as usually in English, but was retained. Establishing a Brittonic cause for the prevalence of /sk/ forms in northern England is complicated by the fact that Viking Norse also had only the cluster /sk/, and so many cases of unexpected /sk/ pronunciations can be explained by Scandinavian influence, especially as lexical borrowings. More persuasive is the place-name evidence for initial /sk/ from especially Devon that is less likely to have resulted from Scandinavian influence.

Two further clusters – /kw/ and /hw/ – may also have been changed as a result of Brittonic influence. Both clusters were in all likelihood absent from northern Late British, while in southern varieties of Late British /hw/ may well have existed (which may have supported its survival there until the modern period). It is striking that in especially Northern and North Midlands dialects /kw/ and /hw/ merged to become a uvular or velar fricative [χw ~ xw] which, it is generally agreed, was a cluster found in northern Late British (and is still found in northern Welsh as well as in standard Welsh pronunciations). Bearing in mind the phonetic similarity of Pre-Old English /kw/ and /hw/ to /χw/, in a situation of language shift sound substitution would have been very likely. Further confirmation for this scenario is found in the fact that English loanwords that contained /kw/ and /hw/ that have entered Welsh were subject to precisely the same process of sound substitution.



### **PART III: VOWELS AND DIPHTHONGS**



## 8 The vowels and diphthongs of Late British

Chapter 8 introduces the vowels and diphthongs of Late British. Using a similar format as in Chapters 4 and 5, a descriptive synchronic overview of the reconstructed Late British vowel and diphthongal systems is presented first. Next, I provide an analysis of how the Late British vowels and diphthongs may be derived historically, paying close attention to the chronology of various sound changes. The whole chapter will serve as a useful reference point – especially for readers unfamiliar with Brittonic historical phonology – when several phonological changes in Medieval English are investigated with a view to possible Brittonic influences in Chapter 10.

### 8.1 Synchronic overview

The Late British vowel system consisted of front unrounded vowels, front rounded vowels and back rounded vowels. Furthermore, there was a distinction between long and short vowels. There are indications, however, that such quantity distinctions in vowels were in a state of collapse towards the end of the Late British period, and that vowel length was in large measure determined by syllable structure. In addition, two central vowels \*[ə] and \*[e] also existed as allophones. The short mid-front vowel \*[ø] was in all likelihood an allophone of \*/o/ in the fifth century, but became a phoneme in its own right in the sixth century (see Fig. 5).

LONG VOWELS			SHORT VOWELS				
i:	y:	ʰ:	i	y		u	
e:			ɛ	[ə]	ø	[e]	o
ɛ:		ɔ:	e				
					a		

Figure 5. Late British vowels

Late British, like Modern Welsh, had a very large number of diphthongs. By the fifth century, we may assume the presence of the following eight diphthongs: /ai/, /ɔi/, /iu/, /ɛu/, /eu/, /au/, /ou/, /ɔu/. By the sixth century, a total of sixteen diphthongs existed in Late British; these may be categorised as /Vi/- and /Vu/-diphthongs respectively (see Fig. 6).

DIPHTHONG /Vi/			DIPHTHONG /Vu/		
ui	yi		iu	yu	uu
ɛi		oi	ɛu	øu	ou
ei		ɔi	eu		ɔu
	ai			au	

Figure 6. Late British diphthongs



## 8.2 Derivation

### 8.2.1 *Proto-Celtic vowels*

The reconstruction of the Late British vowels set out in 8.1 above can be derived from the vowel system generally reconstructed for early Proto-Celtic, which consisted of ten vowels (= five vowels each with a distinctive length contrast) and six diphthongs (see Fig. 7).

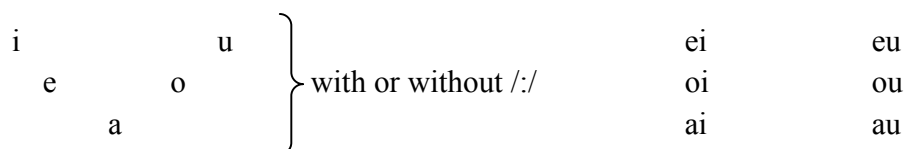


Figure 7. Proto-Celtic vowels

The earliest developments to affect the early Proto-Celtic vocalic system were the merger of \*/e:/ with \*/i:/ and the merger of \*/o:/ with \*/a:/ or (word-finally) \*/u:/. Effectively, these changes created a triangular long vowel system: \*/i:/, \*/a:/ and \*/u:/. However, at a very early date \*/ei/ monophthongised to create a new \*/e:/. Considerably later, as part of an Insular development (though with traces in Gaul), \*/eu/ (> \*/ou/) and \*/ou/ monophthongised to fill the vacant space of \*/o:/. As a result of these monophthongisations, the Proto-Celtic inventory of five cardinal vowels of contrasting length remained in tact. Thus, a vocalic system identical to that presented above can be posited for an early stage of Proto-British, minus three of the six Proto-Celtic diphthongs: \*/ei/, \*/eu/ and \*/ou/.

### 8.2.2 *Monophthongisation of \*/ai/, \*/oi/ and \*/au/*

Subsequent monophthongisation of the remaining diphthongs – \*/oi/, \*/ai/ and \*/au/ – gave rise to a rectangular six vowel system, through the addition of an open-mid front vowel \*/ɛ:/ (see Fig. 8).



Figure 8. Monophthongisation of EBr. \*/ai/, \*/oi/, \*/au/

It is not possible to gain absolute certainty about the chronology of the monophthongisations, especially with respect to the shifting of back rounded vowels which will be described next, though a first- or second-century AD date seems a reasonable estimate.

### 8.2.3 The Great British Vowel Shift

The second major development to affect the Brittonic vowel system was a chain shift in the back series of vowels; there seem to have been at least two stages to the process. Starting with the Proto-British system of five long vowels (see Stage 0 in Fig. 9), PBr. \*/o:/ raised to \*/u:/ and PBr. \*/u:/ fronted to \*/y:/ (Stage 1). Then, as part of a later process (which is not well corroborated by Brittonic place-names in Old English), \*/y:/ lost lip-rounding and merged with existing \*/i:/, while \*/u:/ centralised to a vowel which is classified here as a high central rounded \*/ɤ:/ (Stage 2). In addition to the changes just outlined, the Proto-British low vowel \*/a:/ was backed and became a rounded open-mid vowel \*/ɔ:/ (at Stage 1), and Proto-British \*/ai/ was monophthongised to an open-mid front vowel \*/ɛ:/ (at Stage 1), as already noted in 8.2.2.<sup>181</sup>

Stage 0		Stage 1			Stage 2		
/i:/	/u:/	/i:/	/y:/ ←	/u:/	/i:/ ←	/ɤ:/	←
/e:/	/o:/	/e:/		↑	/e:/		
/a:/	(/ai/ >)	/ɛ:/		/ɔ:/	/ɛ:/		/ɔ:/

Figure 9. The Great British Vowel Shift

McCone (1996: 145) has aptly named this chain-shift of the peripheral long vowels the ‘Great British Vowel Shift’. Chain-shifting, which often involves raising of the back or front long vowels (or of both), is quite a common process, attested in the histories of many languages. Such shifts tend to yield two possible outcomes for the high back rounded vowel: since /u:/ cannot rise any further, either it becomes a diphthong and leaves the system of long vowels altogether, or it is fronted, e.g. to \*[ɥ:] or [y:]. The development under discussion has been termed a ‘pattern 3’ shift by Labov and always involves raising of long peripheral vowels (see Fig. 10).

<sup>181</sup> A slightly different ordering of these changes is offered by McCone (1996: 145–54). Most noticeable, however, is the fact that, whatever reconstruction or ordering of events one prefers, the Late British vowel system lacked a close-mid back vowel /o:/, though it did have an open-mid (or possibly a low) back vowel \*/ɔ:/ or \*/ɒ:/.

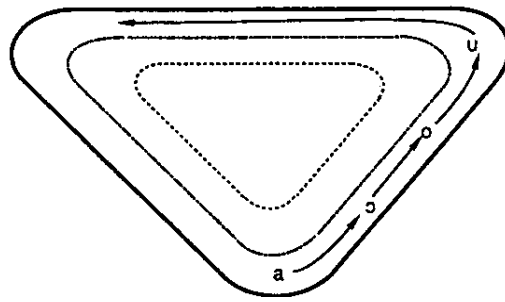


Figure 10. Chain-shift involving raising of long peripheral vowels (Labov 1994: 207)

The tendency for such a chain shift to occur among the back vowels has been put down to overcrowding. It has been observed that such a development normally follows from the ‘existence of more than three degrees of height among the back vowels’ (Labov 1994: 218). According to the present reconstruction, however, there were only three long vowels in the back series: \*/u:/, \*/o:/, \*/ɔ:/. It is possible, therefore, that at a prehistoric stage the diphthongs \*/oi/, and \*/au/, instead of merging directly with \*/o:/ and \*/a:/, in fact yielded distinct long vowels, which may even have differed from existing long back vowels in terms of height and possibly lip-rounding. For instance, \*/oi/ may have first become a very close mid vowel \*/ɔ:/, or it may have lacked lip-rounding \*/ɤ:/. Likewise, \*/au/ may not have immediately merged with existing PCl. \*/a:/, which by this time may have been a low back vowel \*/ɑ:/ (or possibly it had been raised and had lip-rounding: \*/ɔ:/). Unfortunately, such speculations about the prehistory of Brittonic phonology are hard to substantiate, but it is well to seek some kind of motivation for the attested chain shift, so as to bring it into line with parallel developments recorded in other languages.

#### 8.2.3.1 Progression of the back vowel chain shift ca. 450–700

It is important for this investigation to deduce the progression of the Great British Vowel Shift during the time of intense Anglo-Saxon contacts, especially between the fifth and seventh centuries. To assess as accurately as possible which stage of development the Brittonic long vowel system had reached in the fifth to seventh centuries, one must study inscriptional renderings of the back vowels, as well as loanword and toponymic evidence. The next three subsections focus on the Brittonic place-name evidence in Old English.

##### 8.2.3.1.1 PBr. \*/a:/ > (\*ɒ:/ >) /LBr. \*/ɔ:/ (Stage 1)

There are some differences of opinion regarding the dating of the change \*/a:/ > \*/ɔ:/. While Jackson places the change in the fifth to early sixth century, McCone (1996: 150–4) argues for a much earlier date at the beginning of the fourth century. It is generally accepted that EBr. \*/a:/ is rendered by ⟨o⟩ in British place-names borrowed into Pre-Old English (Jackson 1953: 292). However, it should be noted that there are few common Brittonic place-name elements

containing \*/a:/, and, moreover, there are few early examples of such elements attested in northern Britain. The River Don is a good witness of the change, OE *Dōn* (< LBr. \**Dōn*, RB *Dānum*, Antonine Itinerary); but this South Yorkshire river name is obviously not within Northumbrian territory (i.e. the North proper), which may turn out to be relevant for this investigation. Apart from this example, Jackson cites a few possible toponyms from late medieval Cumbria, namely Cam Beck (ME *Camboc* < Primitive Cumbric \**Cambōg* < \**cambāco*-) and Crummock Beck/Water (ME *Crumboc* < Primitive Cumbric \**Crēmōg* < \**Crumbāco*-). Jackson notes two more Cumbrian forms, namely Maughanby and Powmaughan. Ekwall (1928: 331) connects these last two place-names with Primitive Cumbric \**Merchiān*, but since the earliest attested English spellings of these names show ⟨a⟩ (*Merghanby* [1288], *Polmergham* [1426], see Ekwall 1951: s.vv.), they are not useful as evidence for \*/a:/. However, Coates & Breeze (2000: 281–8) list a few more Cumberland toponyms containing the British \*-āco- suffix, some of which do point to a development to \*/ɔ:/ (Barrock, Caraverick, Cardunnoch, Carrock Fell, Cumdivock, (Water)millock, Polthledik). Thus, certainly by the late seventh century – when these toponyms were adopted by the ‘Angles’ (or when Cumbrian speakers adopted the English language) – the change \*/a:/ > \*/ɔ:/ had occurred in Cumberland. This does not immediately mean that this was the case for eastern seaboard areas, e.g. in Holderness and Lindsey, which were settled during the fifth century. In these and other areas where the ‘Angles’ initially settled, such as in and around the emporium of York, the emerging Northumbrian language began to take shape before it spread further inland in the following centuries. According to Coates, EBr. \*/a:/ may still have been a low vowel (not a mid vowel) in these areas around the time of the advent, based on the place-name Wawne (< \**Wāyna* ‘slope’) in the Yorkshire East Riding. He writes, ‘Holderness is generally supposed to be an area of fifth-century colonisation by the Angles, and one can easily envisage this word being borrowed in essentially its late British form \**wāyn(a)*’ (Coates & Breeze 2000: 176). Thus, one observes that in the North Midlands there is the river-name Don, displaying the change \*/a:/ > \*/ɔ:/, whereas slightly further north, in the Northumbrian area, there is the place-name Wawne, which appears to reflect \*/a:/ at the time of borrowing. It may represent a late fifth-century isogloss within British Celtic. If so, the isogloss is reminiscent of the /a:/ vs. /ɔ:/ isogloss which begins to emerge in Middle English (see 10.2.2.3, Map 13). However, further evidence would be highly desirable to make a case for any such causal connection. For the present, it seems preferable to assume that EBr. \*/a:/ had generally developed to a mid-vowel \*/ɔ:/ in the North, though it cannot be ruled out that this vowel was still a low unrounded vowel in the fifth century.

8.2.3.1.2 PBr. \*/y:/ (< IE \*/u:/ and final PCl. \*/o:/, \*/ou/, \*/eu/; L final /o:/) > \*/i:/ (= Stages 1, 2)  
 Jackson (1953: 696) dates the change \*/y:/ > \*/i:/ to the middle of the fifth century, but there are actually no firm grounds for dating the change so precisely. Jackson claims that \*/y:/ > \*/i:/ must have occurred prior to final *i*-affection, which he dates to the middle of the fifth century (see 8.2.4); however, Schrijver (1999: 42) questions the logic of his argument, reasoning that ‘\*/y:/,

being a high front vowel, may itself easily have caused *i*-affection'.<sup>182</sup> Evidence for etymological /u:/ in Old English place-names is limited. Ekwall, comparing place-names such as Kilquite and Colquite (Cornwall) and Cilcoit (Monmouthshire), regarded Culcheth (Lancashire) and Culgaith (Cumberland) as compounds of W *cil* 'corner, nook' and *coed* 'wood' (1951: s.v. Culcheth). But Jackson (1953: 320) argues that this 'would mean that in the later seventh century the sound was still *ū* [/y:/, SL], which will not fit' (i.e. it will not fit into Jackson's chronology). Rather, he chooses to derive *Cul-* from PBr. *\*coilo-* 'narrow' (cf. W *cul*), 'which would naturally give Pr.AS. *\*cȳlcēt*, whence *Culcheth* and *Culgaith*'.<sup>183</sup> Other northern toponyms are also explained away by Jackson. For instance, the Lothian forms *Dunbar* and *Dunchidock*, from PCl. *\*dūn* 'fort', can be dismissed by assuming substitution of a putative former *\*dīn* by either OE *dūn* 'down, upland' or Gaelic *dūn* 'fort'. One problematic form is found in chapter 38 of Eddius' *Life of Wilfrid* (ca. A.D. 710–720), namely *Dynbar*, also with a variant form *Dyunbær*. In this instance, Jackson is forced to accept that the front vowel may still have been rounded in the dialect: 'perhaps the Pr[imitive] Cumb[ric] of the Lothians still had some traces of rounding in its pronunciation of *ī* < *ū*, enough to account for the A[nglo-]S[axon] *ȳ* instead of *ī*' (1953: 321). But if Lothian dialects of Brittonic still had traces of rounding at the time of Anglo-Saxon settlement in the seventh century, the inference must be that the same could hold for Brittonic dialects along the Atlantic seaboard in the early fifth and sixth centuries. It is therefore possible that *\*y:/* had not merged with *\*i:/* in the period ca. 450–650, or at least not in (all) northern dialects.

#### 8.2.3.1.3 PBr. *\*u:/* (< Pre-PBr. *\*o:/*, *\*oi/*, L */u:/* and internal */o:/*) > LBr. *\*u:/* (= Stage 2)

Jackson (1953: 315–17, 696) dates these changes to ca. 500–550. LBr. */u:/* in British place-names is represented in three ways by Old English scribes: <u>, <y> and <i>. The most common Old English spelling appears to have been <u>; there is some evidence for <y>, while renderings

<sup>182</sup> 'Jackson's claim (1953: 319) that PBr. *\*ȳ* had become *\*ī* already by the middle of the 5th c. A.D. is debatable. *\*ȳ* > *\*ī* is not presupposed by the fact that the sound causes final *i*-affection as *\*ȳ*, being a high front vowel, may itself easily have caused *i*-affection' (Schrijver 1999: 42).

<sup>183</sup> Jackson must surely mean Pr.AS. *\*Cūlcēt* or rather *\*Cūlcæt* (not *\*cȳlcēt*), since Pr.AS. *\*Cȳlcēt* would yield *\*Cīlchet(h)* (or the like). However, one would rather expect that Pr.AS. would substitute with */y:/* (< *\*u:/* + *i*-mutation), which was no doubt phonemicised by the time of the settlement of Cumberland. The argument then seems to be that OE *ȳ* was more fronted than Late British *ȳ*, hence replacement with OE *ū* (see Jackson 1953: 316–17). Jackson probably assumes long */e:/* in the second syllable rather than */æ:/* on account of the fact that early Anglian dialects did not have */æ:/* (see 9.1). However, Lancashire and Cumberland were Anglicised late, and so long open mid vowel */æ:/* had almost certainly arisen in Anglian by this time as a result of *i*-mutation. Note that Jackson uses the abbreviation Pr.AS. = Primitive Anglo-Saxon, which is broadly speaking synonymous with the term 'Pre-Old English'. For a discussion of the change LBr. */t/* > */θ/* in final positions, see Cubbin (1981–82).

with ⟨i⟩ are extremely scarce and often questionable. The following toponyms, taken from Jackson (1953: 308) and Coates & Breeze (2000: 277–345), all have ⟨u⟩ in Old English: London, Clun (Shropshire), Clowne (Derbyshire), Crook (Devon, Dorset), Crewkerne (Somerset), Colne (Hertfordshire, Middlesex, Berkshire, Essex), Lincoln, Aln (Northumberland), Ayle Burn (Cumberland, Northumberland), Ellen (Cumberland), Lugg (Shropshire, Herefordshire), Culgaith (Cumberland), Cumcrook (Cumberland), Glendue (Northumberland), Krug (Hill) (Cumberland), Coulderton (Cumberland). Assimilation to Old English ⟨y⟩ is less common, but one good example is Creechbarrow Hill (Somerset), which is referred to in a charter from 682 as *collen qui dicitur Britannica lingua Cructan, apud nos Crycbeorh* (see Ekwall 1951: s.v. Creech).<sup>184</sup> Several other toponyms may also be the result of Old English assimilation at /y:/ (< PGmc \*/u:/ + *i*-mutation; see 9.2.6), but their etymologies are rather doubtful.

It has also been suggested that some toponyms may display Old English *i*-mutation subsequent to their transmission from Brittonic, e.g. Boyd (Gloucestershire) (< \**Būdī*), Kyre Brook (Worcestershire) (< \**Cūrī*); however, the etymologies of these words are again dubious (cf. Jackson 1953: 310–11). Cases of assimilation at OE /i:/ ⟨i⟩ are even less numerous. One example is Penkridge (Staffordshire) (< OE *Pencric*, RB *Pennocrucium*, Antonine Itinerary). According to Jackson (1953: 309), OE *Lindcylene* must have been taken into Pre-OE as \**Lind(o)colīn-* from LBr. \**Lind(o)golȳn-*; thus ⟨y⟩ in the Old English form *Lindcylene* would result from raising of \*/o/ to \*/u/ and subsequent Old English *i*-mutation of \*/u/ to \*/y/. Jackson (1953: 309–10) also thinks that *Clyde* goes back to a putative OE \**Clīd*, though an Old English substitution at /y:/ is equally possible, since this would ultimately yield ME *ī* too, the precursor to the Modern pronunciation. The old name of Dumbarton, namely *Al Clud/Alt Clud* ‘Clyde rock, Clyde cliff’, given by Bede as *Alcluith* (ca. 730), would support this interpretation. A better but possibly quite late example of OE *ī* substitution is Bede’s rendering of the Welsh Abbot *Dinoot* (< Pre-OW \**Dīnōd* < *Dōnatus*). The fact that Old English rarely replaces the supposed fronted /u:/ with /y:/ – even in later loans when there is no doubt that the *i*-mutated vowels must have been phonemicised – led Jackson to suspect, quite understandably, that the British long-*u* must have been phonetically quite different from OE /y:/, such that it was probably phonetically closer to OE /u:/. Thus, while OE /y:/ was more fronted and close, the British vowel was more central and open or, to cite Jackson, ‘more or less half-way between A[nglo-]S[axon] *ȳ* and *ū*’ (1953: 317). Jackson’s interpretation could, I think, be supposed for some Brittonic dialects in the later period. It is quite possible that British long-*u* was slightly centralised, /ɥ:/. However, the degree of centralisation may have varied in relation to the chronology of Anglo-Saxon settlement on the

<sup>184</sup> ‘[The] hill which is called *Cructan* in the British tongue [is called] by us *Crycbeorh*’. The British place-name element \**cr̥ȳc* is represented variously in English place-names, e.g. *crook*, *crutch*, *creech*, *church* (see Coates & Breeze 2000: 263–356). The forms showing assibilation of LBr. \*/k/, e.g. *creech*, perhaps indicate replacement by folk etymology of British *cr̥ȳc* with Old English *cryc̥ce* ‘crutch’ (< \**kruk̥ja*), since palatalisation of /k/ is not expected after a mid- or front rounded vowel in Old English.

one hand, and in terms of the regional Brittonic variety on the other. Judging from the evidence presented here, it seems safe to conclude that it was a back or centralised high vowel in Brittonic at the time of the Anglo-Saxon settlements, to be distinguished from a front rounded vowel /y:/ which persisted in some dialects perhaps as late as the seventh century (see point 2 above).

To summarise (1)–(3) above: the evidence suggests that Stage 1 of the Great British Vowel Shift had been reached in the period ca. 450–650, and thus Late British probably had the following system of long vowels: \*/i:/, \*/e:/, \*/ɛ:/, \*/ɔ:/ (possibly the latter vowel was somewhat lower in the North, e.g. \*[a:, ɑ:, ɒ:]), \*/y:/ and \*/ʊ:/.

#### 8.2.4 Final *i*-affection of short vowels

Proto-Celtic, and similarly Early British, had a system of five short vowels: \*/i/, \*/e/, \*/a/, \*/o/, \*/u/.<sup>185</sup> An early change to affect the short vowel system was final *i*-affection, whereby \*/i:/, \*/j/ and perhaps \*/y:/ in final syllables caused raising and/or fronting of short vowels, i.e. \*/o/ and \*/u/ became \*/y/; \*/a/ was raised to a very close vowel \*/ɛ/; and \*/e/ was raised to \*/i/ (see Fig. 11).<sup>186</sup>

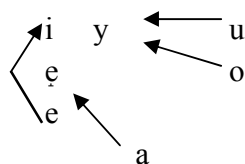


Figure 11. Final *i*-affection of Late British short vowels

Jackson (1953: 695) dates final *i*-affection to ca. 400–450. Apart from two Kentish names – Kent itself and Reculver – which may have been known to Anglo-Saxons well before the mid-fifth century, Jackson (1953: 601) knew of ‘no probable examples of lack of British final affection in English names’. A clear example of final *i*-affection in an English name is the River Brent in Middlesex (OE *Breġent* < \**Briyantiā* or *Briyanti*) (Jackson 1953: 602, Sims-Williams 1990: 239). In agreement with Jackson, *i*-affection had taken its course by the time of the Anglo-Saxon settlements and had the effect of augmenting the short vowel system by two phonemes, namely /ɛ/ and /y/ (at least by the time of apocope, which brought about the loss of the conditioning factors for *i*-affection, i.e. the final \*/i:/ and \*/j/).

<sup>185</sup> Although several conditioned changes in the short vowels are reconstructed for the transition period PCl. > PBr., the inventory of five short vowel phonemes remained intact. For a detailed discussion of the various changes of the short vowels, see Schrijver (1995: 23–191).

<sup>186</sup> It appears that \*/e/ alone was raised not only by \*/i:/ and \*/j/ but also by short /i/, e.g. \**gweltis* > MW *gwyllt* ‘wild’ (see Schrijver 1995: 267–8).

### 8.2.5 Reduction and deletion of vowels: centralisation, apocope, syncope

The following three changes, which all involve the reduction and loss of vowels, can be seen as part of a general trend towards vowel reduction in unstressed syllables.

#### 8.2.5.1 Apocope

Jackson (1953: 695–6) sees apocope as a process underway from the end of the fifth to the beginning of the mid-sixth century. The earliest evidence for apocope in British sources seems to be the form *Mailoc* (< PBr. \**Maglākos*) in the Council of Braga in 572 (see Sims-Williams 2003: 284). Jackson regards the evidence from Anglo-Saxon sources as useless for dating apocope because Old English had its own case endings and own gender system and presumably would have replaced any surviving Brittonic endings anyway. To a certain extent this may be true, but if Anglo-Saxons did not speak Brittonic it is hard to understand how they would have always known how to distinguish the inflectional endings from the root of a particular word, and so, one would normally presume that many speakers would have taken over words, endings and all, as simplex forms. At any rate, there seems to be little or no evidence in the Old English sources for preservation of endings in Late British. It is clear, however, that apocope must have taken place after final *i*-affection, otherwise there could have been no *i*-affection.

#### 8.2.5.2 Syncope

This change involves the loss of short vowels immediately before stressed syllables, e.g. PCl. *brassi* 'samos' > \**brasi* 'havoh' > *bras* 'hav' > MB *brasaff* 'biggest'. Jackson (1953: 696) dated syncope to the mid to later sixth century, but Sims-Williams (1990: 245–7) has shown that a fifth-century dating is more likely. It will be recalled that syncope brought about protraction (see 4.2.5), which is attested in place-names taken into Pre-Old English, such as OE *Catreht* 'Catterick' (< \**cat* 'raçt < \**cadaracton* < RB *CATARACTON*). The Anglo-Saxon settlement of this area of the North Riding of Yorkshire began in the fifth century, according to archaeologists, which would push back syncope to this date (see Sims-Williams 1990: 246). Assuming that spelling lags behind change, Sims-Williams' fifth-century date therefore seems more appropriate than Jackson's sixth- and seventh-century date.

#### 8.2.5.3 Centralisation

In Late British stress lay on the final syllable.<sup>187</sup> In closed pretonic and all pre-pretonic syllables, \*/i/ and \*/u/ became lax and ultimately centralised to [ə] and [ə] respectively. Examples are: \**su-la* 'baris' 'eloquent' > \**hula* 'var > *həla* 'var > MW *hy* 'lafar, B *he* 'lavar (cf. OIr. *sulbair*);

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<sup>187</sup> Final syllable stress in Late British came as a result of Late British apocope. Prior to apocope, stress was on the penultimate syllable in Brittonic.



*\*kinti'samos* ‘first’ > *\*kinti'haṽ* > *kin'taṽ* > *kən'taṽ* > MW *'cyntaf*, MCo. *kynsa*, B *kentañ*. Schrijver (2008: §3.1) views this development as a first loss of vowel features on the way to a new quantity system (as outlined in 8.2.8 below). Based on toponymic evidence from Latin and Greek sources, Jackson proposes that centralisation of *\*/u/* to *\*[ø]* must have taken place ‘long before the fifth century’ (1953: 662). A similar centralisation seems to have befallen short *\*/o/* in proclitics too, such as in the preverbs *\*ro-* ‘complete’ and *\*com-* ‘with’. Yet evidence from the earliest Welsh Charters from the Book of Llandaf (ca. early 7th century) indicates that *\*/o/* had not yet fallen together with *\*[ø]* at this early date (see further Sims-Williams 1991: 36–7; Schrijver 2008: §3.1).

The developments of the long and short vowels presented so far in this chapter can be reconstructed for Late British of the fifth century with confidence; the following three developments (8.2.6–8.2.8) probably took place after this date. However, considerable contact between Britons and Anglo-Saxons must have existed at this later period, especially in the north and west of Britain. It should be stressed that the changes to be discussed below are still reflected in all historically attested Brittonic varieties and thus are not usually dated later than sixth century.

#### 8.2.6 *Internal i-affection of short vowels*

Internal *i*-affection involved the fronting of short back vowels (*\*/u/* > *\*/y/*, *\*/o/* > *\*[ø]*) and the raising of low front vowels (*\*/a/* > *\*/e/*) by a non-final high vowel *\*/i(:)*, *y*, *e*/ or the approximant *\*/j/* in the following syllable. The phonemicisation of this change resulted in a further mid-rounded front vowel in the short vowel inventory, namely *\*/ø/*. However, it is not entirely clear when internal *i*-affection should be dated. The one place-name which could confirm that the change was early is Bede’s *Bernicii*, OE *Beornice* (< PCl. *\*Brigantakkjā*), which must have been taken into Pre-Old English in the sixth century at the latest. This form is viewed with suspicion by Jackson (1953: 613); but he thinks that early seventh-century loans such as OE *Tefġet* ‘Teviot’ (Roxburghshire) (< PBr. *\*Tamjatis*) do demonstrate the change (1953: 612–13). Ultimately, Jackson (1953: 616) assigns the change to the seventh century in the North and to the early eighth century in the South West. However, he thinks that due to the fact that internal *i*-affection is found in all Old British languages it must have a common origin. He argues that ‘the nuance of the beginnings of raising, advancing, and palatalisation [...] goes back into the sixth century, into the common Pr.WCB. [Primitive Welsh, Cornish, Breton] period, though it did not amount at that time to anything perceptible and did not develop into such for some considerable time, independently in north-central Britain, south-west Britain, and Brittany’ (1953: 617). To use current linguistic terminology, Jackson is suggesting that internal *i*-affection was allophonic by the sixth century at the latest. In short, it is unclear whether *[ø]* was a phoneme in its own right in early Late British.

### 8.2.7 Shortening of pretonic long vowels

Following a close investigation of the data, Schrijver has shown that already at an early date long vowels must have been shortened in pre-tonic syllables before geminates and consonant clusters as well as in all pre-pretonic syllables (see Schrijver 1995: 243–52). The following examples are representative: \*/ɔ:/ > \*/o/ in PCl. *\*mātrVk<sup>w</sup>ī* > *\*mǣdrVb* > *\*modrVb* > MW *modryb*, MCo. *modereb*, MB *mozrep* ‘mother’s sister; aunt’; \*/e:/ > \*/i/ in the PCl. *\*bleidaniās* (nom.pl.) > *\*blēðaneð* > *bliðneð* > MW *blynedd*, OSWBr. *blened* /bleneð/ ‘year’. It is difficult to date the change, but it seems to have occurred after internal *i*-affection because otherwise \*/o/ would presumably have been fronted \*[ø] by internal *i*-affection; thus *\*modrVb* would have given MW *\*\*medreyb* or MB *\*\*mezrep*.<sup>188</sup> The change must also have occurred before Late British \*/e:/ and \*/e:/ were diphthongised in Welsh to /ui/ (ca. 750–800) and /oi/ (ca. 800–850) respectively (cf. Jackson 1953: 696–7).<sup>189</sup>

### 8.2.8 The Late British quantity system

As a result of the vowel changes discussed in 8.2.5 in particular, the symmetrical system of long and short vowels as presented in 8.2.1 was radically changed. The Proto-Celtic and early Proto-British systems, which relied on a binary contrast of vowel length, developed into a system in which vowel length became more and more dependent on syllable type and syllable stress. It is interesting to note that the loss of phonological quantity in Brittonic finds close parallels in Vulgar Latin, with which it was naturally in close contact during the first half of the first millennium AD (see Schrijver 2002). By contrast, no such comparable developments took place in Irish. The development seems to have progressed in several stages. Following Schrijver (2008: §3.1), two distributions of vowels existed by about the sixth century, which are here labelled Systems I and II. System I possibly comprised short lax vowels, in contrast to tense long and short vowels in System II.

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<sup>188</sup> However, Sims-Williams (1990: 255) suggests that \*/ɔ:/ was first shortened to \*[ɔ], and thus was distinct from the \*/o/ which underwent internal *i*-affection.

<sup>189</sup> For further discussion see McCone (1996: 161–2).

SYSTEM I <sup>190</sup>	SYSTEM II
i                      u	i      y      u                      i:                      u:
ə                      ø	ɛ      ø      o                      e:
e                      o	e                      ɛ:                      ɔ:
a	a

Table 19. Two systems of Late British vowels, ca. sixth century

Illustrative examples of System I vowels are provided below: for those in closed pretonic syllables cf. System I, 1 in Table 20; for those in open and closed pre-pretonic syllables cf. System I, 2–3.

SYSTEM I			
Position		Late British (< Proto-Celtic)	Middle Welsh
1.	CVC <sup>1</sup> CV(C):	<i>kənthaṽ</i> (< PCl. <i>*kintisamos</i> )	<i>cyntaf</i> ‘first’
2.	CVCV <sup>1</sup> CV(C):	<i>həlavar</i> (< PCl. <i>*su-labaris</i> )	<i>hylafar</i> ‘eloquent’
3.	CVCCV <sup>1</sup> CV(C):	<i>*pedwareð</i> (< PCl. <i>*k<sup>w</sup>etwor-iā-</i> )	<i>pedwared</i> ‘fourth’

Table 20. Late British System I vowels

Examples of etyma containing vowels of System II in final stressed syllables of Late British as well as in all open pretonic syllables are presented below (cf. II, 4a–d and II, 5 respectively in Table 21).

SYSTEM II			
Position		Late British (< Proto-Celtic)	Middle Welsh
4.a	CV(C):	<i>*kl̥̊r</i> (< EBr. <i>*klār-</i> )	<i>clawr</i> ‘plank’
b	CV <sup>1</sup> CV(C):	<i>*mən̥̊x</i> (< <i>*manaxī</i> from L <i>monachī</i> )	<i>meneich</i> ‘monks’
c	CVC <sup>1</sup> CV(C):	<i>*kənthaṽ</i> (< PCl. <i>*kintisamos</i> )	<i>cyntaf</i> ‘first’
d	CVCV <sup>1</sup> CV(C):	<i>*həlavar</i> (< PCl. <i>*su-labaris</i> )	<i>hylafar</i> ‘eloquent’
5.a	CV <sup>1</sup> CV(C):	<i>*Lidau</i> (< PCl. <i>*litawja</i> )	<i>Llydaw</i> ‘Brittany’
b	CVCV <sup>1</sup> CV(C):	<i>*həlavar</i> (< PCl. <i>*su-labaris</i> )	<i>hylafar</i> ‘eloquent’
c	CVCCV <sup>1</sup> CV(C):	<i>*pedwareð</i> (< PCl. <i>*k<sup>w</sup>etwor-iā-</i> )	<i>pedwared</i> ‘fourth’

Table 21. Late British System II vowels

<sup>190</sup> Schrijver (2008: §3.1) assigns the etymologies as follows: 1) *\*/i/* (< *\*/i:/*, PCl. *\*/u:/*); 2) *\*/ə/* (< *\*/i, e:/*) 3); *\*/e/* (< *\*/e/*, internal *i*-affection of *\*/ə, ø, a, e/*); 4) *\*/u/* (< *\*/u:/* < *\*/o:/*); 5) *\*/ø/* (< *\*/u:/*); 6) *\*/o/* (< *\*/o, ɔ/*).

The system as outlined here is reflected in the spellings of names in the earliest charters of the *Book of Llandaf* from about the seventh century (Schrijver 2008: §3.1). And since it is generally agreed that the spellings used in the oldest Welsh written sources go back to a still older tradition, this system represents, in all probability, a transition stage before Brittonic began to rely wholly on qualitative rather than quantitative oppositions.

### 8.2.9 Late British diphthongs

Around the middle of the first millennium AD a large number of diphthongs arose from two sources: 1) from the fusion of a vowel and a following approximant /w/ or /j/ as a result of apocope; 2) by the loss of various fricative consonants after vowels.<sup>191</sup> In the present analysis, it will be useful to distinguish between *u*-diphthongs and *i*-diphthongs. While there is no doubt that there were a large number of *u*-diphthongs in Late British at the time of the Anglo-Saxon settlements, it is not entirely clear how many *i*-diphthongs had arisen, and so diphthongs which may have arisen in the sixth rather than the fifth century are indicated separately in 8.2.9.1 and 8.2.9.2 below.

#### 8.2.9.1 /Vu/-diphthongs

The following *u*-diphthongs can be reconstructed with certainty for Late British, even at the earliest period of Anglo-Saxon settlement. They arose from Proto-Celtic etyma or Latin loans as a result of apocope of final syllables (see 8.2.5.1), whereby the medial approximant [w] fused with preceding vowels to create diphthongs (see Table 22).

Diphthong	Late British	Middle Welsh
*/iu/	* <i>Li<u>u</u></i> (< EBr. * <i>Līwā</i> )	<i>lliw</i> ‘colour’
*/eu/	* <i>k<u>e</u>ne<u>u</u></i> (< EBr. * <i>kanawī</i> )	<i>ceneu</i> ‘whelp’
*/eu/	* <i>Le<u>u</u></i> (< EBr. * <i>Lewū</i> < L <i>leō</i> )	<i>llew</i> ‘lion’
*/yu/	* <i>L<u>y</u></i> (< EBr. * <i>Lowī</i> < PCl. * <i>ϕlowī</i> )	<i>llyw</i> ‘rudder’
*/au/	* <i>N<u>a</u></i> (< EBr. * <i>nawan</i> < PCl. * <i>newan</i> )	<i>naw</i> ‘nine’
*/ou/	* <i>kl<u>au</u></i> (< EBr. * <i>klōw</i> < L <i>clāvis</i> or <i>clāvus</i> )	<i>clo</i> ‘lock, bolt’
*/ou/	* <i>to<u>u</u></i> (< EBr. * <i>towe</i> )	<i>teu</i> ‘yours’

Table 22. /Vu/-diphthongs of early Late British, ca. fifth century

<sup>191</sup> The large number of diphthongs to be described in this section may at first seem unusual, but even today North Walian dialects tend to have a large inventory of thirteen diphthongs: /aɪ, ɔɪ, əɪ, iʊ, eʊ, aʊ, əʊ, iʌ, aɪ, ɔɪ, ʊɪ, ɔɪ, əɪ/, and some of these also have contextual variants (see Ball & Williams 2001: 46).

Three more diphthongs must also have been part of the Late British vowel system during the Anglo-Saxon settlement period ca. 450–650 – though perhaps not until the sixth century. The diphthong \*/øu/ arose from internal *i*-affection (see 8.2.6), while \*/eu/ and \*/uu/ arose through fusion of the approximant /w/, which also derived from the velar fricative /ɣ/ between labial vowels (from lenition of PCl. \*/g/) (see Table 23).

Diphthong	Late British	Middle Welsh
*/øu/	* <i>nøwið</i> (< PCl. * <i>Nowijo-</i> )	<i>newyd</i> ‘new’
*/eu/	* <i>L<u>eu</u>varx</i> (< PCl. * <i>Lugu-markos</i> )	<i>Llywarch</i> ‘Lug’s horse’
*/uu/	* <i>juw</i> (< <i>ju y</i> < PCl. * <i>jugom</i> or L <i>iugum</i> )	<i>ieu</i> ‘yoke’

Table 23. /Vu/-diphthongs of early Late British, ca. sixth century

### 8.2.9.2 /Vi/-diphthongs

The Late British *i*-diphthongs derive from several sources. Firstly, they emerged from the fusion of a previously intervocalic palatal approximant to the preceding vowel in Early British words or British Latin loans after apocope or syncope. These diphthongs must certainly have been present at the time of the earliest Anglo-Saxon contacts, owing to the early date of apocope and syncope (see 8.2.5.1 and 8.2.5.2):

Diphthong	Late British	Middle Welsh
*/ai/	* <i>mair</i> (< L * <i>maior</i> )	<i>maer</i> ‘official’
*/ɔi/	* <i>mǣ</i> (< EBr. <i>mǣh</i> < PCl. * <i>mājūs</i> )	<i>mwy</i> ‘bigger’

Table 24. /Vi/-diphthongs of early Late British, ca. fifth century

A second, larger number of /Vi/-diphthongs arose from the Early British velar fricative /ɣ/ which, probably through an intermediate stage as a palatal fricative [j], became an approximant /j/ and fused with preceding vowels to form diphthongs. Jackson (1953: 396) dates this change to the second half of the sixth century. The early inscriptional evidence has now been exhaustively surveyed by Sims-Williams (2003: 154–77) and generally shows retention of ⟨g⟩ in spelling, which probably indicates a fricative [ɣ] or [j]. Earlier inscriptions which appear to indicate the change are possibly Irish in origin rather than British (see Sims-Williams 2003: 317). The earliest instances of ⟨il⟩-spellings from \*/yl/ are often found in the personal name \**Maglo-*, compare *Mailoc* attested at the Council of Braga in 572 and *Coinmail*, 577 (beside *Conmæzl* and *Coinmazil*), and Bede (ca. 731) has *Brocmail* (< \**brokk(o)maglo-*).<sup>192</sup> As the change first appears

<sup>192</sup> Förster (1922: 225) takes *Mægla* in the *Anglo-Saxon Chronicle* AD 501 to represent [ai], but Jackson (1953: 466 note 1) seems to think it could also be a sound-substitution of British [Mayla]. Interestingly, the name does not refer to a Briton but to Port’s son, who after landing in

in documents of the 570s, it seems likely that the change occurred earlier in speech, e.g. in the first half of the sixth century. It is probable, therefore, that the diphthongs had either already emerged or were in the process of emerging from [e̞j], [ej], [yj], [ɔj], [uj] during the period of Anglo-Saxon contacts:

Diphthong	Late British (< Early British)	Middle Welsh
*/e̞i/	* <i>m̥e̞irjon</i> (< L <i>maior</i> + internal <i>i</i> -affect.)	<i>meiri</i> ‘official’
*/ei/	* <i>teir</i> (< * <i>teōr</i> )	<i>teir</i> ‘three’
*/yi/	* <i>y̥in</i> (< * <i>y̥jn</i> < * <i>o y̥nī</i> ) (+ final <i>i</i> -affect.)	<i>wyn</i> ‘lambs’
*/oi/	* <i>oin</i> (< * <i>o̞jn</i> < * <i>o yno-</i> )	<i>oen</i> ‘lamb’
*/ui/	* <i>truin</i> (< * <i>tru̞jn</i> < * <i>tru yn-</i> )	<i>trwyn</i> ‘nose’

Table 25. Later created /Vi/-diphthongs, ca. sixth century

Probably at a later date, several /Vi/-diphthongs arose through the loss of various fricative consonants in consonant clusters, the most common being the loss of the voiceless velar fricative /x/, which appears to have become a palatal fricative [ç] before deletion (for it left a palatal approximant in its wake). Thus, the process may have been approximately: \**saxs*- ‘Saxon’ > \**saiçs* > LBr. \**sais*, cf. MW *Saes* ‘Saxon, Englishman’. The examples in Table 26 are representative.

Diphthong	Late British (< Early British)	Middle Welsh
*/ai/	* <i>Catraiθ</i> (< * <i>Catraiçt</i> < * <i>Catar(r)acta</i> )	<i>Catraeth</i> ‘Catterick’
*/e̞i/	* <i>e̞iθin</i> (< * <i>e̞içtin</i> < * <i>aktīnā</i> )	<i>eithin</i> ‘furze’
*/ei/	* <i>seiθ</i> (< * <i>seiçt</i> < * <i>sext</i> )	<i>seith</i> ‘seven’
*/yi/	* <i>yīθ</i> (< * <i>yīçt</i> < * <i>oxtī-</i> < PCl. * <i>oxtū-</i> )	<i>wyth</i> ‘eight’
*/oi/	* <i>Noiθ</i> (< * <i>noiçt</i> < * <i>noxt-</i> < PCl. * <i>nok<sup>w</sup>t-</i> )	<i>(he)noeth</i> ‘(to)night’
*/ui/	* <i>Luiθ</i> (< * <i>luiçt</i> < * <i>luxt-</i> )	<i>luith</i> ‘tribe’

Table 26. Later created /Vi/-diphthongs from /Vxt/-clusters, ca. sixth century

Brittonic place-name evidence in Anglo-Saxon sources written both in Latin and Old English indicates that the velar fricative was still present during the early settlement period. The Yorkshire place-name Catterick (MW *Catraeth*) appears in Bede as *Cataracta* and *Cataractone* and in the Old English translation as *Cetreht* (from LBr. \**Catar(r)axta*, cf. Antonine Itinerary *Cataractone*). Similarly, the Isle of Wight is found in Old English as *Wiht* (< PBr. \**wextis*), not \*\**Wīþ*. However, loss of the velar fricative is found in areas which were Anglicised late, e.g.

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Portsmouth, slew a young Briton of high rank on the spot. Accordingly, Port must have given his son a Celtic name before coming to Britain.

Linlithgow (West Lothian) which, according to Watson (2004: 384), is cognate with W *llaith* ‘damp’ (< PBr. *\*lexto-*).<sup>193</sup> A further possible attestation of the change may be ME *Lanrekaythin/Lanrechathin* (Cumberland) which appears to be from *\*lannerch* ‘glade’ + *eithin* (< *\*aktinā*) ‘furze’ (see Armstrong *et al.* 1950: 72, Jackson 1953: 410). On the whole, it seems safer to assume, with Jackson (1953: 696), that the /xt/ (= [çt]) did not become /iθ/ until the late sixth or early seventh century (see also Sims-Williams 2003: 386).<sup>194</sup> Nonetheless, there is not a great deal of evidence available, and Catterick and Wight may well have been taken into Pre-Old English already in the fifth century. This completes our survey of the Late British vowels and diphthongs.

### 8.3 Summary

The origins of the Late British vowels and diphthongs are presented in summary in Tables 27 and 28.

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<sup>193</sup> According to Watson (2004: 384), Linlithgow translates as ‘lake of the damp/grey hollow’, assuming it contains the following elements as in Modern Welsh: *llyn* ‘lake’ + *llaith* ‘damp’ + *cau* ‘field’ (see also Jackson 1953: 410 and Fox 2007: appendix s.v. Linlithgow).

<sup>194</sup> The effects of a similar change are also found in Middle English dialects, such as in the Midlands and the North (e.g. ME *nith* ‘night’ < OE *niht*; see e.g. Laing & Lass 2003: 265–68 for details on South-West Midlands dialects). Since the change [çt] > [θ] does not seem to be attested in other Germanic languages, it may be worth considering whether language contact with Brittonic may have brought about the dialectal change in English.

Vowel	Late British (< Proto-Celtic)	Middle Welsh
/i:/	*trī (< *trīs)	tri ‘three (masc.)’
/e:/ <sup>1</sup>	*krēdr (< *krei-tro-)	crwydyr ‘sieve’
/ɛ:/ <sup>2</sup>	*kēd (< *kaito-)	coed ‘forest’
/y:/ <sup>3</sup>	*dȳn (< *dūno-)	din ‘fort’
/ʊ:/ <sup>3</sup>	*tūd (< *teutā)	tud ‘people’
/ɔ:/ <sup>3</sup>	*brōd (< *brātu-)	brawd ‘judgement’
/i/ <sup>4</sup> {	[i] *Nīθ (< *nisdo-)	nyth ‘nest’
	[ə] *kənthaṽ (< *kintisamos)	cyntaf ‘first’
/ɛ/ <sup>5</sup>	*kɛnɛu (< *kanawī < *kenawū)	ceneu ‘whelp’
/e/	*hen (< *senos)	hen ‘old’
/y/ <sup>5</sup>	*Lys (< *lutsu-)	llys ‘herbs’
/a/	*cant (< *kantom)	cant ‘hundred’
/u/ <sup>4</sup> {	[u] *trum (< *trudsmo-)	trwm ‘heavy’
	[ə] *bōdar (< *budaros)	byddar ‘deaf’
/o/ <sup>7</sup> {	[o] *torrōg (< *torr-āko)	torrog ‘pregnant’
	[ə] *Nōwið (< *nowijo-)	newyd ‘new’
<b>Notes:</b> 1. Monophthongisation of PCl. /ei/ (8.2.1). 2. Monophthongisation of EBr. /ai/ (8.2.2). 3. Great British Vowel shift /ɑ:/ > /ɔ:/, /o:/ > /ʊ:/, /u:/ > /y:/ (8.2.3). 4. Centralisation in pre-tonic closed syllables and all pre-pre-tonic syllables (8.2.5.3). 5. Final <i>i</i> -affection (8.2.4). 6. Centralisation in pre-pretonic syllable (8.2.5.3). 7. Internal <i>i</i> -affection (8.2.6).		

Table 27. Late British vowels and their derivation



Diphthong <sup>1</sup>	Late British (< Early British etc.)	Middle Welsh
(ui)	* <i>truin</i> (< * <i>truġn</i> < * <i>tru yn-</i> )	<i>truin</i> ‘nose’
(ei) <sup>2</sup>	* <i>mēirjon</i> (< L <i>maior</i> )	<i>meiri</i> ‘official’
(ei)	* <i>teir</i> (< * <i>teōr</i> )	<i>teir</i> ‘three’
(yi) <sup>3</sup>	* <i>yġn</i> (< * <i>yġn</i> < * <i>o ynī</i> )	<i>wyn</i> ‘lambs’
/ai/	* <i>mair</i> (< L * <i>maior</i> )	<i>maer</i> ‘official’
(oi)	* <i>oin</i> (< * <i>oġn</i> < * <i>o yno-</i> )	<i>oen</i> ‘lamb’
/ɔi/ <sup>3</sup>	* <i>mǣ</i> (< <i>mǣh</i> < PCl. * <i>mājūs</i> )	<i>mwy</i> ‘bigger’
/iu/	* <i>Liu</i> (< * <i>līwā</i> )	<i>lliw</i> ‘colour’
/ɛu/ <sup>3</sup>	* <i>kēneū</i> (< * <i>kanawī</i> )	<i>ceneu</i> ‘whelp’
/eu/	* <i>Leu</i> (< * <i>lewū</i> < L <i>leō</i> )	<i>llew</i> ‘lion’
(yu) <sup>3</sup>	* <i>Lyu</i> (< * <i>lowī</i> < PCl. * <i>φlowī</i> )	<i>llyw</i> ‘rudder’
(ou) <sup>2</sup>	* <i>Nōwið</i> (< PCl. * <i>nowijo-</i> )	<i>newyd</i> ‘new’
(ou)	* <i>Lōu</i> <i>varx</i> (< PCl. * <i>lugu-markos</i> )	<i>Llywarch</i> ‘Lug’s horse’
/au/	* <i>Nau</i> (< * <i>nawan</i> < PCl. * <i>newan</i> )	<i>naw</i> ‘nine’
(uu)	* <i>juw</i> (< <i>ju y</i> < PCl. * <i>jugom</i> or L <i>iugum</i> )	<i>iau</i> ‘yoke’
/ou/	* <i>tou</i> (< * <i>towe</i> )	<i>teu</i> ‘yours’
/ɔu/	* <i>klǣu</i> (< * <i>klāw</i> < L <i>clāvis</i> or <i>clāvus</i> )	<i>clo</i> ‘lock, bolt’
<b>Notes:</b> 1. For details on the development of the Late British diphthongs in general see 8.2.9. 2. Internal <i>i</i> -affection (8.2.6). 3. Final <i>i</i> -affection (8.2.4).		

Table 28. Late British diphthongs and their derivation

## 9 The vowels and diphthongs of Pre-Old English

Chapter 9 introduces the Pre-Old English vowel and diphthongal system. As in the previous chapter, a descriptive overview of the Pre-Old English vowels is provided first. This section also points out possible dialectal variation that may have existed already in Pre-Old English and considers which vowels and diphthongs may or may not have had the status of phonemes in the early settlement period of the fifth century. The remainder of the chapter is devoted to the historical derivation of the Pre-Old English vowels and diphthongs. The chapter closes with a summarised overview in tabular form of the Pre-Old English vowels and diphthongs and their historical derivation.

### 9.1 Synchronic overview of Pre-Old English vowels

Two systems of long vowels are usually differentiated for even the earliest period: a West-Saxon system, which is characterised by two long front mid-vowel phonemes /e:/ and /æ:/, and an Anglian system, comprising Northumbrian and Mercian dialects, which probably had only one front mid-vowel phoneme /e:/.<sup>195</sup> A possible reconstruction of the early vowel systems is presented below (variants in square brackets result from *i*-mutation; these attained the status of phonemes probably no later than about AD 550).

LONG (West Saxon)			LONG (Anglian)			SHORT		
i:	[y:]	u:	i:	[y:]	u:	i	[y]	u
e:	[ø:]	o:	e:	[ø:]	o:	e	[ø]	o
æ:		ɑ:	[æ:]		ɑ:	æ		ɑ ~ ɒ

Figure 12. Pre-Old English vowels

A more limited inventory of vowels occurred in unstressed syllables, such as in inflectional endings, namely only the short vowels \*/i, u, æ, ɑ/ – this study, however, will focus for the most part on vowels in stressed syllables. A large amount of scholarship has been dedicated to the Old English vowels and inevitably some parts of the vowel systems presented here are open to slightly different interpretations, as will become clear from the discussions in 9.2 and Chapter 10.

Pre-Old English diphthongs were originally composed of a front vowel followed by a back rounded vowel /u/ or /o/. Furthermore, as a result of a change known as Old English breaking, most scholars posit a series of short diphthongs too (i.e. diphthongs that are equivalent

<sup>195</sup> The situation with Kentish is debated among scholars. Moreover, due to its close proximity to continental West Germanic, Kentish seems to have shared a number of developments with continental Germanic dialects throughout the Old English period. For the most part, this chapter will concentrate on Anglian and West Saxon dialects.

in length to short vowels; these are also known as monomoraic diphthongs in contrast to bimoraic diphthongs which are equivalent in length to long vowels). Both long and short diphthongs were subject to *i*-mutation. Such a system of bimoraic and monomoraic diphthongs is extremely unusual from a typological perspective, leading many scholars to question the phonemic status of short diphthongs in Old English and especially Pre-Old English, for this reason I have placed them in parentheses in Fig. 13.

LONG		SHORT	
[iy]	iu	(īy)	(īu)
	eu		(ēu)
[eø]	æo	(ěø)	(ǣo)

Figure 13. Pre-Old English diphthongs

The remainder of this chapter will provide details on how the vowel and diphthongal system of Pre-Old English can be derived from that of Proto-Germanic.

## 9.2 Derivation of Pre-Old English vowels

### 9.2.1 Proto-Germanic vowels

The Pre-Old English vowels can be derived from a Proto-Germanic system consisting of four (or five)<sup>196</sup> long vowels \*/i:/, (e:/), æ:/, o:/, u:/, four short vowels \*/i, e, a, u/, and four diphthongs \*/ai, au, eu, iu/. The vowels and diphthongs of Proto-Germanic were further characterised by the effects of vowel mutation and nasalisation. As a result of vowel mutation, \*/e/ was raised to \*/i/ when the following syllable contained a high vowel \*/i/ or \*/u/ (note that the change also affected the diphthong \*/eu/ > \*/iu/). Further, \*/i/ and \*/u/ were lowered to \*/e/ and \*/o/ respectively, if the next syllable contained a non-high vowel (this change also affected the diphthong \*/iu/ > \*/eo/). Typical examples of these changes are: Pre-PGmc *\*beresi* > PGmc *\*birisi* > OE *birst* ‘you carry’; Pre-PGmc *\*gulpa-* > PGmc *\*golpa* > OE *gold* ‘gold’. Furthermore, the Proto-Germanic vowels \*/a, i, u/ were nasalised before nasal plus velar-fricative clusters, i.e. \*[ãŋx, ĩŋx, ũŋx]. With loss of nasalisation, these clusters yielded corresponding long vowels in the older Germanic languages. However, in North Sea Germanic languages (i.e. Old English, Old Frisian, and parts of Old Saxon) \*[ãŋx] did not become \*/a:x/ (as it did in Old High German) but a rounded vowel \*/o:x/. Furthermore, the North Sea Germanic languages show some effects of nasalisation not regularly attested in related languages. Nasals are also lost before fricative clusters other than \*[ŋx], with lengthening of preceding

<sup>196</sup> Some scholars assume there were five long vowels in Proto-Germanic, and therefore two mid front vowels: /æ:/ and /e:/. Other scholars, however, assume that there was only one mid-front vowel \*/æ:/ (see 9.2.2).

vowels, e.g. PGmc *\*yans-*, *\*tanθ-* > OE *gōs* ‘goose’, *tōþ* ‘tooth’. Since there is no clear reason why nasalisation of vowels should have operated only before \*[x] and not before other fricatives in Proto-Germanic, it is possible that nasalised vowels also existed before \*/s, f, θ/ in Proto-Germanic too.<sup>197</sup>

### 9.2.2 *Developments of Proto-Germanic long mid-front vowels*

The long front mid-vowel(s) of Proto Germanic are the topic of considerable debate. The following paragraphs can only attempt to provide a survey of opinions; we shall deal with each of the two proposed vowels in turn.

Much debate has centred around Proto-Germanic \*/æ:/ (usually referred to as  $\bar{e}_1$ ) in the evolution of North and West Germanic. This vowel appears as ⟨a⟩ in both Old Norse and Old High German; in West Saxon, scribes render the vowel ⟨æ⟩; in Anglian dialects, as well as in Old Frisian and parts of Old Saxon, it is written ⟨e⟩. There has been a long debate about whether the front-vowel reflex of Old English represents an inherited front reflex from Proto-Germanic or is a later innovation, namely PGmc \*/æ:/ > NWGmc. \*/a:/ > NSGmc \*/æ:/ or \*/e:/ (see most recently Stiles 2004 and Kortlandt 2006 for opposing views). The simplest account assumes that PGmc \*/æ:/ generally remained a low mid-vowel in North Sea Germanic except in a few select phonetic environments. Thus, according to this explanation, a back variant arose in North Sea Germanic before nasals, e.g. PGmc *\*mān-* > OE *mōna* ‘moon’ as well as before /w/, e.g. in PGmc *\*blāwan-* > OE *blāwan* ‘blow’ (see Hogg 1992a: 88, Fulk 1998: 141).<sup>198</sup> But otherwise PGmc \*/æ:/ remained a front-mid vowel, which appears as ⟨æ⟩ /æ:/ in West Saxon (and possibly early Kentish based on place-names evidence) and as ⟨e⟩ /e:/ in Anglian dialects (see Map. 12). It seems likely that /æ:/ was raised to a /e:/ at an early stage in Anglian dialects, which possibly relates to dialect differences already existing in Continental North Sea Germanic dialects. Note that van Wijk (1911) established that the original reflex of PGmc /æ:/ was /æ:/ approximately south of the River Rhine, namely in South Holland, Utrecht, Zealand and West Flanders, while a variant /e:/ was found to the North in most of North Holland and Old Frisian (cf. also Kortlandt 1986).

Attention must next be turned to PGmc \*/e:/ (usually referred to as  $\bar{e}_2$ ). Traditionally, it is assumed to have existed in a handful of words in Proto-Germanic, notably PGmc *hēr* ‘here’ (< IE *\*keir*). Yet its main locus of origin was in the preterite forms of class VII strong verbs in

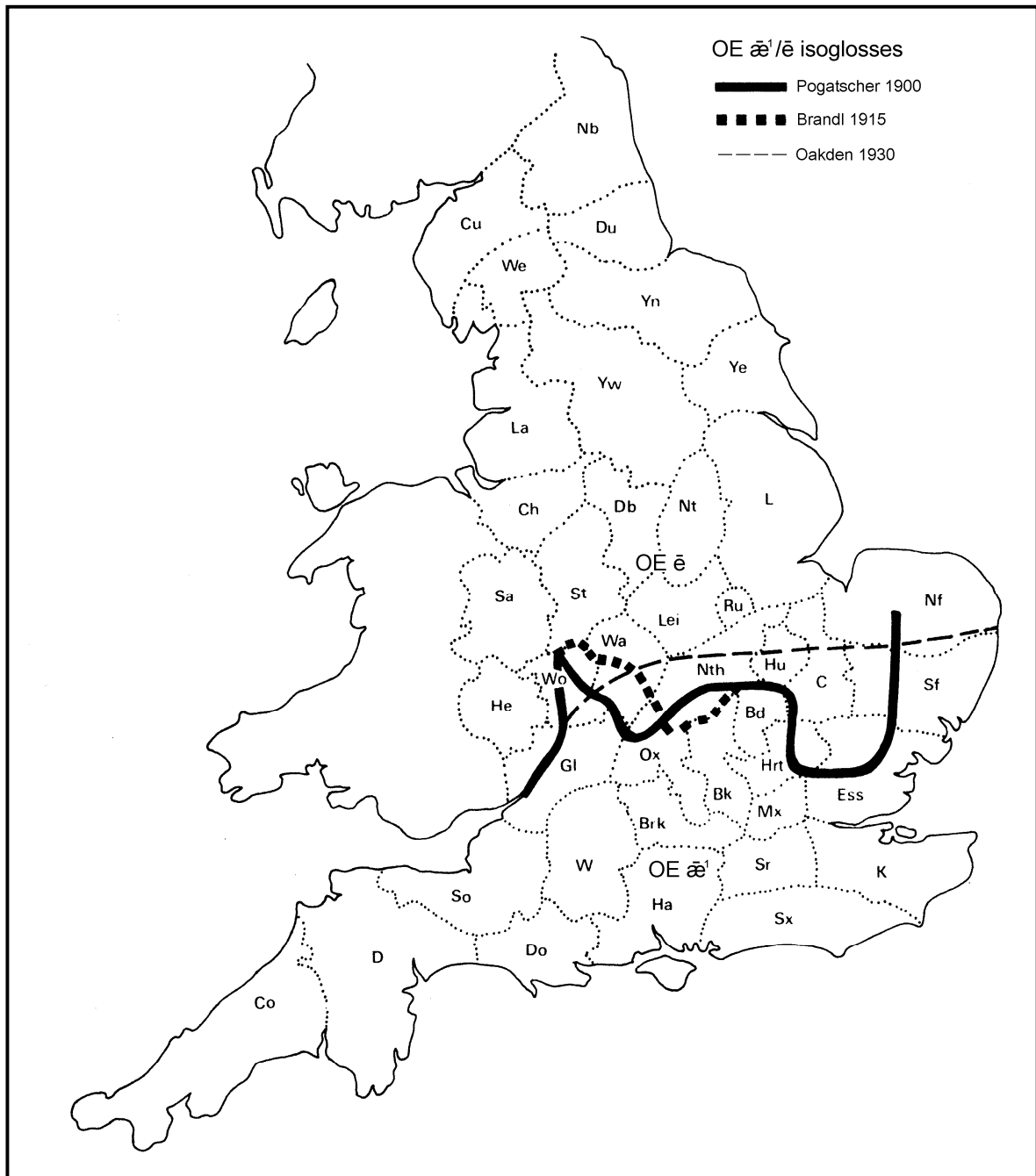
<sup>197</sup> The North-Sea Germanic development is attested sporadically elsewhere, compare e.g. G *Süden* ‘south’ from PGmc *\*sunθ-* (unless, quite possibly, this example is a loanword from North Sea Germanic dialects).

<sup>198</sup> Like other languages with small long vowel inventories, there must have been considerable phonetic space in which the vowels could move. Compare, for instance, Standard Arabic with its three long vowels /i:, u:, a:/. To listeners with more elaborate vowel systems, like English, these Arabic vowels can often appear more like /e:, o:, æ:/ respectively, in certain phonetic contexts.

North-West Germanic languages (as opposed to East Germanic languages, principally Gothic). Class VII verbs were reduplicating in Proto-Germanic and are still found as such in Gothic, e.g. Gothic *haitiþ* ‘he calls’ and *slēpiþ* ‘he sleeps’ (both 3.sg.pres.ind.) vs. *haihait* ‘he called’ and *saizlēp* ‘he slept’ (both 3.sg.ind.pret. with reduplication). Reduplicating verbs underwent a radical transformation in North-West Germanic languages, such that the Gothic preterite forms *haihait*, *saizlep*, appear in West Saxon and Kentish dialects of Old English as *hēt* ‘called’, *slēp* ‘slept’. Anglian is an exception in this regard, for it evidences archaic reduplicated forms without a long mid-vowel, e.g. *heht* ‘he called’, *leolt* ‘let’, *reord* ‘advised’ (cf. WS *hēt*, *lēt*, *rēd*).<sup>199</sup> Some scholars (e.g. Vennemann 1997) therefore doubt whether  $\bar{e}_2$  ever developed in Anglian at all. Such a position has not received general acceptance, but most accounts do tend to agree that only one mid vowel existed in Anglian dialects from the earliest settlement period, and this system must be placed in a relative chronology before breaking and *i*-mutation (see 9.2.5 and 9.2.6).

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<sup>199</sup> Note also that PGmc *\*mizd-* ‘pay, reward’ yielded West Saxon *mēd* with /e:/ =  $\bar{e}_2$  (cf. also OFris. *mēde*, OS *mēda*, OHG *mēta*, *meata*, *miata*), but appears in Anglian as *meord*. Unfortunately, this word is not attested in North Germanic.



Map 12. Proto-Germanic \*/æ:/ (=ē<sub>1</sub>) in Old English dialects (Crowley 1986: 109)

### 9.2.3 Fronting of PGmc \*/a/

Proto-Germanic \*/a/ was fronted and raised to \*/æ/ in the prehistory of Old English. Due to the fact that a similar change is attested in Runic Frisian as well as Old Frisian, the change may well go back to a time of Anglo-Frisian unity; hence this change is sometimes referred to as Anglo-Frisian brightening, e.g. PGmc \**day-* > OE *dæg*, OFris. *dei*.<sup>200</sup> Following the observation of Krupatkin (1970), namely that changes in long vowels call forth changes in short vowels, Kortlandt (2006) has argued that fronting of short \*/a/ to /æ/ took place because there was no long back vowel /ɑ:/ in the North Sea Germanic vowel system at the time, but there was the fronted variant \*/æ:/. Krupatkin's observation seems pertinent if we assume that Pre-Old English, like other older Germanic languages, relied on a binary opposition of phonological quantity. As such, short vowels and long vowels formed opposing binary sets, i.e. they contrasted more in terms of length, not quality, as in Modern English. However, not all instances of \*/a/ were affected by the change. Before a nasal consonant, \*/a/ was *not* fronted, cf. PGmc \**man-* 'person' > OE *man*, *mon* OFris. *man*, *mon*. It appears that \*/a/ was nasalised in this position, which prevented fronting. Striking similarities in the development of the low long vowel PGmc \*/æ:/ are noticeable here too (see 9.2.2), underscoring Krupatkin's observation cited above. Judging by Old English and Old Frisian orthography, this vowel appears to have been a back vowel and was subject to rounding ([ɔ]?). It is also most likely that, like in Frisian, \*/a/ was not fronted in several other environments in Old English, though some scholars believe that there was fronting but also later restoration of the vowel /a/. These environments were: before /l, r, h/ plus consonant, before /w/, and when a back vowel appeared in the following syllable. Since the changes lie in prehistory it is difficult to establish all the necessary facts to establish precisely when \*/a/ was fronted and when it was not. Certainly, there are good arguments to assume that \*/a/ was not fronted before /w/ and /l/ plus consonant clusters (see Hogg 1992a: 83–4); yet the situation before /r, h/ plus consonant clusters is less clear, because here fronting appears to have been blocked especially when \*/a/ was in the neighbourhood of a labial consonant (see Campbell 1959: 56).

### 9.2.4 Developments of PGmc \*/ai/ and \*/au/

The inherited Proto-Germanic diphthongs \*/ai/ and \*/au/ underwent significant changes on their way into pre-Old English. They will be dealt with together in this section (note, however, that it is generally agreed that the changes affecting \*/ai/ and \*/au/ did not occur contemporaneously).

Probably sometime in the fifth century AD, PGmc \*/ai/ was monophthongised to a low vowel [a:] or [ɑ:] in Pre-Old English. The date of the change can be roughly inferred from the

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<sup>200</sup> Even if some scholars doubt the Anglo-Frisian origin of the change, the change must nonetheless be very early. For instance, there is general agreement among runologists that the Undley Bracteate runic inscription (ca. 450–500) contains three instances of fronting of \*/a/ to \*/æ/ (see Nielsen 2000: 91–2).

available Anglo-Frisian runic evidence (see Bammesberger 1996b: 21, Waxenberger 2008). A very early runic inscription on a bone from a roe-deer found at Caistor-by-Norwich still attests the diphthong /ai/: **raihan** ‘roe’ (ca. 425–475). However, it is possible that this early inscription preserves a conservative spelling and it might not even be Anglo-Saxon. At any rate, in later inscriptions the long low vowel /a:/ (< PGmc \*/ai/) is rendered by the new *āc*-rune ⟨**ƿ**⟩. The *āc*-rune is first attested in the London gold solidus inscription **skanomodu** ‘Schönmut’ (ca. 6th century), which, it is usually thought, must be Frisian. However, runologists agree that the *āc*-rune was invented in England and then adopted for use in Frisian.<sup>201</sup> If, as seems likely, the *āc*-rune ⟨**ƿ**⟩ was invented at the same time as the similar *ōs*-rune ⟨**ᚱ**⟩, which appears in the inscription found at Undley in Suffolk (ca. AD 450–500), one may infer that the monophthongisation of \*/ai/ to /a:/ occurred no later than AD 500 (and probably much earlier, given that changes in spelling lag behind changes in speech).<sup>202</sup> As a result of the monophthongisation of PGmc \*/ai/ to Pre-OE \*/a:/, the low back vowel \*/æ:/ which once occupied a large vowel space \*[a: ~ æ: ~ ɑ:], would have adjusted to the new changes within the system.

The Proto-Germanic diphthong \*/au/ shows a fronted first component in all Old English dialects. For Pre-Old English we can probably assume the pronunciation \*/æo/ (Bammesberger 2006: 178); a new runic symbol was devised to represent it, namely ⟨**ᚹ**⟩, and in the oldest Latin-based manuscripts it appears as ⟨æo, æa, eo⟩ and in later manuscripts as ⟨ea⟩. It is agreed that even though the usual classical Old English spelling for the diphthong is ⟨ea⟩, the first vowel was actually a low vowel /æ/, for the diphthong ultimately yielded a mid-low vowel in Middle English /æ:/ or /ɛ:/. Opinions on the development of this diphthong differ greatly (see Laker 2007: 177–80 for discussion). Probably the majority opinion is that the /a/ in the Germanic diphthong \*/au/ was fronted as a result of the change outlined in 9.2.3. Some scholars, however, assume \*/a/ was fronted later and independently of the aforementioned change. In terms of relative chronology, it is clear that the resulting diphthong ⟨ea⟩ was early enough to palatalise preceding velar consonants, e.g. *ċēapian* ‘to trade, buy’ < PGmc \**kaupian* (ultimately from L *caupo* ‘tavern-keeper, hawker’).

<sup>201</sup> Cf. ‘The name of the rune (ᚱ) denoting a *ā* was *āc* ‘oak’ in OE, a name deriving from Gmc. \**aik*-. In runic Fr[isian], there is no evidence of the use of ᚱ for *ā* < Gmc. *ai*, and according to the acrophonic principle (by which the runes had the sound value of the first letter of their names) the rune is therefore likely to have been invented in England and been exported from there to Frisia [...], where Gmc. *ai* became *ǣ* (cf. OFr. *ēk* ‘oak’), and where for phonetic reasons, but contrary to the acrophonic principle, the runic letter was used with the sound value *ā*, e.g. to denote *ā* < Gmc. \**au*. The circumstance that ᚱ is attested in Runic Eng[lish] only from the 7th century may be fortuitous in view of the paucity of early extant inscriptions’ (Nielsen 2001: 515).

<sup>202</sup> Kortlandt (2006, 2008) argues that monophthongisation of PGmc \*/ai/ to \*/a:/ was an Anglo-Frisian change; this proposal is not accepted by all scholars, however.



### 9.2.5 Breaking

The change known as Old English breaking involved diphthongisation of the front vowels /i(:), e(:), æ(:)/ before /lC/, /rC/ or \*/h/ (= [x]).<sup>203</sup> Typical examples are: \**līht* > *līoht* ‘light’, \**tīhhian* > *tīohhian* ‘consider’, \**nēhwest* > (\**nēohwest* >) *nēowest* ‘nearest’, \**feh* > *feoh* ‘cattle’, \**nāh* > *nēah* ‘nigh, near’, \**sāh* > *seah* ‘he saw’. It is noteworthy that /r/ and /l/ only cause breaking when followed by another consonant, e.g. *eorpe* ‘earth’ and WS *eald* ‘old’ from \**erpa*, \**æld* in contrast to *here* ‘army’ (with no breaking) from \**heri*. Comparison of forms such as *nearwe* ‘narrow’ with breaking and *nerian* ‘save’ without breaking (< \**nærwe* and \**nærjan*, the latter also showing *i*-mutation of \*/æ/ to /e/) lead one to agree, with Hogg (1992b: 103), that ‘*r* and *l* which caused breaking must have been velarised or acquired some equivalent back articulation and that this happened when the liquid was followed by another consonant’. On the other hand, /h/ caused breaking independent of whether it was followed by a consonant or not; it was no doubt always velarised or had some equivalent back articulation at the time of breaking.

As already noted, breaking created diphthongs, long and short, which are usually expressed in Old English orthographically as ⟨io, eo, ea⟩.<sup>204</sup> Clearly, then, diphthongisation of the front vowels was a conditioned process, i.e. the results of the change are directly predictable from the phonetic environment, therefore it looks like it was an allophonic process originally. However, because broken long vowels automatically merged with existing inherited diphthongs, namely /io, eo, æɑ/ (< Pre-OE \*/iu, eu, æo/ < PGmc /iu, eu, au/), they must have gained the status of phonemes as a result of the merger. But breaking of the short front vowels – it is usually held – created three new short diphthongs \**[īu, ēo, āo]* which had no counterparts in the Old English vocalic system: their status is therefore debated. Hogg (1992b: 104) has argued that they achieved phonemic status on the analogy of the long diphthongs, since a length contrast permeated the Old English phonological system. Furthermore, the fact that short diphthongs are represented in the Old English orthographic system leads to the assumption that they were phonemic due to the fact that orthographic systems tend to express phonemic differences rather than mere phonetic differences. In brief, the status of the short diphthongs is uncertain, especially

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<sup>203</sup> Breaking of \*/æ:/ occurred in West Saxon dialects but not in Anglian. There is no evidence to suggest that Anglian had /æ:/ at the time of breaking.

<sup>204</sup> Following the editorial conventions used by Anglo-Saxonists, a macron is used to indicate a long diphthong when citing Old English forms. However, when referring to the diphthongs as phonemic or phonic segments in slanted ‘//’ or square brackets ‘[]’, the long diphthongs are left unmarked and the short diphthongs are identified by a breve ‘˘’. The breve is important because it must be recognised that short diphthongs are monomoraic, i.e. are equivalent in length to a short vowel, despite the fact that they are composed of two vowels. Long diphthongs are bimoraic, having the length of two short vowels and so are equivalent to a long monophthong in terms of their quantity.

for Pre-Old English; hence they were placed in parentheses in Fig. 13 above.<sup>205</sup> Their status seems to have been precarious, since all Old English short diphthongs revert back to their former monophthongal status in Middle English, like their long counterparts also do.<sup>206</sup>

A further complicating factor of Anglian dialects, which involves diphthongs of all origins (i.e. including those from breaking), is so-called Anglian smoothing. By this change long and short \*/iu, eu/ were monophthongised to /i(:), e(:)/, while long \*/æo/ was monophthongised to /e:/ and short \*/ǣo/ was monophthongised to /æ/ before /k, h, ȝ/,<sup>207</sup> even if /l/ or /r/ intervened,<sup>208</sup> cf. Anglian *nēh* ‘nigh, near’ against West Saxon *nēah*.<sup>209</sup> Smoothing is many ways an unexpected change. First, it is assumed that the back articulation of velar consonants caused diphthongisation (i.e. breaking) of vowels. Later, though still in prehistoric times, the very same consonants come to have a palatalising effect, thereby producing monophthongisation of vowels (i.e. smoothing). This anomaly has led some scholars to think the change was merely orthographic (Brunner 1965: 97 note 1). Alternatively, Hogg (1992a: 143) has suggested that the final back consonant of the diphthong was weakened in Anglian dialects and the following velar was effectively palatalised. Important for the present study is the fact that smoothing does not affect the inventory of vowels, only their distribution.

#### 9.2.6 *i-mutation*

Lastly, attention must be turned to *i*-mutation (also known as *i*-umlaut), a change which had a substantial effect on the evolution of the (Pre-)Old English vowel system. The change involved the fronting of back vowels and diphthongs of all origins and the raising of the low front vowel

<sup>205</sup> It is difficult to date breaking. Luick (1914–40: 266) puts the change in the 3–4th century, which seems quite early.

<sup>206</sup> For instance, in the Northumbrian area, which will be the main focus of Chapter 10, long \*/iu, eo, æo/ yield /i(:), e(:), æ:/ respectively, while short \*/īu, ēo, ǣo/ yield /i, e, a/, as if there had never been any diphthongs in the first place.

<sup>207</sup> Since smoothing obliterated evidence of breaking before /h/, it might be supposed there was never breaking before /h/. However, in some cases /h/ seems to have been lost before smoothing, and in such instance a diphthong has been left in its wake, e.g. *neoliciga*, *neowest* (Northumbrian section of *Rushworth Glosses*), *neoleca* (*Lindisfarne Gospels*, *Durham Ritual*), *neawung* (*Lindisfarne Gospels*) (see Watson 1941: 49).

<sup>208</sup> Early Mercian glosses show /æ(:)/ <æ> as a result of smoothing too.

<sup>209</sup> Hogg has offered one explanation for this anomaly (1992a: 149): ‘Since /æ:/ < Gmc. \*/ai/ by *i*-umlaut does not regularly develop to /e(:)/ even when followed by a palatal consonant [...] it can be assumed that the sound produced by smoothing of \*/æa/ was slightly higher than /æ:/ by *i*-umlaut but not as high as /e:/, that is, approximately [ɛ:]. In most dialects this [ɛ:] was assimilated to /e:/, but in the dialect of the early glosses there was vacillation between /e:/ and /æ:/.’

/æ/ when followed by /i/ and /j/ in the following syllable. These developments are best outlined diagrammatically as in Fig. 14.



Figure 14. *i*-mutation of Pre-Old English vowels and diphthongs

Due to the high frequency of final syllables with \*/i/ and \*/j/, the change had a major impact on the vocalic system, serving to create front-rounded vowels which had been absent from the system previously. Note that while the *i*-mutation product of \*/ɑ:/ (< PGmc \*/ai/) merged with /æ:/ in West Saxon, the latter vowel was not present in the Anglian system at the time and so was introduced as a phoneme by virtue of *i*-mutation. Finally, it must be admitted that *i*-mutated diphthongs constitute a significant problem for reconstruction, and so the reconstructions presented here must be viewed as tentative (for a discussion of some of the problems, see Mottausch 2002).

### 9.2.7 The date of *i*-mutation

Various dates have been suggested for *i*-mutation. Since the change is found in some form or another in all attested Germanic languages (except Gothic), some historical linguists have tried to push back its ultimate origins to a stage when there was a common North-West Germanic language-unity. Such investigators have argued that *i*-mutation was always present allophonically but that the change was only phonologised when the *i*-mutating factor (i.e. following \*/i/ or \*/j/) was lost in the later histories of the individual languages (see a discussion of these issues in Salmons 2007). Many handbooks, however, suggest a more recent date for *i*-mutation around the sixth century, and possibly the first half of that century (e.g. Luick 1914–40: 321, Coates 1984: 31, 1989–90: 6–7, Nielsen 1985: 238). In order to estimate the date of *i*-mutation, the following evidence must be considered: 1) earliest attestations in runic inscriptions; 2) the phonological interpretation of lexical borrowings, especially early Latin loans and Romano-British place-names elements; 3) the chronology of *i*-mutation in relation to other sound changes. I shall now survey these three forms of evidence in turn.

<sup>210</sup> This diphthong, whether long or short, was affected by *i*-mutation in West Saxon only; in Anglian and Kentish the diphthongs shows no sign of the change.

<sup>211</sup> The diphthong /eu/ did not occur historically when /i/ or /j/ was found in the following syllable, due to the constraints of the vowel mutation described in 9.2.1. Historical cases of /eu/ are therefore subsumed under /iu/.

<sup>212</sup> In West Saxon this appears as ⟨ie⟩. Possibly a former diphthong [eø] merged with [iy] (< \*/æo/ plus *i*-mutation) before the earliest texts in this dialect.

First, the earliest certain dating for *i*-mutation is provided by the inscription on the Harford Farm Brooch **gibætæ** (ca. 610–650), which was discovered at Caistor-by-Norwich. Runologists agree that **gibætæ** must be connected with the Old English verb *gebētan* ‘improve, repair, make amends’ (< PGmc \**ge-bōt-jan*).<sup>213</sup> The form shows that the *i*-mutating factor was already lost, indicating that the *i*-mutated vowel, represented by the *æpil*-rune ⟨**ᚦ**⟩, must have been a phoneme in its own right. A similar uncontroversial example of *i*-mutation, though slightly later, is found on the left panel of the Franks (Auzon) Casket inscription of the late seventh century in the form of **wylif** ‘she-wolf’. Although an *i*-mutating vowel is present in this example, leading to the possible assumption the change could still be allophonic, the runemaster purposely uses a newly developed rune ⟨**ᚱ**⟩ /y(:)/ instead of ⟨**ᚱ**⟩ /u(:)/, and there could be no logical explanation for him to develop a new symbol to indicate phonetic variation.<sup>214</sup> Earlier runic inscriptions could also be taken to imply that *i*-mutation had taken place in the sixth century but are inconclusive. As in later English runes, the *ans*-rune ⟨**ᚹ**⟩ is used to indicate /o:/ but never /o(:)/ in an *i*-mutating environment, while the *æpil*-rune ⟨**ᚦ**⟩ is always used where *i*-mutation would be expected, but in each such case the *i*-mutating factor is still present in the inscription, and therefore phoneme status cannot be guaranteed.<sup>215</sup>

Second, Bülbring (1902: 64) argues that *i*-mutation must still have been operative beyond the sixth century because ecclesiastical loans such as *cælc* ‘chalice’ and *glesa* ‘to gloss’ could not have been borrowed before the mission of Augustine in 597. However, Coates (1984: 27) points out that the Anglo-Saxons met with a functioning albeit residual British church before this date, which could have transmitted these loanwords. In the same context, Coates has also drawn attention to the fact that early place-name elements such as *-ing(as)*, *-ingaham* have caused *i*-mutation in only a few place-names, namely in areas that were settled very early, such as Filching (Sussex), showing *i*-mutation of \*/u/, and possibly Gembling (North Yorkshire), with *i*-mutation of \*/a/. Coates argues that the most straightforward interpretation for the lack of *i*-mutation in other place-names with the element *-ing* is that *i*-mutation was principally a pre-

<sup>213</sup> In the context of the full inscription, the form has been plausibly explained as a 3rd person singular present subjunctive form of a 1st class weak verb, reflecting PGmc \**ge-bōt-jai* (see Bammesberger 2003).

<sup>214</sup> Furthermore, the vowel /i/ in this inscription is no doubt of recent origin, resulting from anaptyxis; based on a comparison of witnesses in other older Germanic languages an earlier form \**wulβi*/\**wylβi* must once have existed.

<sup>215</sup> The Undley Bracteate (ca. 450–500) contains ⟨**ᚹ**⟩ in a non *i*-umlaut environment (as expected): **gægogæ**. The Chessell Down Scabbard Mount (ca. 525–550) contains ⟨**ᚹ**⟩ in a non *i*-mutation environment and ⟨**ᚦ**⟩ in an *i*-mutation environment: **særi**. The Watchfield Purse Mount (ca. 500–550) contains both ⟨**ᚦ**⟩ ‘æ’ and ⟨**ᚦ**⟩ ‘æ’ in *i*-mutation environments: **hæribæki**; but, as with the Watchfield inscription, the *i*-mutating vowels are still present, therefore phonemic status for the *i*-mutated vowels cannot be guaranteed (see Waxenberger 2008).

settlement change which ceased to occur shortly after the settlement of Britain.<sup>216</sup> Coates' analysis of the *-ing* element, and other formations, seems hard to dispute; at any rate, his explanation seems preferable to other proposals, such as that there was a lack of *i*-mutation as a result of secondary stress (see Campbell 1959: 34–5, 83).

Third, it seems logical to assume that velar consonants were palatalised before *i*-mutation, since velars were palatalised before front vowels but *not* before rounded front vowels which result from *i*-mutation, such as in OE *kyn(n)* 'kin' (< PGmc *\*kunni*). But assuming, with Coates (1984: 31), that *i*-mutation did not take place long after c. 550, how can it be that Romano-British place-names with /k/ and /g/ before front vowels were palatalised at least a century after this date and possibly as late as the mid-seventh century (see 6.2.1.1, Map 6)? There are three possible explanations for this apparent anomaly: (1) velars were not palatalised before *rounded* front vowels; (2) palatalised velars of Old English had already been phonologised at an earlier date than *i*-mutation (or at precisely the same time), such that the phonological forms of Brittonic toponyms represent mere sound substitutions in line with the phonotactic constraints of Anglo-Saxon, with the observation that such substitutions were more widespread in southern England than in Northern England (especially Northumbria); (3) Romano-British place-names had already been subject to some degree of palatalisation, as in Vulgar Latin, prior to the arrival of the Anglo-Saxons in the fifth century (see the discussion in 6.2.1.1.4).

In general, Luick's and Coates' dating of *i*-mutation to the first half of the sixth century seems justified. I shall assume that around AD 500 the *i*-mutated vowels perhaps still had allophonic status. Based on some early place-names cited by Coates, *i*-mutation was probably still active as a change before and for a short time after AD 500, but it must surely have been completed by about AD 550. This discussion of *i*-mutation concludes our survey of the reconstructed vocalic systems of West Saxon and Anglian which were set out at the beginning of this chapter and will be discussed in relation to the Late British systems in the next chapter.

### 9.3 Summary

A summary of the reconstructed Pre-Old English vowels and diphthongs and their derivation from Germanic along side attested Old English cognate forms is presented in Tables 29 and 30.

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<sup>216</sup> Cf. Coates (1984: 29): 'This dating has the further consequences that the change was a feature of the migration period and the very earliest settlement phase; that the conditions for the change or its beginning therefore in all probability originated on the continent and that backing and/or breaking therefore did also [...]; that some forms failing to show mutations can be traced to obvious paradigmatic analogies (e.g. unmutated dative singulars of *i*-stems), but that the remainder are lexical creations of the period after the first half of the sixth century.' In a later article, Coates (1989–90: 6–7) indicates that the date of *i*-mutation may have still occurred slightly after the first half of the sixth century in the North.

Vowel	Pre-Old English (< Proto-Germanic)	Old English
/i:/	* <i>tīd</i> (< * <i>tīdi-</i> )	<i>tīd</i> ‘tide, time’
/e:/	* <i>hēr</i> (< * <i>hēr</i> )	<i>hēr</i> ‘here’
/æ/ <sup>1</sup>	* <i>sl̥ē/ēpan</i> (< * <i>slāēpan</i> )	<i>slāēpan/slēpan</i> ‘sleep’
or	* <i>mɔ:n</i> (< * <i>mān</i> )	<i>mōn</i> ‘moon’
/e:/ <sup>1</sup>	* <i>brāmil</i> (< * <i>brām-</i> )	<i>brāem(b)el</i> ‘bramble’
/ɑ:/	* <i>hāl</i> (< * <i>haila-</i> )	<i>hāl</i> ‘whole, hale’
	* <i>hālan</i> (< * <i>hailija-</i> )	<i>hālan</i> ‘to heal’
/u:/	* <i>mūs</i> (< * <i>mūs-</i> )	<i>mūs</i> ‘mouse’
	* <i>mȳs</i> (< * <i>mūsi-</i> )	<i>mȳs</i> ‘mice’
/o:/	* <i>fōt</i> (< * <i>fōt-u-</i> )	<i>fōt</i> ‘foot’
	* <i>fōt</i> (< * <i>fōt-i-</i> )	<i>fēt/foet</i> ‘feet’
/i/	* <i>itiθ</i> (< * <i>itiθ</i> )	<i>iteþ</i> ‘eats’
/e/	* <i>weġ</i> (< * <i>weġa-</i> )	<i>weġ</i> ‘way’
	* <i>dæġ</i> (< * <i>daya-</i> )	<i>dæġ</i> ‘day’
/æ/ <sup>5</sup>	* <i>tellan</i> (< * <i>taljan</i> )	<i>tellan</i> ‘to tell’
	* <i>dayas</i> (< * <i>dayōz</i> )	<i>dagas</i> ‘days’
	* <i>hōmar</i> (< * <i>hamara-</i> )	<i>hamer</i> ‘hammer’
	* <i>drænc</i> (< * <i>drank-i-</i> )	<i>drenc</i> ‘drink’
/u/	* <i>sunu</i> (* <i>sunu-</i> )	<i>sunu</i> ‘son’
	* <i>syn(n)</i> (< * <i>sunjō-</i> )	<i>syn</i> ‘sin’
/o/	* <i>doxtVr</i> (< * <i>doxter</i> )	<i>dohter</i> ‘daughter’
	* <i>dōxtri</i> (< * <i>doxt-r-iz</i> )	<i>doehter</i> ‘daughters’
<b>Notes:</b> <ol style="list-style-type: none"> <li>1. PGmc /æ:/ (Gmc. <i>ē<sub>1</sub></i>) appears as /æ:/ in West Saxon but as /e:/ in Anglian dialects (9.2.2).</li> <li>2. PGmc /æ:/ &gt; /ɔ:/ (later &gt; /o:/) before nasal consonants (9.2.2).</li> <li>3. Pre-Old English /ɔ:/ produced a low-mid front rounded vowel [œ:] by <i>i</i>-mutation (9.2.6).</li> <li>4. By <i>i</i>-mutation (9.2.6).</li> <li>5. Derived from fronting and raising of PGmc */a/ (9.2.3).</li> <li>6. PGmc /a/ was not fronted or raised before a back vowel in the following syllable (9.2.3).</li> <li>7. PGmc /a/ was rounded and perhaps nasalised to [ɒ] before nasal consonants (9.2.3).</li> <li>8. The rounded vowel [ɒ] was subject to <i>i</i>-mutation to [œ] in Pre-Old English (9.2.6).</li> </ol>		

Table 29. Pre-Old English vowels and their derivation

Diphthong	(Pre-)Old English (< Germanic)	Old English
/iu/	{ [iu] <i>ciuzan</i> (< * <i>kius-a-</i> ) { [iy] <sup>1</sup> <i>ciyziθ</i> (< * <i>kiusiθ</i> )	<i>cēosan</i> ‘choose’ <i>cīesþ</i> ‘chooses’
/eu/	{ [eu] <i>leuxt</i> (< * <i>leuxta-</i> ) { [iy] <sup>1</sup> <i>liyxtan</i> (< * <i>leuxt-ija-</i> )	<i>lēoht/lēht</i> <sup>3</sup> ‘light’ <i>līhtan/līhtan</i> <sup>3</sup> ‘to light’
/æo/	{ [æo] <i>læoþ</i> (< * <i>lauþa-</i> ) { [eø] <sup>1</sup> <i>leoþan</i> (< * <i>lauþija-</i> )	<i>lēaf</i> ‘leaf’ <i>līefan/lēfan</i> <sup>4</sup> ‘believe’
[īu] <sup>2</sup>	{ [īu] <i>līurnian</i> (< WGmc * <i>liz-nō</i> ) { [īy] <sup>1</sup> <i>sīy(h)iθ</i> (< * <i>sīuhiθ</i> < * <i>sihiθ</i> )	<i>liornian</i> ‘learn’ <i>siehp</i> ‘sees’
[ēu] <sup>2</sup>	{ [ēu] <i>wēorðan</i> (< * <i>werθ-a-</i> ) { [īy] <sup>1</sup> <i>wēyrðiθ</i> (< * <i>wēurθiθ</i> < * <i>werθiθ</i> )	<i>weorþan</i> ‘become’ <i>wierþ/weorþ</i> ‘becomes’
[ǣo] <sup>2</sup>	{ [ǣo] <i>bǣold</i> (< * <i>balda-</i> ) { [ēø] <sup>1</sup> <i>fǣollan</i> (< * <i>fǣollian</i> < * <i>fall-eja-</i> )	<i>beald/bald</i> <sup>5</sup> ‘bold’ <i>fiellan/fellan</i> <sup>4</sup> ‘fell’
<b>Notes:</b> 1. Due to <i>i</i> -mutation (9.2.6). 2. The phonemic status of short diphthongs is uncertain, especially for Pre-Old English. Square brackets are used to indicate phones rather than phonemes. All the short diphthongs in the table result from breaking (9.2.5). 3. The Anglian form <i>lēht</i> and <i>līhtan</i> are due to smoothing (9.2.5). 4. The variation <i>līefan/lēfan</i> and <i>fiellan/fellan</i> is due to the differing outcomes of <i>i</i> -mutation of /æo/ and [ǣo] in West Saxon and Anglian dialects (9.2.6). 5. Fronting of PGmc /a/ and subsequent breaking does not take place before /ld/ in Anglian dialects. Hence the variant form <i>bald</i> ‘bold’ (9.2.3 and 9.2.5).		

Table 30. Pre-Old English diphthongs and their derivation

## 10 Developments of English vowels and diphthongs

This chapter investigates the development of Pre-Old English vowels and diphthongs and evaluates whether any early restructuring of them may be due to early contact with Late British. This study of vowels is conducted in a more systemic manner than with consonants, since individual vowel developments tend to have repercussive effects on vowel systems as a whole. However, as a consequence, it is also necessary to draw up some limitations. Rather than dealing with multiple vocalic systems of various dialects at the same time, this chapter's main focus will be on the evolution of vowels and diphthongs in northern and midland dialects, where in fact the most salient dialectal divergences appear in medieval English. Against this focal area, however, more general comparisons of the vocalic systems in other areas can also be made. Finally, although the focus of this chapter is on possible Late British contacts, some attention is also given to other known language-contact-based proposals which have been put forward to explain specific vocalic developments in the history of English.

### 10.1 Contrastive overview (long vowels)

Due to the large amount of data, I shall begin by providing a contrastive analysis of the long vowels and then proceed to consider the developments of these in Medieval English and possible contact influences directly. Contrastive analyses of the short vowels and diphthongs will appear later in the chapter, namely in sections 10.3 and 10.5 respectively.

Pre-Old English had a system of eight long vowels: /i:/, /e:/, [y:], [ø:], /u:/, /o:/, /ɑ:/ and /æ:/ (or [æ:] depending on dialect). In addition, there were perhaps two further vowels, namely /ɔ:/ and its possible *i*-mutation variant [œ:]; these vowels must have been exceedingly rare and were soon lost (just as they were in Frisian). The low rounded vowel /ɔ:/ may have been nasalised in Pre-Old English. It derives from PGmc \*/æ:/ before nasals (see 9.2.2); it ultimately merged with (Pre-)Old English /o:/. This vowel also underwent *i*-mutation, presumably to [œ:], though later merging with /æ:/. Due to the peripheral nature of these variants, they are largely ignored in the present analysis.

The main dialectal difference that seems to have existed in Pre-Old English vowels was that the low open vowel /æ:/ was a phoneme in West Saxon dialects from earliest times, whereas in Anglian dialects, it emerged as a result of *i*-mutation of PGmc \*/ai/, which was phonemicised by about 550 (see 9.2.7). The two front rounded vowels [y:] and [ø:] were the products of *i*-mutation in all (Pre-)Old English dialects, and probably attained the status of phonemes in the sixth century too.



V-Height	Length/Constriction/Roundedness of Vowel					
	Long vowels					
	Front		Central		Back	
	–R	+R	–R	+R	–R	+R
	Late British					
High	i:	y:		ʊ:		
High-mid	e:					
Low-mid	ɛ:					ɔ:
Low						
	Pre-Old English					
High	i:	y:				u: <sup>4</sup>
High-mid	e:	ø: <sup>2</sup>				o: <sup>5</sup>
Low-mid	æ: <sup>1</sup>	(œ): <sup>2</sup>				(ɔ:)
Low					ɑ: <sup>3</sup>	
<b>Notes:</b> <ol style="list-style-type: none"> <li>1. A low mid-front vowel – WS /æ:/ (&lt; PGmc */æ:/) and Anglian [æ:] (&lt; PGmc */ai/ plus <i>i</i>-mutation) – is posited for Pre-Old English. A low-mid-front vowel is also reconstructed for Late British and is normally designated as /ɛ:/. Whether the two vowels really did differ phonetically is unclear (but see 10.2.2.2 for discussion).</li> <li>2. The long vowels /ø:/ and (rare) [œ:] cannot be reconstructed for Late British.</li> <li>3. Pre-Old English had a long low vowel /ɑ:/, which was probably central in Anglian dialects and backed in West Saxon dialects. Late British probably had no low long vowel by ca. 450 (except perhaps in the North), owing to rounding and diphthongisation of PBr. */ɑ:/ &gt; */ɔ:/ (see 8.2.3).</li> <li>4. (Pre-)Old English /u:/ probably did not exist in Late British. However, a diphthong /uɔ/ developed during the Late British period, which would have represented a close counterpart.</li> <li>5. (Pre-)Old English /o:/ had no equivalent in Late British.</li> </ol>						

Table 31. Late British and Pre-Old English long vowels compared

## 10.2 Developments of long vowels

It is possible to identify two, or possibly three, main stages of structural development for the Pre-Old English vowels on their way to Middle English:

**Stage 1:** The Old English front rounded vowels merged with unrounded front vowels, i.e. /y:/, ø:/ > /i:/, e:/ . The open front vowel /æ:/ is thought to have been raised somewhat to /ɛ:/ . The Old English low vowel /ɑ:/ became a fronted low vowel /a:/ in the north. According to some scholars, /o:/ was fronted in the north to /ø:/ at this early stage (others think it occurred later).

**Stage 2:** Short vowels were lengthened in open syllables. In terms of new long vowel phonemes, /ɔ:/ (< /o/) entered the northern long vowel system.

**Stage 3:** According to some scholars, the mid-rounded vowel /o:/ was fronted to /ø:/ in the North after (rather than before) stage 2.

The two or three possible stages of development in the North are presented in Fig. 15 below. Changes which altered the phonetics of the vowels in various ways or which added new vowels to the system are encircled.

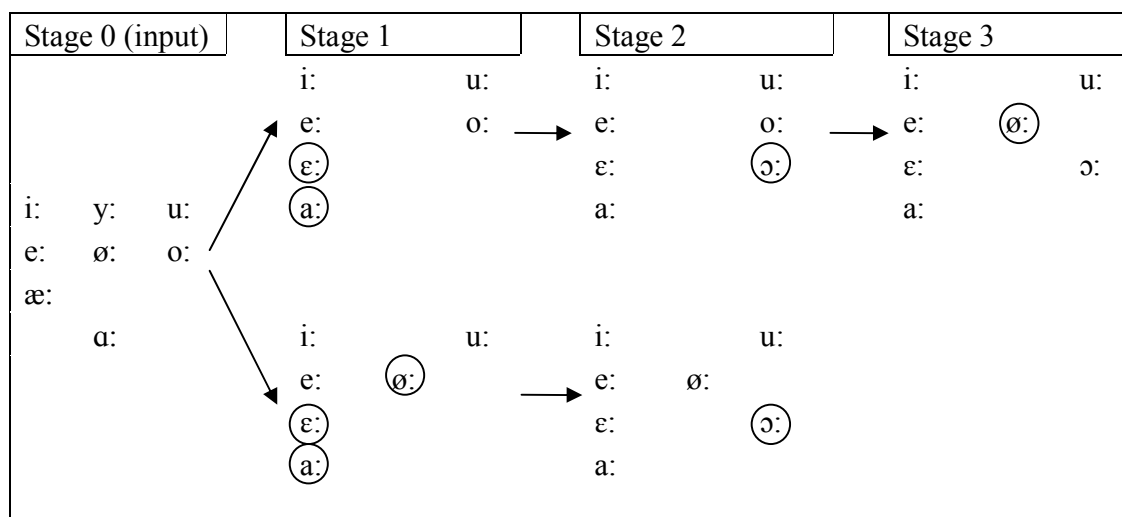


Figure 15. OE long vowels into Northern ME, two possible routes of development

For the development of the Old English vowel system into southern Middle English, two stages are necessary:

**Stage 1:** The Old English front rounded vowels merged with unrounded front vowels, i.e. /y:/, ø:/ > /i:/, e:/. The open front vowel /æ:/ is thought to have been raised somewhat to /ɛ:/ . The Old English low vowel /ɑ:/ was rounded to low-mid vowel /ɔ:/.

**Stage 2:** Short vowels were lengthened in open syllables. In terms of new long vowel phonemes, /a:/ (< /a/) entered the southern long vowel system.

The two stages of development in southern long vowel system are presented in Figure 16.

Stage 0 (input)			Stage 1		Stage 2	
i:	y:	u:	i:	u:	i:	u:
e:	ø:	o:	e:	o:	e:	o:
æ:			ɛ:	ɔ:	ɛ:	ɔ:
ɑ:					a:	

Figure 16. Development of Old English long vowels in southern Middle English

To summarise: a total of five of the eight Old English long vowels underwent change in the Northern system:

- (1) Pre-Old English /y:/ merged with /i:/.
- (2) Pre-Old English /ø:/ merged with /e:/.
- (3) Pre-Old English /æ:/ was raised to /ɛ:/.
- (4) Old English /ɑ:/ was fronted to /a:/.
- (5) Old English /o:/ became a central or front rounded vowel /ɔ:/.

In southern dialects four of the eight Pre-Old English vowels underwent change:

- (1) Pre-Old English /y:/ merged with /i:/.
- (2) Pre-Old English /ø:/ merged with /e:/.
- (3) Pre-Old English /æ:/ was raised to /ɛ:/.
- (4) Old English /ɑ:/ was raised and rounded to /ɔ:/.

Problematic for proposals that appeal to early language contact is the fact that most of the restructuring outlined above is usually dated to between about 1100–1300 (e.g. Lass 1992: 45–7, 56), based on the assumption that phonetic changes were registered more or less contemporaneously in changes in the orthographic system. Alternatively, several scholars have

argued that some changes could have occurred at much earlier dates. In the next section I shall review and assess a number of proposals which attribute restructuring of the Old English long vowels to early language contact.

### 10.2.1 *Previous attempts to explain vowel developments*

Three suggestions of language contact influencing the development of the inherited Old English long vowels are found in the literature. All three explanations set out to explain restructuring in the Northumbrian vowels. Unfortunately, all treatments tend to focus on a particular vowel-change in isolation, without attempting to compare the combined effects of the proposed language in contact on the complete Old English phonological system. In particular, the Northern change /o:/ > /ø:/ has been the subject of at least three contact-based proposals. This is probably because there does not appear to be any structural reason why Northumbrian speakers were wont to front /o:/.

While fronting of back rounded vowels is not uncommon, such fronting usually concerns /u:/ as a result of chain-shifting.<sup>217</sup> Chain-shifting of long vowels typically involves raising of the back or front long vowels (or both). For the back vowels, a typical shift would be /ɔ:/ > /o:/ > /u:/. Such a shift tends to have two possible outcomes for the high back rounded vowel: because /u:/ cannot be raised further, it can either diphthongise and leave the system of long vowels altogether, or it can become a front rounded vowel, e.g. [ʏ] or [y:]. As was seen in 8.2.3, the latter development is attested in the historical development of Brittonic vowels. Northern Fronting, by contrast, appears to be unconditioned and without influences from such a push-chain.<sup>218</sup> While it is a generally accepted universal principle that vowels spread to create maximal distinctiveness in phonetic space (cf. Liljencrants & Lindblom 1972, Schwartz *et al.* 1997), no motivation for Northumbrian fronting of /o:/ can be argued for on this basis.<sup>219</sup> In effect, Northern Fronting does not appear to have brought about any ‘improvement’ in the

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<sup>217</sup> E.g. fronting of the high back rounded vowel /u:/ to [ʏ:] or [y:] is particularly well attested in the histories of Dutch, British Celtic, French, Swedish, North Frisian and in some present-day varieties of English (see Labov 1994: 129–37, 200–8).

<sup>218</sup> This observation was made by Luick (1914–40: 426, 429) and is noted by Samuels (1985: 278).

<sup>219</sup> If Northern Fronting preceded Open Syllable Lengthening, the back vowel space was probably less full in Northumbrian than in Southumbrian. Based on the Middle English reflexes, it is likely that even in Old English times /ɑ:/ may have begun to differ phonetically. Thus Northumbrian varieties may well have had fronted [ɑ:]. On the other hand, Southumbrian probably had [ɑ:], owing to the fact that this was raised and yielded /ɔ:/ in these varieties (see 10.2.2.3).

phonological system as such.<sup>220</sup> The tense peripheral vowel /o:/ would carry as much differentiation as any resulting tense or lax front or central rounded vowel (see Labov 1994: 172). In short, no obvious motivation for Northern Fronting has been discovered so far, leading some scholars to propose explanations which appeal to language contact.

#### 10.2.1.1 Suggestions of Gaelic influence

The first attempt to explain a particular development of Northumbrian vowels on the basis of language contact goes back to Murray (1873). Murray thought that fronting of OE /o:/ could have resulted from Celtic influence, seeing the existence of a high back unrounded vowel in Scottish Gaelic, namely /u:/, as the initiator of the change (1873: 51–2):

If the labial part of the process [of producing /o:/, SL] be removed, by holding the lips asunder while pronouncing *oo*, we obtain the lingual element alone, viz., the Gaelic sound represented by *ao*, as in *aon* one, *taobh* side, *laodh* calf. This sound being thus naturally connected with *oo*, was perhaps the form taken by Ags. [Anglo-Saxon, SL] *ó* in Scotland, and might form an intermediate step to the sound now given to *u* in *muin*, *muir*, which, though certainly labialized like the French *eu* in some parts of Scotland, in others is only formed by “internal rounding.”

Luick (1896: 72–3) took Murray’s proposal seriously at first, and he considered the idea of Celtic influence on Northumbrian English quite plausible. However, not able to judge the Celtic data himself, Luick asked Heinrich Zimmer to look into the matter. Zimmer came to the conclusion that Murray’s proposal was highly unlikely (his reasons are given in Luick 1896: 296–301). Although dialects of Scots Gaelic had, and still have, an unrounded back high vowel /u:/ (< OIr. /ai/ and /oi/), which Luick obviously thought may have resembled the product of Northern Fronting of /o:/, Scots Gaelic also had, and still has, a mid rounded vowel /o:/ (< OIr. and MIr. /o:/). Hence there would have been no reason for a Gaelic speaker to replace Old English /o:/ with Gaelic /u:/ and not Gaelic /o:/.

Even if Gaelic were able to explain developments in varieties of English in western Lowland Scotland – where one can accept considerable language contact and language shift between Gaelic and Anglian speakers – how does one then explain fronting of /o:/ in southern or more easterly varieties of northern Middle English? There is no evidence to suggest that Gaelic had any phonological or other structural influence in these areas of Northumbria. Surprisingly, Zimmer did not point out to Luick that Brittonic (rather than Gaelic) was the Celtic variety spoken during the early Anglo-Saxon settlement period throughout the area where Northern

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<sup>220</sup> For the principle that language change must entail some level of language improvement, see Vennemann (1993).

Fronting is later found.<sup>221</sup> While one would not want to rule out the possibility of Gaelic influence on Scots phonology outright, in order to account for the developments in England it seems more auspicious, both from an historical and geographical perspective, to seek a possible link with the Brittonic rather than with the Goidelic long vowels.<sup>222</sup>

#### 10.2.1.2 Suggestions of Scandinavian influence

The second attempt to explain select developments of the Northumbrian long vowels came over a century later from Samuels (1985), who suggested that contact with Viking Norse initiated two unique Northern developments: fronting of OE /o:/ > /ø:/ and fronting as well as raising of OE /ɑ:/ > /a:/ > /æ:/ (Samuels 1985: 277–8).<sup>223</sup>

[T]he simple north-south pattern [...] was mentioned as one of those typical for the distribution of Scandinavian lexical items. But this pattern, with some minor variations, corresponds with two of the most important phonological features of the Northern dialect: the fronting of OE *ā* to /æ:/, later /e:/, as in *hame*, *stane* compared with *home*, *stone*; and the parallel fronting of ME (close) *ō* to /ø:/ or /y:/ as in *gud(e)*, *buk(e)* compared with *go(o)d*, *bo(o)k*. On the modern map the southern limits for these two features correspond with the well-known Lune-Humber line (Kolb 1965: 150) . . . and the fact that it corresponds with the southern boundary of the focal area is regarded as nothing more than coincidence. But why should it be? There is no proof that the two phonological changes antedate the Scandinavian invasions: the fronting of *ō* is not evidenced before the mid-thirteenth century (Aitken 1956); and the evidence for early fronting of *ā* is only

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<sup>221</sup> Zimmer may have been unaware that Northern Fronting occurred outside of southern Lowland Scots, as northern English dialects are not discussed in connection with Northern Fronting in Murray's monograph.

<sup>222</sup> It seems that Luick never completely rejected the idea of Celtic influence in Northumbria (1896: 73): 'Damit ist freilich die Möglichkeit einer keltischen Beeinflussung nicht gänzlich ausgeschlossen [...]. Vielleicht bringt die Zukunft einmal Aufschluss. Das Bestreben aber, auf diesem Gebiete eine Erklärung zu finden, ist bei der besonderen Stellung der nordhumbrischen Modifizierung des *ō* jedenfalls gerechtfertigt.' [The possibility of Celtic influence is, of course, not entirely ruled out (...). Perhaps the future will bring enlightenment at some point. The attempt to find an explanation in this area is justified due to the special significance of the Northumbrian modification of *ō*.] Based on Luick's comments, we can be sure that he would have been very open to the idea of Brittonic influencing the northern development of /o:/, as will be considered in 10.2.2.4 below.

<sup>223</sup> In contrast to Samuels, a change of OE /ɑ:/ to /a:/ is usually assumed, and then a later raising from /a:/ to /ɛ:/ due to the Great Vowel Shift (see Lass 1992: 47, 72).

negative, since the change is merely presumed from the absence of *ō*-spellings (Luick 1914: 359).

Samuels' proposal has now been endorsed by Smith (2004, 2007: 144), who is obviously satisfied with Samuels' simple geographical inference, namely that the two developments took place in northern Britain, where Scandinavian settlements were at their densest. As for linguistic arguments, Samuels prefers not to go into any great detail. He refers to Norse as well as Old Norse;<sup>224</sup> but he also refers to special tendencies for modern Scandinavian languages to have retracted vowels. The most detailed description of what he presumed happened in Northumbrian is the following (Samuels 1985: 278–9):

Since it seems likely, from modern Scandinavian languages, that it was the Scandinavian *ā* and *ō* vowels that were more retracted than those of Northern English, it would be natural for the younger generation to front these vowels in the direction of /æ:/ and /ø:/.

Samuels has made an observation that the '*ā* and *ō* vowels [...] were more retracted' as in 'modern Scandinavian languages'. Considering the amount of restructuring which the vowel systems of Scandinavian languages have witnessed during the last millennium, it is doubtful whether phonetic observations made from modern twentieth-century varieties can be traced back into medieval times. But, if indeed they can be, to which modern Scandinavian languages was Samuels referring? Samuels does not tell us, and yet the North Germanic linguistic area contains such a wealth of national and regional varieties.

Fortunately, fairly reliable information about the language of the Viking settlers of Britain can be gathered from a variety of sources: surviving fragmentary linguistic specimens of the Norse settlers, Norse loanwords, and personal-names and place-names. Judging by these linguistic survivals, the Norse variety makes a rather archaic impression.<sup>225</sup> From a comparative

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<sup>224</sup> Cf. Samuels (1985: 278): 'there was considerable etymological correspondence between the English and Norse distributions; in the case of *ā* (= Prim. Germanic *ai*), the question is somewhat complicated by the ON development to *ei* (as in *heim*, *steinn*), but even so it is natural to assume that bilinguals would in such words replace ON *ei* by *ā*. It would, therefore, need only a slight difference between the English and Norse realisations to occasion hypercorrection by the younger generation'. In a recent publication, Smith interprets Old Norse as follows (2004: 311): 'By "Old Norse" I mean varieties of North Germanic (i.e. Norwegian, Swedish, Danish etc.) – not simply classical Old Icelandic, with which Old Norse is commonly (and erroneously) equated'. Smith does not go into any detail about the Scandinavian vowel system, but refers to Samuels' article, but it provides no description of the vowel system either.

<sup>225</sup> Cf. Gordon/Taylor (1957: 328): 'The Norse forms that lie behind the loanwords [i.e. in English, SL] are much more archaic than those of the thirteenth-century Icelandic'.

perspective, it should be noted that the settlement of Iceland from 870–930 broadly coincides with the main period of settlement in England.<sup>226</sup> The *First Grammatical Treatise* of the Icelandic language provides a detailed description of Icelandic phonology of the twelfth century (see Haugen 1972). Further points of reference can also be gleaned from contemporaneous runic inscriptions in England and Scandinavia, such as the comparatively verbose Glavendrup, Tryggevælde and Rønninge inscriptions (all Denmark ca. 900; see Nielsen 2000). On the basis of these and other sources, Nordists and Anglicists are jointly of the opinion that the Viking language of the ninth- and tenth-century settlers was in no significant way different from the Common Scandinavian language reconstructed for this period ca. 700–1100 (see Fig. 17). The system of long vowels reconstructed for the late Viking Age has all the long vowels of Old English (including those of the Anglian variety, with which the Scandinavians were mainly in contact). No evidence has yet been found to suggest that the Old Norse long vowels were more retracted, and there is likewise no evidence to suggest that Old English back vowels were more fronted. Consequently, there is no linguistic basis for assuming that the language of the Viking settlers initiated fronting of /o:/. Likewise, there is no evidence to suggest that such a variety of Norse would have had any significant effect on the Anglian long low vowel either. We have already observed that it is difficult to determine the precise place of articulation of the Old English low vowel, but, judging by its reflexes in Middle English, long Anglian OE /ɑ:/ was probably a central or front vowel [a:]. If anything, Norse should therefore have had a backing effect on Anglian [a:]. Unfortunately for Samuels, Old English /ɑ:/ underwent the same change as in Medieval Scandinavian languages in southern (but not northern) dialects of Medieval English, namely raising and rounding to /ɔ:/.

From the period ca. 1100–1350, Nordists distinguish Old East and West Nordic varieties. The long vowel systems of these varieties do not show significant phonetic differences in the back vowels as compared to Common Scandinavian either. One notable exception, just mentioned, is the widespread tendency to round and raise [ɑ:] > [ɔ:]. This change occurred in both East and West Scandinavian branches (only northern Faroese and Gutlandic do not participate in the change; see Haugen 1982: 38). The change is usually dated to about 1200 in

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Gordon/Taylor go on to list nine Old Norse linguistic innovations that did not take place in the Norse variety spoken in England.

<sup>226</sup> The main period of settlement is thought to be from the late ninth to the mid tenth century; cf. Gordon/Taylor (1957: 326): ‘The earliest Scandinavian settlement of England was in 876, when an army of Danish Vikings took land in Yorkshire. Most of the Scandinavian settlements in the East Midlands too were made before the end of the ninth century, and they also were almost entirely Danish. Norwegian settlements were a little later, accomplished mainly in the first half of the tenth century. Under the Danish kings who ruled England in the eleventh century few settlements were made [...]. The distribution of Scandinavian place-names indicates that Scandinavian settlement was thickest in Yorkshire and Lincolnshire, and the proportion of Scandinavian population in Cumberland and Westmorland was also high’.



Icelandic, and as late as 1400 for central Swedish dialects. The reconstructed system of vowels in Old Danish, Old Norwegian, Old Swedish and Old Icelandic ca. 1350 is set out in Fig. 17 (right).

i:	y:	u:	i:	y:	u:
e:	ø:	o:	e:	ø:	o:
æ:		ɔ:	æ:		ɔ:
	a:				

Figure 17. Long vowels in Viking Norse, ca. 700-1100 (left); long vowels of Medieval Scandinavian languages, ca. 1350 (right)

Clearly, the vowel systems as reconstructed for the period up to ca. 1350 should not have caused Northern Fronting. In fact, the system as presented in Fig. 17 (right) has been preserved in Danish into present times (Karkar 2005: 1097), making Danish most unhelpful in explaining Northern Fronting; yet it is usually assumed to have been a major influence in the Danelaw. In summary, no linguistic evidence has been found to support a thesis for Northern Fronting based on the vowel systems as reconstructed by Nordicists up to the fourteenth century.<sup>227</sup>

Aside from the non-existent linguistic arguments, Samuels' thesis does not adequately explain the geographical dimensions of Northern Fronting. Samuels concedes that while the southern boundary of Northern Fronting and the non-rounding of OE /ɑ:/ falls approximately at the Humber-Lune boundary, its northern reaches go far beyond the Scandinavian focal zone of settlement and influence as deduced from toponymic and loanword evidence. And the fact that loanwords are far more apt to transfer and spreading than phonological and grammatical features means that a good explanation is required for this scenario. It must be explained how the Scandinavianised pronunciations immediately made their way into Bernician varieties of English north of Teesdale, that is, present-day Durham, Northumberland and large areas of Lowland Scotland.<sup>228</sup> Aware of this problem, Samuels (1985: 279) writes:

Many of the same younger generations who either initiated or imitated these hyperforms migrated to Scotland, and that accounts for the increased area of these changes. One might even postulate that the hyperforms were first used on arrival in Scotland, as a direct

<sup>227</sup> In about the fourteenth century there was a vowel shift in Swedish and Eastern Norwegian dialects, which also brought about raising and centralisation of back vowels, e.g. /o:/ > /u:/ and /u:/ > /ʉ:/ (see Haugen 1982: 40–1, Riad 2005: 1105–6). It seems to me that Samuels may have had the Swedish vowels in mind when he was referring to tendencies in Modern Scandinavian languages. Perhaps Samuels preferred not to mention that such tendencies are absent from Danish and West Norwegian.

<sup>228</sup> This was due to the assumed 'liberty' of the Community of St Cuthbert and the earls of Bamburgh north of the Tees. For a discussion of this interesting chapter of Viking settlement history (see Rollason 2003: 244–55).

result of migration to a less Scandinavianized milieu, and that would account for the fact that the earliest spellings of *u* for *ō* are Scottish (Aitken, and cf. Kristensson 1967).

The idea of mass medieval resettlement from the Danelaw areas into Bernicia and Lowland Scotland, which, as a consequence, changed the phonological systems of these areas profoundly, is audacious. The suggestion that Northern fronting first initiated in Scots and then diffused into dialects of Northern English is without any support. The thesis as it stands – without references or further historical or linguistic argumentation – is hardly convincing. Although Samuels does not elaborate upon his idea, it must surely have been founded on or influenced by a much more modest proposal made previously by the historian G.W.S. Barrow, who investigated the origins of the adventurers and dependents of Norman lords who came to Scotland. Barrow dismissed the belief that the Honour of Huntingdon (i.e. English lands held by the kings of Scotland mainly in the shires of Huntingdon, Cambridge, Bedford and Northampton) was the only source of English settlers in Scotland, as sometimes thought, and argued that Somerset and Yorkshire were equally important too (see, for instance, Barrow 1980: 117 *et passim*).

One suspects that Samuels possibly singled out the Yorkshire component in Barrow's argumentation in order to strengthen his particular case. Following Samuels' lead, other scholars working on the history of the Scots language have subsequently paid attention only to the possibility of Yorkshire influence on Scots too, as this could then explain the Scandinavian influences, in particular the Scandinavian lexical component in Scots.<sup>229</sup> But it is important to bear in mind that the historical evidence does not indicate that immigration from Yorkshire far exceeded that of other areas. Admittedly, too little is known at present about the influences which various regional strands of English had on Scots during the Anglo-Norman age to draw any firm conclusions; but, as I have shown above, the phonological reconstruction of the Norse long vowels does not support any such analysis in the first place.

#### 10.2.1.3 Suggestions of French influence

The third language-contact scenario of which I am aware involves French influence. Luick (1896: 71) contemplated whether French influence could have brought about Northern Fronting and drew particular attention to the strong connections traditionally held between France and Scotland:

Es wäre denkbar, dass der ursprüngliche heimische Laut für das *ü* französischer Lehnwörter als unvollkommene Nachbildung empfunden und durch den fremden Laut

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<sup>229</sup> For a thorough review of Scandinavian loanwords in Scots, see Kries (2003).

ersetzt wurde, derselbe Ersatz dann auch im germanischen Sprachgut eintrat und der *ü*-Laut schliesslich in die Dialekte durchsickerte.<sup>230</sup>

The idea of French influence on pre-literary Scots and northern Middle English has been taken up more recently by Aitken, again in relation to Northern Fronting: ‘In the late 13c pre-literary Scots and northern Middle English /o:/ was fronted to /y:/, merging, in pre-consonantal environments, with /y:/ mainly of Old French origin [...]’ (2002: 39).<sup>231</sup> Similar to Luick, Aitken did not suggest that French contact initiated Northern Fronting as such. Rather he saw a connection with the Scots and northern Middle English speakers’ knack of acquiring the correct French pronunciation /y:/ before Northern Fronting took place. It was then, it seems, just a small step for native /o:/ to merge with the newly acquired French vowel.

Wisely, I think, Luick went on to reject this proposal, arguing that the introduction of a new sound into the speech of the masses via such an artificial route would be unlikely, especially as /y:/ also came into usage in northern England, where such a strong influence from French on regional pronunciations has never been posited.<sup>232</sup> Of course, it would have represented an admirable linguistic feat of phoneme acquisition on the part of the northerners. But one has to ask why those northerners would have been especially adept at learning unfamiliar French phonemes as compared to southerners. Was there more intense or intimate Norman influence in the North? Unfortunately, Aitken provides no information for why the northerners should have been more faithful to foreign phonology when adopting French loanwords into their native vernacular. Typically, when loanwords are adopted speakers very often replace unfamiliar phonemes with closest counterparts from their own phoneme inventory. This is true, for example, of the numerous English loanwords which are being adopted around the world at the present time. There is no reason to suggest that Northumbria English speakers were any different in this respect. Only bilingual speakers or English natives with a good command of French may have

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<sup>230</sup> ‘It would be conceivable that the former local sound for *ü* in French loanwords was considered imperfect and so was replaced by the foreign sound, the same replacement then took place in Germanic words too, and the *ü*-sound finally seeped into the dialects’.

<sup>231</sup> Also Aitken (2002: 40): ‘[A]n immediate outcome of the fronting [of *ō* – SL] was the merger, in pre-consonantal environments, of the fronted vowel, presumably at the [y:] stage, with an existing /y:/ phoneme, mainly of OF origin’ (Aitken 2002: 40). Note that Aitken speaks of *mainly* Old French origin. Aitken (2002: 90) assigns three sources of /y:/: Old French *ū* and *ü*, and Anglo-Norman *ī*. Therefore, Anglo-Norman seems to be the remaining source which Aitken had in mind.

<sup>232</sup> I likewise find it inconceivable that PreSc and nME introduced (1) a new open mid-back rounded vowel /ɔ:/ from Old French, as suggested by Aitken (2002: 90), and that (2) the OSc vowels e.g. /ai, oi, au, ou/ were introduced through foreign loans; in fact, elsewhere Aitken (2002: 19) says as much himself: ‘in most cases, loanwords containing these diphthongs already existed in the language before the creation of new diphthongs by native development’.

retained French phonology in loanwords, and such speakers would have amounted to a tiny proportion of the native population.

### *10.2.2 Comparisons with Late British*

In section 10.2.1, it was demonstrated how suggestions of Gaelic, Scandinavian and French influence on the early developments of English long vowels lack any kind of linguistic basis. In the present section, the hitherto unstudied possibility of Late British influence will be considered. Unlike previous proposals to explain the restructuring of the long vowels considered so far, which have – very conveniently – focussed on the development of one or two vowels in isolation, the following analysis will not be selective. By comparing the complete Pre-Old English vowel and diphthongal systems with those of Late British, an unbiased global view can be gained of what restructuring may or may not be posited. As such, attention will firstly rest on the linguistic basis for any possible restructuring, and only later will other factors be considered, such as clues from the linguistic geography. Furthermore, both the dating and the geographical spread of the following long vowel developments will need further detailed investigation, especially since the dates ascribed to most of the changes have been based primarily on the assumption that phonetic changes were registered more or less contemporaneously in orthographic changes. While phonological changes are often followed by spelling errors and orthographic change, phonetic variation is not typically reflected in orthographic change, and since many of the developments to be discussed below involve phonetic alterations of long vowels, rather than mergers or splits, some of the dating criteria should, in the author's opinion, be viewed with greater caution than has typically been the case.

First let us review the reconstructed long vowel systems of Late British and Pre-Old English as presented in 10.1. A comparison of the two systems revealed that:

- 1) The front vowels /i:/, e:/ and probably /æ:/ had exact or near exact equivalents in Brittonic.
- 2) Pre-Old English [y:] (< \*/u:/ + *i*-mutation) possibly had an exact equivalent in Brittonic.<sup>233</sup>

As for differences, we discovered that:

- 1) Pre-Old English /u:/ is not part of the Late British long vowel inventory and so may have been identified with Late British /ʊ:/.<sup>234</sup>

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<sup>233</sup> Note also that if Pre-Old English [y:] had not attained phonemic status at the time of contact, then it presumably soon would have done so in the speech of British speakers, since there it was a phoneme.

- 2) The Pre-Old English low-open vowel /æ:/ had a near equivalent in the Late British open-mid vowel /ɛ:/.
- 3) (Pre-)Old English /o:/ found no match in the Brittonic system of long vowels.
- 4) (Pre-)Old English [ø:] (< /o:/ + *i*-mutation) was not present in Late British.
- 5) The low vowel /ɑ:/ had no exact equivalent in Late British (except perhaps in some early varieties of Late British in the North; cf. 10.2.2.3).

It is now possible to re-evaluate the structural changes to the Old English long vowels in the light of the similarities and differences revealed by comparative analysis in Table 31 above.

#### 10.2.2.1 Merger of /y:/, ø:/ at /i:/, e:/

The development of the Old English front rounded vowels [y:] and [ø:], both of which were the products of *i*-mutation, can be dealt with together. In general, /y:/ unrounded and merged with /i:/, while /ø:/ unrounded and merged with /e:/. The only exception is Kentish which, like Old Frisian, attests the merger of both /y:/ and /ø:/ on /e:/. The fact that the unrounding brought about a merger and therefore a structural change within the system of long vowels (i.e. front rounded vowels were lost) signifies that the change was not merely phonetic but structural and so had phonemic implications which, usually, would lead to changes in orthography, first in what might be regarded as spelling errors and later in orthographic reform. As for [y:], scribes of early manuscripts write the high front vowel as ⟨u⟩ and ⟨ui⟩ (Hogg 1992a: 123). But generally the spelling ⟨y⟩ is found throughout the Old English period, except in late Old English manuscripts, where ⟨i⟩ spellings are sometimes attested too, such as in the Northumbrian and Mercian glossaries. Indeed, the merger was probably complete in most dialects of the North and East by the end of the Old English period (Luick 1914–40: 261). In parts of the southwest Midlands, /y:/ was retained for a long time, namely well into the Middle English period (a discussion of the data is provided by Dietz 1989: 144–50). The mid front rounded vowel /ø:/ is written in early manuscripts as ⟨oi⟩, and later as ⟨oe⟩ (Hogg 1992a: 15–16). In contrast to the merger of /y:/ at /i:/, the merger of /ø:/ at /e:/ is found earliest and most regularly in southerly dialects. The spelling ⟨e⟩ is general in West Saxon texts at the end of the ninth century and in Kentish texts by the end of the tenth century. Such ⟨e⟩-spellings are rarer in Anglian dialects, though sometimes they occur in the *Lindisfarne Gospels* and, more frequently, in the Mercian sections of the *Rushworth Glosses* of the tenth century (Luick 1914–40: 169, 263, Hogg 1992a: 125).

From our present knowledge of Late British, only the high front rounded vowel, /y:/, may still have been present in early Late British, though it later merged with /i:/ (see 8.2.3.1). There is no evidence to suggest that there was a long mid front rounded vowel /ø:/ in Late British. Based on the relative lack of evidence for /y:/ in many Late British dialects and the complete lack of /ø:/,

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<sup>234</sup> However, /u/ did exist as a short vowel and a near match existed in the Late British diphthong /uu/ (8.2.9.1).

it could be inferred that, in a situation of language shift, Britons learning English could have had difficulty acquiring long front rounded vowels, and so they may have merged with front unrounded vowels /i:/ and /e:/ very early. However, such sound substitution is not certain to have taken place, especially in view of the fact that Late British speakers were at least familiar with *short* front rounded vowels (as well as centralised short rounded vowels), which, it could be argued, would have helped rather than hindered the acquisition of new long vowel variants. Furthermore, Late British possessed a rich variety of diphthongs which possibly represented near matches for /y:/ and /ø:/ too (see section 10.5). Certainly, it is conceivable that the loss of the rounded front vowels in Old English could have been catalysed by contact with Late British, yet, on the other hand, similar unrounding of front rounded vowels at such an early date is not particularly striking when cognate languages are compared. In particular, Frisian, whose early vocalic system resembled that of English very closely, evidences early unrounding of front-rounded vowels, and probably at around the same time as in English, since they were already unrounded before the earliest Frisian manuscripts from about 1200 (Bremmer 2009: 32–3). For these reasons, it is difficult to argue with much conviction that Late British effectuated the unrounding of (Pre-)Old English [y:, ø:].

#### 10.2.2.2 Raising of /æ:/ to /ɛ:/

It is generally agreed that Old English /æ:/ was raised to /ɛ:/; but since the change amounts to a phonetic alteration and did not result in restructuring of the phonemic system, little or no orthographic change would be expected. Nonetheless the basis on which this phonetic change is usually dated has been spelling evidence. Lass (1992: 45), for example, appeals to spelling evidence when dating the change to the eleventh and twelfth centuries. It follows that, if a scribe of one generation wrote ⟨æ⟩ whereas a later scribe wrote ⟨e⟩, the later scribe must then have intended to indicate what was a phonetic alteration in contemporary speech.

It seems to me that scribal forms have been over-interpreted. The phonetic difference between /æ:/ and /ɛ:/ is slight, and to think that a scribe had any intention of adjusting his standard of writing to indicate such phonetic variation is hardly credible. One can accept that there was regional variation with regard to the degree of opening of the open mid vowel (indeed in a small area of the southeast Midlands north of the Thames Old English /æ:/ was in fact backed to /a:/; see Luick 1914–40: 345, Dietz 1989 143–4); but it is more reasonable to attribute the emerging difference in spelling to Norman influence. Insular spellings (that is, Anglo-Saxonisms) like ⟨æ⟩ were gradually being replaced at the time.<sup>235</sup> There was no reason (apart

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<sup>235</sup> Cf. Luick (1914–40: 343): ‘Die Schreibung æ für ae. æ̅ ist in den Hss. des 11. Jahrhunderts noch ziemlich unberührt, im 12. wird e immer häufiger (...), um gegen Ende die Oberhand zu gelangen; nur Orrm führt æ regelmäßig durch, ebenso noch die Proklamation von 1258’. [‘The spelling æ for æ̅ remains quite unchanged in manuscripts of the 11th century, in the 12th century e becomes more and more frequent [...], finally becoming the dominant spelling towards the end

from scribal fashion) why the graph <æ> should have been eliminated. <æ> was ideally suited to represent a mid open vowel – /æ:/ or /ɛ:/ – because the ligature indicated an intermediary sound between /ɑ:/ and /e:/. So even if there was indeed a minimal phonetic change, i.e. /æ:/ > /ɛ:/, it could well have pre-dated the eleventh and twelfth centuries.

Lutz (2004) argues that the initial raising of /æ:/ to /ɛ:/ may be viewed as a prelude to the Great Vowel Shift. She views the raising of Old English /æ:/ (as well as the raising of /ɑ:/ to /ɔ:/ in southern dialects) as a language internal development, resulting from the fact that the English vowels were undergoing a typological shift by moving away from an alternation based on quantity (long vs. short vowels) to one based on tenseness (tense vs. lax vowels). Lutz (2004: 220) explains that low tense vowels are prone to raising. Lutz's proposal seems feasible, but raising of /æ:/ could also have resulted from – or have been in some way influenced by – contact with Late British, which might well have had a more raised front low-mid vowel /ɛ:/. If such influence is assumed – and Lutz does assume that there was strong Brittonic influence on English (see Lutz 2009) – contact influence seems quite plausible, especially since there is evidence to suggest that near equivalent phonemes are more difficult to master than completely variant phonemes (see on this point 3.2). Consequently, in a situation of second language acquisition, British speakers would have found it extremely difficult *not* to replace /æ:/ with /ɛ:/. Even so, the phonetic alteration would have had no effect on the structure of the Old English phonemic system and so should not have called forth any form of orthographic change; this, as indicated above, resulted most significantly from later French orthographic influence.

### 10.2.2.3 Development of (Pre-)Old English /ɑ:/ to /ɔ:/ (South) and /a:/ (North)

An important North–South dialectal indicator in Middle English concerns the development of long /ɑ:/, the historical reflex of PGmc \*/ai/. The earliest evidence for rounding and raising of /ɑ:/ to /ɔ:/ comes in the form of <o> spellings (e.g. *mor* ‘more’ < OE *māra*) in southern and Midlands dialects. Lass (1992: 47) thinks that such spellings ‘reflect a major change in progress, in which OE /ɑ:/ rounded and raised to /ɔ:/’. Despite variable spellings in different texts and different areas Lass concludes that ‘we can date the change as coming to fruition in the late twelfth to early thirteenth century, beginning in the south-east and spreading northwards – and constituting from that time on one of the major north/south isoglosses’. A comprehensive survey of the spelling evidence from the 9th–12th centuries from literary sources, the Domesday Book (ca. 1086), and other onomastic evidence, has now been provided by Liebl (2006, 2008), who,

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of the century; only Ormm uses æ regularly as well as [the scribe of] the Proclamation of 1258.’] Ormm tended to preserve insular spelling habits more than other writers of the early Middle English period and strove for exactness in his spelling system. Ormm no doubt saw the importance of retaining a phonemic distinction in the spelling of the vowels /e:/ = <e> and /ɛ:/ = <æ>, and the same appears to have been the case for the scribe of the Proclamation.

after surveying the evidence in greater detail than Lass, argues ‘that /ɑ:/ > /ɔ:/, rather than spreading from the South to the North, might have started in Late Old English more or less simultaneously in several counties in the South as well as the East and West Midlands and radiated from there’ (Liebl 2006: 30; similarly, Ekwall 1938: 165). The approximate North–South dialectal division as deduced from early Middle English place-name evidence is presented in Map 13.<sup>236</sup>

Despite Lass’s interpretation that Middle English spellings indicate a phonetic sound change in progress during the twelfth and thirteenth centuries, it is possible that phonetic differences in the realisation of long ⟨a⟩ may have been around in varieties of English well before the Middle English period. In theory, ⟨a⟩ may have already represented a more rounded vowel ([ɒ:] or [ɔ:]) before the Middle English period, even if ⟨a⟩ was retained in spelling.<sup>237</sup> Stockwell has argued that Old English long and short ⟨a⟩ represented low back vowels, probably with some rounding, from the earliest English times. He provides two arguments in support of this idea (2002: 274–5):

- (1) unconditioned rounding is unheard of as a process in the history of English, though the reverse (unconditioned unrounding) is common. For [a] or [ɑ] to have become, without conditioning, a rounded vowel [ɑ] or [ɔ] is hard to believe, given that there are no parallels. I conclude, therefore, as a matter of probability, that it must have been rounded, to some extent, already, such that the Middle English [ɔ:] was a direct inheritance, not the result of sound change.
- (2) It is totally reasonable that this OE vowel should have been spelled with the Roman alphabet symbol <a>. What other vowel in the system could the symbol <a> possibly have been used for?<sup>238</sup>

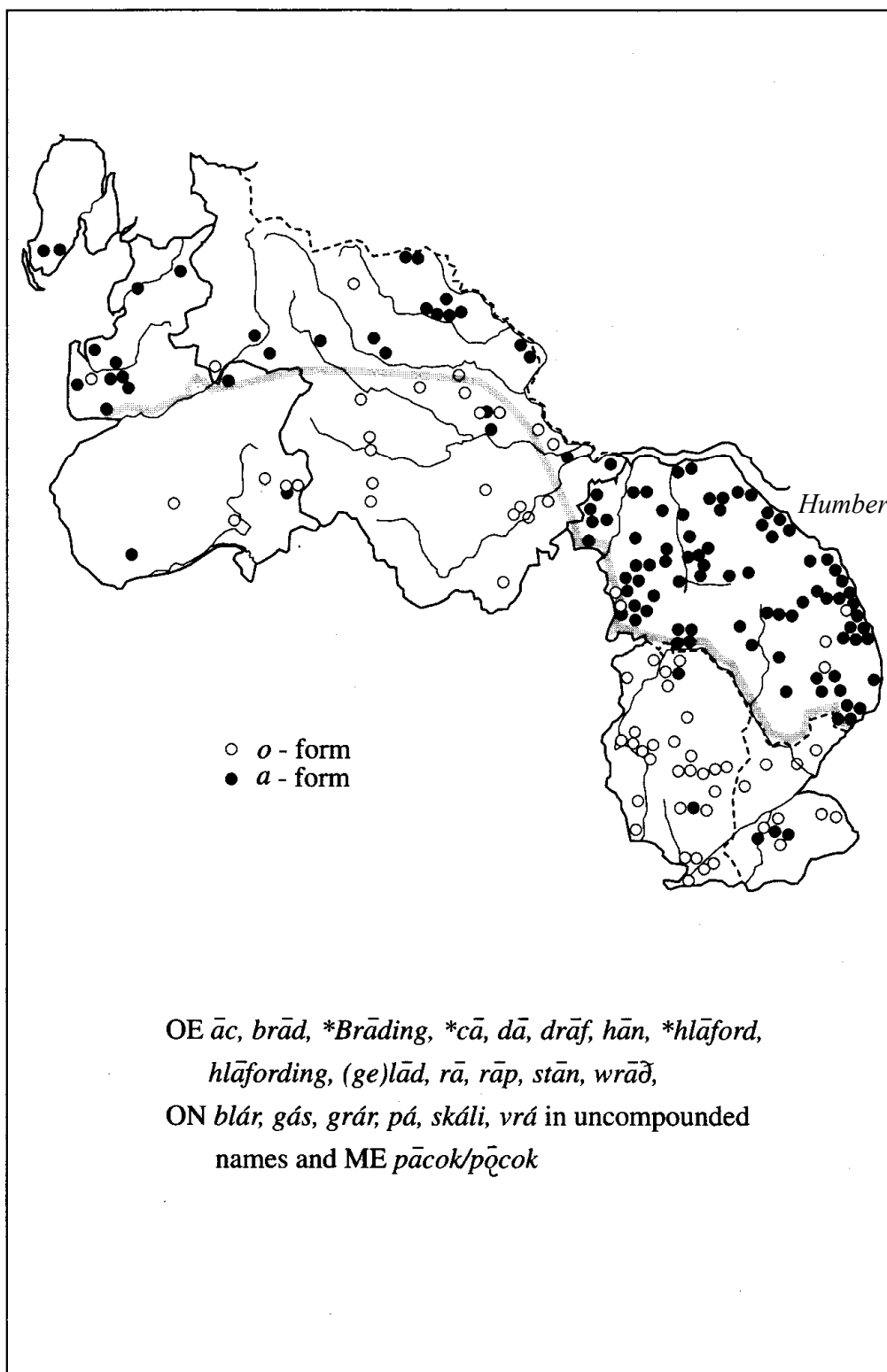
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<sup>236</sup> Further discussion of the boundary with special reference to additional place-name as well as discussion of *LALME* and data from modern dialects is provided by Dietz (1989: 135–43), which is also complemented by Liebl (2008).

<sup>237</sup> Just as Modern Icelandic retains the Old Icelandic spelling ⟨á⟩ despite the fact that long /ɑ:/ was diphthongised centuries ago, yielding /au/, as in Modern Icelandic (Haugen 1982: 38). Similarly, English orthography still uses the Latin low vowel graph ⟨a⟩ in words such as *made*, despite the fact that ⟨a⟩ no longer signals a back vowel in English.

<sup>238</sup> Of course, Old English orthography does not make a difference between such phonetic realisations of long ⟨a⟩, just as it does not in Modern English, e.g. in *father* [fɑ:ðə] for most speakers in northern England (e.g. in present-day North Yorkshire) vs. [fɑ:ðə] in Received Pronunciation. Speaking from personal experience, Northern English speakers are not consciously aware of any differences in pronunciation here, and I doubt whether speakers of Old English would have been either.





Map 13. <a>/<o>-isogloss (Kristensson 1967: 283, map 17)

If Stockwell is right, Northern Middle English ⟨a⟩ rather than representing a conservative continuation of Old English /ɑ:/ could represent, instead, an unrounding of the Old English phoneme, while Southumbrian Middle English ⟨o⟩, i.e. [ɔ:], would be a more likely direct descendent of Old English long ⟨a⟩. This interpretation would correlate with the trend in Old and Middle English whereby northern dialects generally tend to be more innovative in terms of phonology and morphosyntax during the Old English and Middle English period than their southern counterparts, and especially those dialects of the South-East. But the fronting of OE /ɑ:/ to /a:/ in northern England is a phonetic change and so is difficult to date on the basis of orthographic evidence. Because southern English [ɑ:] > [ɔ:] is also phonetic change, it is equally unlikely to have led to an immediate change in scribal habits.<sup>239</sup>

While it is true that the Old English ⟨a⟩ spelling gives way to the ⟨o⟩ spelling in Middle English, this change in scribal habits can be attributed to the fact that the two mid-rounded vowels of southern dialects, i.e. [o:] and [ɔ:], were not part of the design of the Latin orthographic system. And since ⟨o⟩ was generally reserved for /o:/, scribes had to decide whether to write [ɔ:] as either ⟨a⟩ or ⟨o⟩. Now, the use of ⟨a⟩ for /ɔ:/, which would have made perfect sense from an Old English perspective, would not have done so in Middle English, due to the gradual emergence of a new long /a:/ vowel as a result of open syllable lengthening of short /a/ and, importantly, its identification with long /a:/ in numerous French loans.<sup>240</sup> Lass (1992: 47) also places this change in about the twelfth to early thirteenth century based on rhyme evidence: ‘the undoubtedly front /a:/ in French loans like *dame* rhymes with OE /ɑ:/ in items like *hame* ‘home’’. But, clearly, the rhyme evidence cited by Lass falls short of being a good credential for dating the change in question. French loans would likely have been adapted to the native phonological system, irrespective of whether northern English had [a:] or [ɑ:].

Assuming, with Stockwell, that the change English [ɑ:] > [ɔ:] could date back to the Old English period, it is worth reconsidering the motivation for this change in the view of early Brittonic rounding and raising of /a:/ > /ɔ:/ (see 8.2.3). In order to assess the matter, the chronology of the change /a:/ > /ɔ:/ in Brittonic will need reconsidering. Scholars differ on the dating of Brittonic /a:/ > /ɔ:/. Jackson (1953: 695) and Sims-Williams (2003: 290) opt for a late fifth- to early sixth-century date, while McCone (1996: 150–4) argues for a much earlier date, at

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<sup>239</sup> One could argue, perhaps, that the <o> spellings indicating a back rounded vowel did appear before nasals in Old English, e.g. *mon* vs. *man* ‘man’, as such spelling such as ⟨bon⟩ ‘bone’ (< *bān* < WGmc \**bain*-) or ⟨ston⟩ ‘stone’ (< \**stān* < WGmc \**stain*-) may have been expected. Still, such spelling practice is found only in early Old English and then later mainly only in Anglian, so we shouldn’t expect such practice in the numerous West Saxon texts which already had a fairly standardised spelling anyway. But this still leaves some Mercian texts (of course in Northumbrian /ɑ:/ did not become /ɔ:/ anyway).

<sup>240</sup> Naturally, open syllable lengthening occurred in different English dialects at different times. One useful benchmark text for dating is the *Ormulum* (south Lincolnshire, ca. 1150–1180), in which open syllable lengthening had not yet occurred (see Fulk 1996).

the beginning of the fourth century. Three sources have been used to date this change – inscriptions, loanwords in Irish, and toponyms in Old English – these will now be evaluated in turn.

First, the relevant Brittonic inscriptions were canvassed by Jackson (1953: 290–1) and have now been augmented and subjected to a more detailed evaluation by Sims-Williams (2003: 55–70). In the vast majority of sources, namely in classical and later Christian inscriptions, original Proto-British \*/a:/ is rendered as ⟨a⟩. However, Jackson lists six examples which display a rounded vowel ⟨o⟩ (one of which, *BODVOCI*, has now been rejected by Sims-Williams 2003: 63). Three of the inscriptions can be localised to Cornwall; none stem from Northumbria. Sims-Williams has been able to find a possible eleven further inscriptions with mid-rounded vowels which could plausibly go back to PBr. \*/a:/. Again, none of these are from Northumbria, yet several have been localised to Wales and Cornwall. The first non-epigraphical ⟨o⟩-spelling is found in the name of the Breton bishop *Mailoc* at the Council of Braga in 572; but Sims-Williams (2003: 282) notes that ‘it is uncertain whether this reflects native Brittonic usage’. Still, there are no ⟨a⟩-spellings in the Llandaf charters of South Wales, suggesting that ⟨o⟩-spellings had begun in writing in that area by about 600. No doubt the orthography of the Llandaf charters influenced Sims-Williams’ conservative dating of EBr. \*/a:/ > \*/ɔ:/, for he writes, ‘begins by c. 600 at the latest’ (2003: 290). Yet it is still unclear whether precisely the same dating also applied to British dialects in Northumbria.

Secondly, investigations into phonological change in Brittonic and Goedelic have often given a great deal of attention to the striking orthographical variations found in British Latin loans in early Irish.<sup>241</sup> As regards British \*/a:/, Old Irish displays some loans with ⟨a⟩-spellings and some with ⟨o⟩-spellings, cf. OIr. *cáise* (< L *cāseus*) ‘cheese’ and *srát* (< L *strāta*) ‘street’ vs. *póc* (from an oblique form of L *pāx*) ‘kiss’ and *oróit* (< L *ōrātio*) ‘prayer’. McManus (1983) has shown that there was in fact a continuum of loans, on which scale there are early and late ones. It is agreed that forms with ⟨a⟩ are earlier loans and those with ⟨o⟩, later loans. Most scholars believe that later loans were therefore borrowed after the change \*/a:/ > \*/ɔ:/ had taken place in Brittonic. McCone (1996: 150–54), however, thinks that the spelling variation is *not* due to the Brittonic change \*/a:/ > \*/ɔ:/, and suggests that the Brittonic change \*/a:/ > \*/ɔ:/ occurred before the first loans were borrowed into Irish. His argument is based on structural assumptions, he thinks that the change \*/a:/ > \*/ɔ:/ was linked to the ‘Great British Vowel Shift’ \*/o:/ > \*/u:/ > \*/ü:/, which, he argues, could have been complete as early as 300 AD. But since the early Irish long vowel inventory had no /ɔ:/, it could have been replaced by native /a:/ rather than native /o:/. McCone goes on to suggest that Irish eventually gained its own /ɔ:/ vowel from

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<sup>241</sup> It must be emphasised that the donor language was British Latin, i.e. Latin pronounced as if it were British. Jackson (1953: 124) notes that ‘One of the outstanding points about British Latin in the late fifth and sixth centuries must have been that intervocally *p*, *t*, *c*, *b*, *d*, *g*, *m* were pronounced [b, d, g, v, ð, γ, μ], because this was so in British, and another, that Latin *ā* was now a back rounded sound, *ō*, just as older British *ā* was’.

lengthened short /o/ in specific phonetic environments. Subsequent to this change, British Latin loans were adopted with /ɔ:/, hence the later ⟨o⟩ spellings.

McCone's argument is not completely satisfactory because /a:/ does not actively take part in the chain-shifting process, i.e. it does not take the place of any other vowel. Therefore, only the argument for the need of symmetry in the vowel system can be posited as a trigger for the change. Although McCone's proposal is a possibility, it is simply unable to invalidate the traditional proposal that the variations in Irish orthography represent differences in the varieties of British pronunciation. Striking is the fact that Celtic scholars have taken for granted that Brittonic speakers – in places as far apart as Land's End to Lothian – shared a sound-change at precisely the same time and within about the same century, when in fact very little is known of the dialectal situation for the most part of Britain during the Dark Ages. With this in mind, it may be worth considering the British Latin loans not only from a chronological perspective, but also from a dialectal perspective. It seems quite suspicious that within one century, or just a few generations, a phonological shift was completed everywhere. For example, it is evident from early inscriptions and place-names in Old English (see below) that there is little or no evidence for the rounding and raising of British /a:/ > /ɔ:/ in early Northumbria. On the other hand, there are several inscriptional indications for early rounding of /a:/ in southern England, and reliable proof by about 600 in the Llandaf charters. One wonders whether there could indeed have been different waves of loanwords from differing varieties of Brittonic, as spoken in their different pronunciations of British Latin. Tentatively, an explanation might be sought along these lines: earliest loans in Irish may well have come from Northern Britain (in particular in the region of Cumbria, where Patrick may well have come from; see Snyder 2003: 118–19), while later the loans may have come from the still-Celtic-speaking western regions of Southumbria, in particular from Wales, where the Celtic church continued to function more than anywhere else in the first centuries following the Anglo-Saxon settlements.<sup>242</sup>

The third and final type of data used for dating the change /a:/ > /ɔ:/ are orthographical forms of Brittonic toponyms in Anglo-Saxon. As noted in 8.2.3.1.1, there is an almost universal view that British /a:/ is always written ⟨o⟩ (see Jackson 1953: 292). However, when one views the actual data it again becomes apparent that there are first of all comparatively few common Brittonic place-name elements with /a:/ and, moreover, there are practically no examples of such elements in Northumbria. The *River Don*, OE *Dōn*, (< LBr. \**Dōn*, RB *Dānum* in *Antonine Itinerary*) bears witness to the change, but while the river is in the North Midlands, it is not in Northumbria. And in fact no other reliable evidence for the change appears to be known from the North until much later, principally in the form of Cumbrian toponyms containing the British suffix \*-āco-, which are usually attested in Middle English – Cardunnock, Carrock Fell, Cumdivock, (Water)millock, Polthledik (see Coates & Breeze 2000: 281–8). Thus, it is possible

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<sup>242</sup> It is interesting to note that there is also a tendency for the change /a:/ > /ɔ:/ in Irish. Not, however, in Manx and Scots Gaelic, illustrating a curious, though perhaps coincidental, north-south division with respect to the development of /a:/. I owe this observation to Peter Schrijver.

that by the late seventh century – when these toponyms were adopted by the Angles (or rather when Cumbrian speakers adopted the English language) – the change /a:/ > /ɔ:/ had occurred in Cumbria. However, this does not imply that the change had already occurred in eastern seaboard areas that were settled during the fifth century (e.g. in Holderness and Lindsey). In these and other areas where the “Angles” initially settled, the emerging Northumbrian language began to take shape before both the people and the language spread further and further inland in the following centuries. It is possible that in these areas British /a:/ was still around at the time of the advent. Coates’ etymology of the place-name Wawne (< \*wāyna) in the East Riding of Yorkshire would support this idea. He writes, ‘Holderness is generally supposed to be an area of fifth-century colonisation by the Angles, and one can easily envisage this word being borrowed in essentially its late British form \*wāyn(a)’ (Coates & Breeze 2000: 176). If this etymology is correct, it may represent a late-fifth-century isogloss within British Celtic. Further evidence would be highly desirable to solidify such an argument, yet for the present it is possible to make the observation that the river-name Don displays the change /a:/ > /ɔ:/ in the north Midlands, whereas further north, in Northumbria, the place-name Wawne appears to reflect PBr. /a:/ at the time of borrowing. The isogloss is therefore reminiscent of the approximate boundaries of the /a:/ vs. /ɔ:/ isogloss, which begins to emerge in Middle English (see Map 13 above). As such, the convergence may not be merely coincidental.

#### 10.2.2.4 Fronting of /o:/

As we have seen from the discussions in 10.2.1.1–10.2.1.3, the long mid-rounded vowel /o:/ underwent unconditioned fronting in northern dialects. The development came to have a profound influence on the subsequent history of the northern system of long vowels (including Scots). The exact phonetic quality of the fronted reflex of OE /o:/ is notoriously uncertain. As Dietz rightly points out, all that is certain is that it was rounded and not a back vowel (Dietz 1989: 173). The fronted vowel is often designated as [ø:] (e.g. Jordan/Crook 1974, Britton 2002, Smith 2004); but actually it is only clear that the outcome was a front or central rounded vowel, e.g. /ø:, œ:, ʊ:, y:/. Pilch (1997: 449) thinks it was a high-central vowel /ʊ:/. Earlier work by Aitken (1977) assumes that the initial outcome of fronting was a close mid-vowel /ø:/; but in later work he considers raising of /o:/ to /u:/ with subsequent fronting to /y:/ more likely (2002: 39–42). Most dialects of northern England tend to show reflexes which point towards a mid front vowel, e.g. [ø:] or [ʏ:], rather than a tenser more peripheral high front vowel, e.g. [y:].<sup>243</sup> As Aitken was

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<sup>243</sup> This would explain why, for example, Yorkshire North and East Riding dialects merged the fronted reflex of /o:/ at /e:/ (from pre-Great Vowel Shift /ɛ:/), and not /i:/ (from pre-Great Vowel Shift /e:/), though not all Yorkshire dialects point in this direction. Northern West Riding dialects, such as that of Dent, do not merge fronted reflexes of /o:/ with the front vowel set. The fronted reflex is thus kept separate and appears as a diphthong /iu/ (see Hedevid 1967: 152–8). The diphthong /iu/ probably points towards an earlier high vowel such as /y:/ or /y:/ rather than /ø:/.

well aware, Scottish dialects are open to a different interpretation, however – indeed the reflex is unlikely to have been phonetically uniform throughout the vast Northumbrian area. Britton (2002: 221–2), while following the general opinion that /o:/ preserved height and lip-rounding as /ø:/, argues that in England the vowel appears to have been raised to a high-front position [y:] or [y:]:

At this height it is generally considered to have been tense [y:]; but there are grounds for supposing that it was, or eventually became, lax [ɻ:]. [...] the lax constituents of the diphthong [ɪʊ] that subsequently emerged in northern English dialects are best explained as deriving from a lax monophthong.

Even if Britton's analysis is right, other questions of phonetic detail remain. For instance, assuming that lip-rounding was preserved throughout the Northumbrian area, was it an outrounding or (as Harold Orton thought) an inrounding vowel?<sup>244</sup> In the rest of this chapter the fronted vowel will simply be referred to as /ø:/, in accordance with the majority of literature on the subject, though it is possible that this vowel's phonetic quality may well have been different, e.g. [ø:, ɸ:, ɻ:, y:].

Handbooks are more specific about dating Northern Fronting: it is usually dated to the thirteenth century (e.g. Luick 1914–40: 426, Jordan/Crook 1974: 86, Aitken 2002: 39). This date has been arrived at in two ways. Firstly, on the basis of orthographic changes: the earliest supposed 'hard evidence' for the change comes from spelling vacillations, such as ⟨u, ui, oi⟩, instead of usual ⟨o⟩. Indeed, during the Middle English period there was often considerable scribal variation in a single text by the same scribe. From some Northumbrian texts one gains the impression that scribes were trying to render a sound which had no exact counterpart in the Latin alphabet (including French orthographic usage). To take one textual document as an example, observe the orthographical vacillation found in the anonymously written *Metrical Life of Saint Cuthbert* (London, British Library, Egerton 3309), which has been located to Durham ca.1450. In this text, ⟨o⟩ is the usual graph used to denote the fronted mid-vowel, but, quite often, variant ⟨u⟩-spellings are found on the same page or in the same couplet, e.g. *gode, loke, boke, toke* beside *gude, luke, buke, tuke*.<sup>245</sup>

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<sup>244</sup> Inrounding, implies that the lips are retracted and compressed/rounded. Outrounding implies that the lips protrude and are compressed/rounded. Orton suggested that OE /o:/ became a mid- or a high-front long vowel with inrounding (see Orton 1928: 246; cf. also Dean 1962: 40, note 72). Murray also seems to have believed such an interpretation possible (see Murray 1873: 52, cited in 10.2.1.1 above).

<sup>245</sup> See Fowler (1891, lines 1977–8; 4158–61; 2111–2; 4304–7; 4628–31; 7743–4). Furthermore, there are occasional rhymes with French loanwords with /y:/, which was probably pronounced similar to the Northumbrian reflex of OE /o:/. It is quite possible that such ⟨u⟩ spellings might sometimes have entered into scribal usage through shortened forms (/ʊ/ < OE /o:/). For example, the ⟨u⟩ spelling is especially common in the adjective ⟨gude⟩, as well as in the noun ⟨gude(s)⟩

Why scribes began to feel a necessity to find a new graphemic representation for the fronted mid-vowel is the first question that needs asking. In fact, the grapheme ⟨o⟩ served the purpose very nicely, since fronting of /o:/ was merely a phonetic change, i.e. it did not result in a phonemic merger or split. I have already suggested in points 10.2.2 and 10.2.3 above that a great deal of phonetic change first becomes evident in English orthography in and around the thirteenth and fourteenth centuries, because of ongoing reforms in English spelling, resulting especially from the influence of French orthographic practices. In short, the mismatch of the English and French spelling systems led to a greater awareness of specific phonetic realisations in English that would normally have escaped any new representation in spelling. French practice had greater prestige and ultimately led to widespread orthographic change (similar views are expressed in Kniezsa 1988: 216–8). In other words, Northern fronting of /o:/ could be several centuries older than first indications in the orthography suggest.<sup>246</sup>

The earliest graphemic evidence for front rounded vowel starts shortly before 1300 and continues throughout the fourteenth and fifteenth centuries. Kristensson (1967: 92–3) cites examples from the early fourteenth century from Cumberland and Westmoreland and has suggested that fronting occurred later in Yorkshire, due to a lack of ⟨u⟩-forms before the end of the fourteenth century. However, Dietz (1989: 157) has shown that such graphemic evidence is indeed found in at least one literary text. *Cursor Mundi* (Cotton Vespasian A.3, writer A) has ⟨o(o) ~ oi⟩ forms (this manuscript and scribal dialect has been localised to Barnoldswick in the north-eastern part of the West Riding ca. 1340). Consequently, there is evidence for the fronting of /o:/ already in the earliest texts. Of course, Northern Fronting must pre-date its occurrence in the orthography, though by how long is uncertain. The *LALME* data has now been carefully assessed by both Dietz (1989: 157–8) and Britton (2002: 224–8). The following lexical items from the *LALME* questionnaire are of relevance: TO + *sb*, TO + *inf*, BEHOVES, BROTHER, CHOOSE,

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‘good(s)’. The adjective ⟨gude⟩ was certainly a very common word and appeared in compounds such as ⟨gudeness⟩, where it would have been more prone to shortening, which may or may not have spread to the simplex form ⟨gude⟩. Likewise ⟨u⟩ spellings were particularly common in *buke*, *luke*, *tuke*, notably before /k/; Dutch dialects also show a tendency to shorten vowels especially before /k/ (see Weijnen 1991: 30). Such spellings could also perhaps stem from shortened forms which had become part of the poet’s orthographic repertoire. I suspect that in some cases the poet occasionally used such spellings, though the actual pronunciation may have differed. For this reason, I am reluctant to attach too much relevance to the ⟨u⟩ spellings in this and other texts. As a rule, the scribe used ⟨o⟩ very regularly to render the [ø:]‑like vowel, which served the purpose adequately.

<sup>246</sup> The problem is very evident throughout the history of English. Changes in pronunciation do not often result in changes in orthographic practice. One exception to this rule involves cases of phoneme merger, which may induce spelling errors, which are indeed valuable indicators for phonological change. However, the case to hand, i.e. the fronting of /o:/ does not involve any such merger before the Modern English period.

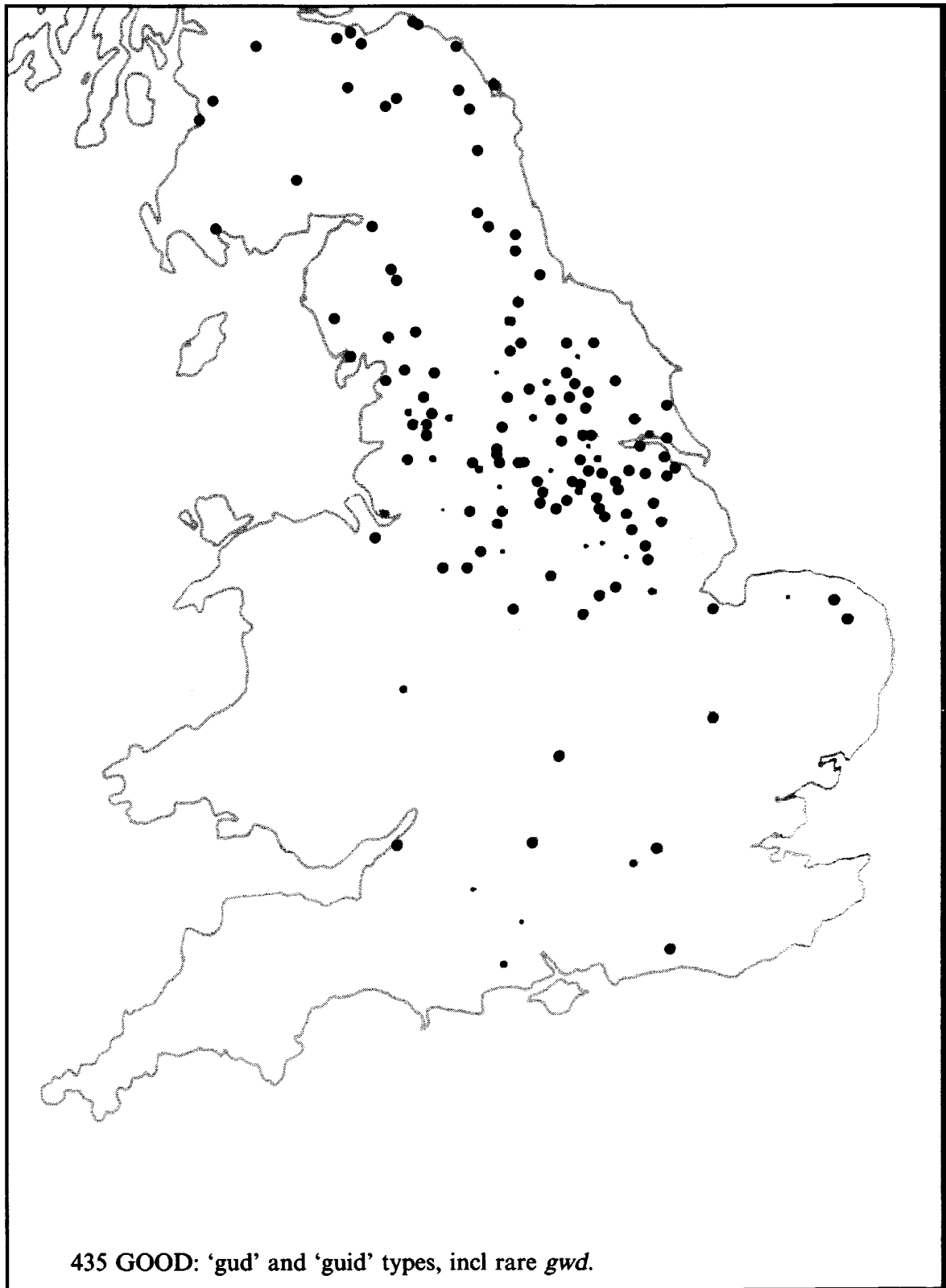
CAME *sg* and *pl*, GOOD *adj* and *sb*, LOVE *sb* and *vb*, MOON, MOTHER, OTHER, POOR, SON. Substantial though this list is, many of the items are of very limited value when interpreting the geographical spread of fronting. Britton (2002: 224) rightly points out that TO occurs commonly as *til* in the North. CHOOSE shows unrounded forms which stem from the Old English long diphthong /eo/. CAME seems to reflect a commonly attested shortening before /m/ (cf. 6.2.1.2 and 6.2.3.2), which is also reflected regularly in spellings, e.g. LP 4285 <cumme>. And in order to avoid minim confusion, <u> is often avoided when <n, m, u> precedes or follows, as in the items MOON, SON, LOVE, and MOTHER. This leaves only GOOD (Pk 435), which shows a very extensive mapping of *u*-forms (see Map 14).

Apart from the Northumbrian region, <u>-forms are also found numerously in the North Midlands and in much of West Yorkshire, barring more southerly areas of the county, especially in the vicinity of Sheffield, Barnsley and Huddersfield. Most attention has been given to the North Lincolnshire forms. While noting that the Lincolnshire <u>-variants could be put down to the Great Vowel Shift (i.e. /o:/ > /u:/), Dietz (1989: 158) basically thinks that the evidence from the *Survey of English Dialects* allows the forms to be viewed as authentic frontings. Britton (2002) also drew the same conclusion as Dietz and has provided a detailed discussion of the history of /o:-fronting in Lincolnshire. Attestations further south of Yorkshire and northern Lincolnshire have been treated with suspicion, however. There is no dialectal evidence from modern times which confirms fronting of /o:/ in, for instance, Norfolk, Derbyshire, Staffordshire or Middlesex, and dialectal levelling in all these areas seems unlikely. Rather, one has to reckon with the possibility that <u>-spellings may reflect early shortening of /o:/ > /u/, either before or after the Great Vowel Shift.<sup>247</sup> Alternatively, it has been supposed that <u>-spellings could also be early attestations of /o:/ > /u:/ by the Great Vowel Shift (see Dietz 1989: 158, Britton 2002: 225). The best way to attain firmer conclusions on this matter will be to look closely at the manuscripts themselves. As I have already pointed out, *gude* ‘good’ seems to have a special tendency for <u> spellings more than any other word, and this very common word must therefore be interpreted with caution (see note 245).

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<sup>247</sup> If shortening was after the Great Vowel Shift then the change would have involved shortening of /u:/ to /ʊ/.





Map 14. GOOD: ⟨u, ui, w⟩ spellings (after *LALME* Pk 435)

The second argument for dating Northern Fronting to about the thirteenth century stems from the observation that late Old English or early Middle English /u/<sup>248</sup> also underwent fronting when lengthened in open syllables. It has generally been taken for granted that /u/ must first have become /o:/ prior to fronting to /ø:/ (e.g. Luick 1914–40: 426–7, Aitken 2002: 42, Britton 2002: 221). Yet Northern Fronting could well have predated open syllable lengthening. When lengthened in open syllables, /u/ could still have merged with an already existing fronted reflex /ø:/ (< OE /o:/), e.g. OE *duru* > ME(north) /dø:r/ > North Riding of Yorkshire dialect /diə/ etc. Similar processes of short vowels lengthening even directly to fronted long vowels are on record. For instance, in the history of Swedish short /o/ was lengthened to an open central rounded vowel /ɜ:/ (Riad 2005: 1108).<sup>249</sup> So, when lengthened in open syllables, /u/ could have merged directly with an already existing fronted vowel /ø:/, because this would be the closest available counterpart in the sound-system. Another scenario in this instance might have been to create a new phoneme /o:/, just as it is assumed that ME /o/, when lengthened, yielded a new open-mid vowel /ɔ:/ in Northern Middle English. But if a mid-rounded vowel were already available in Northern Middle English, albeit a somewhat fronted vowel /ø:/, this would already have served as a suitable lengthened counterpart to /u/ (= [u]). It follows therefore that northern fronting of /o:/ may have preceded open syllable lengthening, and consequently the orthographical evidence is not reliable as evidence for positing that fronting happened around the thirteenth century, since phonetic changes do not usually result in contemporaneous reforms in orthographic systems.<sup>250</sup> In brief, it is possible that /o:/ was indeed fronted at an earlier stage in the history of Northumbrian English, namely before open syllable lengthening. Of the two northern pathways of change outlined in Fig. 15 above, the shorter pathway presents itself as a reasonable possibility and is definitely worth surveying, especially with reference to Late British influence.

Firstly, it must be stressed that a real linguistic basis for contact-based change can be found in the reconstructed system of Late British long vowels, because no long mid-rounded vowel /o:/ existed in Late British (this has not been the case with previous language contact proposals, see 10.2.1.1–10.2.1.3). Old English /o:/ does not show a merger with other inherited long vowels or diphthongs, as is clear from northern Middle English, so we must assume that if there was indeed British contact and language shift, Brittonic speakers must have acquired some phonetic equivalent to the unfamiliar long vowel. Brittonic speakers may well have replaced /o:/ with the high-central rounded vowel /ɤ:/ or with a near equivalent in the rich diphthongal system of Late British. Probably the best diphthongal candidate would have been Late British /ou/

<sup>248</sup> Sometime before the Great Vowel Shift the Old English short vowel /u/ became a lax and somewhat lower high front vowel.

<sup>249</sup> Of this Swedish development Riad (2005: 1108) writes, ‘[t]he reason why the vowel gets slightly fronted is in all likelihood due to the overcrowding of the back series, caused by the increased number of distinctions and the raising of the vowel /ɔ~ɔ:/ relative to the low /a~a:/’.

<sup>250</sup> For a useful discussion of when phonological changes become evident in orthographic systems, see Lüdtkke (1968).

(phonetically this was probably [oʊ], see Schrijver 2008: §3.6.1), which develops to a high-central diphthong /əʊ/ in Medieval Welsh, cf. OW *dou*, MW *deu* ‘two’. It seems very likely that the acquisition of an unfamiliar /o:/ phoneme would at least have led to some phonetic variation. We can gather some idea of the likely substitutions from observation of northern English dialects of the modern period, which have re-acquired a mid-back-rounded vowel from Modern Standard English – a vowel, or rather a diphthong in Received Pronunciation, which was (and to a large extent still is) alien to northern dialect speakers. One of the first observers of the difficulty of northern speakers in acquiring a back mid-rounded vowel /o:/ was Marshall (1788: II, 309) with reference to the dialect of East Yorkshire: ‘In the pronunciation of VOWELS, that of *o long*, as in *stone, yoke, bole, more*, is first noticeable. A mere provincialist of East Yorkshire knows no such sound; nor can he, without much practice, pronounce it’.

Similar observations can be projected on dialects throughout the Northumbrian region, where a large number of variant pronunciations for Standard English long-*o* abound. For instance, in many parts of North and East Yorkshire today there is evidence of the low rounded vowel [ɔ:]<sup>251</sup> in words such as *stone, moan, go* – an early substitution for Southumbrian [o:] or [ou].<sup>252</sup> In addition, a fronted vowel, in the region of [ø:], as well as [o:] are both found in the same areas and in the same words. The [ø:] variant may be more common among female speakers (Watt & Tillotson 2001: 297), while /o:/, which has almost no lip-rounding, can be viewed as a kind of regional standard throughout northern England. As in Middle English, the division with respect to the pronunciation of the mid-rounded vowels runs straight through Yorkshire. It is well-known that speakers to the south, i.e. in much of the West Riding are able to ‘round’ their vowels, while those of the northern dialects, in the North and East Ridings, are not (i.e. only West Riding speakers have a closing diphthong with lip-rounding [ou] in words such as *goat* and *rowed*). Nevertheless, it has recently been observed that re-fronted articulations of /o:/ are even spreading into more southern areas of Yorkshire (see Watt & Tillotson 2001).

In short, evidence shows that a speaker of a language lacking back a mid-rounded vowel may have considerable problems in acquiring such a vowel anew and may be prone to front or centralise the intended target vowel. Since a back mid-rounded vowel was lacking in the Late British system of long vowels, its absence could therefore have given rise to different, possibly fronted or centralised variants of Pre-Old English /o:/. The isogloss that emerged as a result of the development also supports to a certain extent the possibility of the development dating back to Anglo-Saxon times, as it matches well with the familiar Northumbrian vs. Southumbrian linguistic divide, which was clearly in place well before the Middle English period.

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<sup>251</sup> The substitution vowel [ɔ:] had already arisen in these dialects from the sequence *a/C*, e.g. *half, calf, old* [hɔ:f], [kɔ:f], [ɔ:d].

<sup>252</sup> I give here the pronunciation [ou], since [əʊ], which is now common in southern Standard English and Received Pronunciation, is of recent origin.

### 10.3 Contrastive analysis (short vowels)

If we compare the short vowels in Late British and Pre-Old English, some clear points of contrast can be observed, cf. Table 32.

V-Height	Length/Constriction/Roundedness of Vowel					
	Short vowels					
	Front		Central		Back	
	–R	+R	–R	+R	–R	+R
	Late British					
High	i	y				u
High-mid	e	[ø]	ə	ɵ		o
Low-mid	e					
Low			a			
	Pre-Old English					
High	i	[y]				u
High-mid	e	[ø]				o
Low-mid	æ <sup>1</sup>					
Low		[œ] <sup>2</sup>			ɑ <sup>3</sup>	ɒ <sup>2</sup>
<b>Notes:</b> 1. (Pre-)Old English had a short open-mid vowel, reconstructed as /æ/ not found in Late British; a slightly less open vowel /e/ (phonetically perhaps [ɛ]) and a central low vowel /a/ were nearest counterparts. 2. The (Pre-)Old English low back rounded vowel [ɒ] did not exist in Late British. Nor did its rare <i>i</i> -mutated counterpart [œ]. 3. The (Pre-)Old English back open vowel /ɑ/ was not present in Late British. Its nearest counterparts were /a/ and /ɔ/.						

Table 32. Late British and Pre-Old English short vowels compared

To sum up, the low vowels /æ ~ ɑ ~ ɒ/ as well as the rare *i*-mutation variant [œ] were not present in Late British. On the other hand, the Pre-Old English short vowels /i, e, u, o/ found exact or near exact equivalents in Brittonic, as did the *i*-umlaut allophone [y]. The short rounded mid front vowel [ø], an allophone of [o] by Brittonic internal *i*-affection, was probably only present as an allophone in early Late British (see 8.2.6).

## 10.4 Developments of short vowels

Generally, a system of eight or nine short vowels of Pre-Old English (left) was reduced to a system of five vowels in Middle English (right).

i	y	u	>	i	u
e	ø	o		e	o
æ	(œ)	a ~ ʊ		a	

Figure 18. General developments of (Pre-)Old English short vowels into Middle English

The following four structural changes took place (though not always at the same time and place):

- (1) /y/ unrounded and merged with /i/.
- (2) /ø/ unrounded and merged with /e/.
- (3) The low vowel phonemes /æ/, /a/ and /ʊ/ merged on /a/ (in most dialects).
- (4) The Old English short vowels became lax vowels, thus phonetically [ɪ, ɛ, a, ɔ, ʊ]

Developments (1)–(2) are considered in 10.4.1; development (3), which has more potential as a possible Brittonicism, is considered in 10.4.2. Development (4) is typical of other closely related Germanic languages that lost phonological quantity in the medieval period. Section 10.7 looks more selectively at a number of specific quantitative developments of Old English which find parallels in Late British.

### 10.4.1 Merger of /y, ø/ with /i, e/

The developments of the short rounded front vowels /y, ø/ seem to have been similar – in terms of chronology and outcome – to those of the long rounded front vowels as described in 10.2.2.1 above (this also holds for the unique merger of both /y/ and /ø/ at /e/ in both Kentish and Frisian). One notable difference, however, is the fact that the (Pre-)Old English short front rounded vowel /ø/ was much more infrequent than its long vowel counterpart.<sup>253</sup> In brief, no significant effect is necessarily expected on the Old English short front rounded vowels in a situation of Late British to English language shift, since /y/ and /ø/ are generally reconstructed as phonemes in Late British (although the latter vowel may well have developed only in the sixth century; cf. 8.2.6). In general, the developments of both the long and short front rounded vowels run largely in tandem, which suggests that no major restructuring took place as a result of Late British contact. The loss of front rounded vowels is not especially striking, for it also occurred in the later history

<sup>253</sup> This is because /ø/ derives from fronting of /o/ by *i*-mutation. Yet in Proto-Germanic, /o/ simply did not occur when the high vowel /i/ appeared in the following syllable (9.2.1). For this reason, words with /ø/ in Old English are either loanwords or native words where /o/ was analogically introduced before /i/ (see Hogg 1992a: 124).

Brittonic languages, though somewhat faster in West British (based on Old Welsh spellings) than in South-West British (to judge from Breton and Cornish spellings). Furthermore, unrounding also took place very early in Frisian which, as I have argued in 10.2.2.1, had at an early stage a vowel system very similar to that of (Pre-)Old English.

#### 10.4.2 Merger of /æ ~ ɑ ~ ɒ/ at /a/

Three low vowel variants [æ, ɑ, ɒ] appear to have existed in Old English; all derive from the Germanic low vowel \*/a/. The historical background to the variation and allophony was surveyed in 9.2.3, for the present we may simply observe that in early Old English the most common variant was /æ/, while a back vowel was generally found when a back vowel was present in the following syllable, e.g. *dæg* ‘day’ vs. *dagas* ‘days’. Further, in Anglian dialects, and parts of West Saxon, no fronting occurred before certain consonant clusters, e.g. /l/ + consonant: *ald* ‘old’ *cald* ‘cold’, *calf* ‘calf’, in contrast to classical West Saxon dialects, which have *eald*, *ceald*, *cealf* (i.e. with fronting and breaking, see 9.2.3 and 9.2.5). In addition to the variation [æ] vs. [ɑ], there also appeared another variant before nasal consonants; this was almost certainly rounded, [ɒ], and was perhaps originally nasalised too. In the earliest manuscripts this low back-rounded vowel is rendered by scribes now as ⟨a⟩ and now as ⟨o⟩, though in late Old English the ⟨o⟩ spelling appears typically in Anglian texts only. It is generally agreed that the variation [æ, ɑ, ɒ] is of North Sea Germanic in origin, especially since an almost identical allophony and allomorphy is attested in Old Frisian.

A phonemic distinction /æ/ vs. /ɑ/ must have been established by about 550 at the latest (9.2.3), while it is rather less certain whether [ɒ] ever achieved phonemic status at all, except in West Mercian dialects (Hogg 1992a: 13–14). The front versus back variation, which was firmly established in Old English, shows the tendency for simplification in the transition period from Old English to Middle English. Early Middle English texts bear witness an array of different Old English spellings used in an apparently random-like manner, such as in the Peterborough Chronicle of 1127 and 1131, where ⟨æ, ea, a⟩ variants are randomly found, e.g. *hæfde*, *heafde*, *hafde* ‘he had’ (see Lass 1992: 44–5). The exact quality of the low vowel is difficult to determine. Hogg (1992a: 217) judiciously concludes that it is safest to interpret it as a vowel not specified for front and back.

From the perspective of the Late British vowels, the two low vowel variants /æ/ ~ /ɑ/ in Old English – not to mention the complex and generally semantically redundant allomorphy encountered in nominal and verbal paradigms – would have been completely foreign to speakers of Late British. In addition, the third back rounded variant [ɒ] before nasal consonants found no counterpart in the Late British system of short vowels. Due to the obvious complexity and, for the most part, semantic redundancy of the threefold variation in early Old English, it seems unlikely that it would have been correctly acquired by any majority of speakers in a situation of language shift. Contact influence is therefore worth considering. Late British influence could have brought about simplification in a number of ways. Most obviously, all low vowel variants

could simply have been substituted by the one Late British low vowel /a/, which was not specified for front or back. Seen from a Middle English perspective, simplification due to a merging of /æ/ and /a/ at /a/ is indeed the usual outcome in most dialects (though this is usually assumed to be simply a natural language internal development).

Alternatively, the three Old English low vowel variants may have been adopted by Britons, even if the complex allomorphy found in Old English paradigms was lost: thus /æ/ could have merged with Late British /e/ (phonetically probably [ɛ]); /a/ could have merged with Late British /a/; and [ɒ] may have merged with Late British /o/. Actually, West Mercian dialects do display ⟨e⟩ for Pre-Old English /æ/, the Pre-Old English back vowel /a/ seems to have been fronted (perhaps to [a]) and is spelt ⟨æ⟩,<sup>254</sup> while a rounded variant [ɒ] is retained before nasals and spelt ⟨o⟩. Therefore, these West Mercian developments, which are reflected in Old and Middle English spelling and to some extent modern dialects, could also perhaps be owed to Late British influence. Finally, it may be noted that Kentish renders Pre-Old English /æ/ as ⟨e⟩, but this seems rather to be another Kentish–Continental Germanic parallel, indeed it is not too strong to suggest that Kentish formed part of something of a dialect continuity area with the Continent during the Old English period.

To reiterate, for the most part English dialects show a general merger of /æ/, /a/ and the rounded variant [ɒ] at a single vowel /a/. A motivation for the merger of the two distinct phonemes /æ/ and /a/ is wanting, since the two remained distinct throughout the history of Frisian, despite largely parallel beginning situations in Old English and Old Frisian. Late British influence would thus provide at least one contact-based explanation for the merger in English but not in Frisian.

## 10.5 Contrastive overview (diphthongs)

The diphthongs of Late British and Pre-Old English are compared in Table 33. The diphthongs in the two languages appear to have been of different types. In Late British, diphthongs differed in that some closed with /i/ and some closed with /u/. For Pre-Old English it is also usual to assume that the second member of at least two diphthongs was /u/, namely /iu, eu/; a third diphthong may also have had /u/ as a second element but more likely had a lower vowel /o/, namely /æo/ (< PGmc \*/au/), cf. 9.2.4. The general tendency with Old English diphthongs was for the second member to lower in height. Thus, in Old English spelling we find a change <iu, eu, æo> to <io, eo, ea>. Most scholars also think that the subsequent history of Old English diphthongs in Middle English demonstrates that Old English diphthongs had greater prominence on the first element and so were falling diphthongs.<sup>255</sup> Furthermore, it appears that in Old English there was

<sup>254</sup> These two changes are discussed under Mercian Second Fronting in Old English grammars (e.g. Hogg 1992a: 138–40).

<sup>255</sup> Cf. Luick (1914–40: 136): ‘Alle Diphthonge waren fallend: sie sind aus fallenden hervorgegangen und in der Weiterentwicklung überwiegt die erste Komponente’ [all (Old

a difference between long and short diphthongs, and this was probably also the case at least as phonetic variants in Pre-Old English. Such a dual set of diphthongs is rare cross-linguistically and did not exist in Late British.

Late British Diphthongs					
/Vi/-Diphthongs			/Vu/-Diphthongs		
(ui)	(yi)		iu	(yu)	(uu)
(ei)		(oi)	eu	(øu)	ou
(ei)		ɔi	eu		ɔu
	ai			au	
Pre-Old English Diphthongs <sup>1</sup>					
‘Long’ Diphthongs			Short Diphthongs <sup>2</sup>		
iy	iu		(īy)	(īu)	
	eu			(ěu)	
eø	æo		(ěø)	(ǣo)	

**Notes:**

1. Only the Pre-Old English ‘long’ diphthongs /iu/ and /eu/ existed in Late British. The Pre-Old English diphthongs were of the opening type, i.e. they contain a more open vowel as a second element. By contrast, the Late British diphthongs were of the closing type, i.e. they have a close front or back vowel as their second element.
2. The (Pre-)Old English diphthongs are thought to have had contrastive length – a feature which is unknown to Late British and very rare cross-linguistically. Short diphthongs did not exist in Late British.

Table 33. Late British and Pre-Old English diphthongs compared

## 10.6 Developments of diphthongs

It is usually assumed that the inherited Old English diphthongs had two length distinctions. Old English had so-called long diphthongs, which were inherited from Proto-Germanic and basically consisted of two short vowel elements, /æo/, /eu/, /iu/.<sup>256</sup> These were equivalent in length to Old English long vowels. Secondly there were so called short diphthongs which, in terms of length,

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English) diphthongs were falling (diphthongs): they originated from falling diphthongs and in their subsequent development the first element dominates].

<sup>256</sup> Further diphthongs were later created by breaking (see 9.2.5).



were themselves equivalent to just a short vowel. Such short diphthongs, which are signalled in this chapter with a breve (˘), are exceedingly rare cross-linguistically and some scholars doubt whether there really were in fact short diphthongs in Old English or whether diphthongal spellings, such as ⟨ea, eo, io⟩, actually signalled qualitatively different short vowels. Generally, the development of Old English diphthongs indicates that greater prominence was on the first element of diphthongs. Excepting the Kentish dialect, in the transition period from Old English to Middle English all Old English diphthongs were monophthongised:

(1) The development of the long and short early Old English diphthong /æo/ into Middle English appears to have been relatively straightforward. The second element seems to have assimilated to the first, thus /o/ was lowered, unrounded and then fully assimilated /æo/ > /æɑ/ > /æ(:)/.

(2) The long and short Old English diphthongs /iu/ and /eu/ both ultimately yielded Middle English /e:/ (except in Kentish). Whereas Old Northumbrian scribes generally keep both /iu/ and /eu/ distinct up to the tenth century, the diphthongs merged very early on /eo/ in West Saxon and Mercian dialects. Traditionally it has been assumed that /eo/ did not directly become /e:/ in West Saxon and Anglian dialects, but went through a complex assimilatory process yielding first /ø:/ then /e:/, that is /eo/ > /ø:/ > /e:/ (Lass 1992: 42). Recently, however, more detailed analysis of spelling evidence from a large corpus of south-western texts from has cast doubt on this claim (see Lass & Laing 2005). Rather, it appears that that /eo/ was in most cases simply monophthongised to /e:/, and, in a few instances, /eo/ underwent a so-called accent-shift, whereby syllabicity or prominence was shifted to the second element of the diphthong, yielding Middle English /o:/ and ultimately Modern English /u:/, as in *choose* and *lose* (< *ċēosan*, *lēosan*) as opposed to *chese* and *lese*.

(3) The *i*-mutation products of the diphthongs differ in Anglian and West Saxon dialects. In Anglian manuscripts only /æo/ shows evidence of *i*-mutation and appears simply as the monophthong ⟨e⟩ (= /e(:)/). Hence long and short /iu/ appear *not* to have undergone *i*-mutation in Anglian, or else their *i*-mutation products were reversed already in Pre-Old English. On the other hand, in West Saxon dialects the *i*-mutation product of all long and short diphthongs is typically written ⟨ie⟩ (in early West Saxon) and ⟨y⟩ (in late West Saxon). Much debate has surrounded what ⟨ie⟩ represented phonetically. In terms of reconstruction, it seems likely that *i*-mutation of /æo/ could have initially produced something like \*[eø] or [iø], while /iu/ would have given \*[iy]. Thus, in West Saxon the *i*-mutation products (i.e. possibly \*[eø]/[iø] and \*[iy]) merged to create the new vowel or diphthong ⟨ie⟩, while in Anglian, \*[iy], if ever it did ever exist as an allophonic variant, was lost. In terms of chronology, the monophthongisation products typically occur in the transition texts of Middle English and even precede the main period of orthographic reform. Furthermore, it has been observed that spellings indicating monophthongisation appear in the early eleventh century in non-literary texts, namely on coins 1050 (Hogg 1992a: 216). Because scholars wish to date this change before /æ:/ > /ɛ:/ (see 10.2.2.2 above), the phonetic value of the

late diphthongal spellings is sometimes doubted: ‘The change is poorly represented in OE texts, partly no doubt because of the conservative influence of the *Schriftsprache*’ (Hogg 1992a: 215).

Turning now to Late British, the first thing that one notices about its diphthongal inventory is its lack of short diphthongs. It so happens that these did not survive in English beyond the Old English period. Secondly, as far as is known, the Late British diphthongs were of a different closing type (more similar to those which appear towards the end of the Old English period and in Middle English). They were thus unlike those of Old English, which seem to have been of a falling type, and so had a less prominent or weak second element, which seems to have reduced or assimilated to the prominent first element of the diphthong.

The diphthong /æo/ found no exact counterparts in Late British and may well have been lost, e.g. through monophthongisation; it may then have merged directly with open mid /ɛ:/ (i.e. rather than the presumed /æo/ > /æɑ/ > /æ:/ > /ɛ:/). The other two diphthongs show a resemblance to the Late British closing diphthongs, and they may conceivably have been replaced with Late British equivalent forms, e.g. /iu/ and /eu/. On the other hand, it is also possible that the resemblance was only apparent, since the attested texts seem to show already a reduction of the second elements of the diphthongs /iu/ > io/ and /eu/ > eo/, which, if their first element really was most prominent, could have been merged with equivalent monophthongal counterparts. In other words, the differences between the Old English and Late British diphthong types may have led to changes, namely simplifications and mergers similar to those which appear in Middle English texts.

Aside from the development of the inherited Germanic diphthongs, it bears mentioning that, while the Old English falling-type diphthongs were being lost in late Old English, new closing diphthongs were being created by processes closely resembling those which took place, albeit slightly earlier, in Brittonic. A new series of closing diphthongs was created by ‘vocalisation’ of [j] (< \*[j, j]) and /w/ (< [ɣ, w]) in syllable codas, yielding [i] and [u]. The new closing or outgliding diphthongs derive from native Old English vowel + /w/ and /y/ sequences, with /y/ showing the effects of the original allophonic variation [ɣ ~ j], when adjacent to velar and palatal vowels respectively (see 5.2.5). Although such a process of diphthong formation is easily comprehensible, it is not always clear when exactly diphthongs from the many V+w/y-sequences were created. When a new diphthong was formed depended on whether the diphthong-forming glide – either [j] or [w] (< \*/y/, \*/w/) – was part of the syllable coda or not. If the glide element was intervocalic and acted as the head of a following syllable, the conditions for the formation of a diphthong were not met. In such instances, diphthong formation resulted only when the following unstressed vowel was lost. Consequently, the glide would become word-final or pre-consonantal, that is the glide was no longer in the syllable head but in the syllable coda and formed a diphthong with the preceding nucleus vowel (see Aitken 2002: 19–20).<sup>257</sup> Nevertheless a significant number of words in Old English already had glides in syllable

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<sup>257</sup> Such examples of delayed diphthong formation tend to involve sequences of a short-vowel + glide + vowel.

codas before consonants and word-finally, so as to produce diphthongal sequences even in Old English. In addition some diphthongs were created by a process known as ‘Middle English breaking’ or ‘vowel accretion’, which involved the insertion of [i] and [u] between a vowel and a following velar fricative [x] (further details of this change are presented in Vennemann 2009b and 2.4.3). For illustration, the Middle English diphthong formation and reflexes in East Midlands English dialects is given in Fig. 20 (after Lass 1992: 50).

Pre-OE	OE example		eME	IME
e <sub>j</sub>	<i>weġ</i> ‘way’	}	ei	ai
ēux	<i>feohtan</i> ‘fight’			
æ <sub>j</sub>	<i>dæg</i> ‘day’		ai	
e <sub>j</sub> /æ <sub>j</sub>	<i>grēġ/græġ</i> ‘grey’	}		
α <sub>y</sub>	<i>dragan</i> ‘draw’			
α <sub>w</sub>	<i>clawe</i> ‘claw’		au	
æox	<i>seah</i> ‘he saw’	}		
æow	<i>scrēawa</i> ‘shrew’		eu	iu
euw	<i>hrēowan</i> ‘rue’		eu	
i:w	<i>snīwan</i> ‘snow’		iu	
α:y	<i>āgen</i> ‘own’	}		
α:w	<i>cnāwan</i> ‘know’			
α:x	<i>dāh</i> ‘dough’			
o <sub>y</sub>	<i>-flogan</i> ‘flown’			
ox	<i>dohtor</i> ‘daughter’		ou	
o:y	<i>plōgas</i> ‘ploughs’			
o:x	<i>sōhte</i> ‘sought’			
α:w	<i>blāwan</i> ‘blow’			
o:w	<i>grōwan</i> ‘grow’			

Figure 19. Creation of /Vi/- and /Vu/-diphthongs in East Midlands English

Possibly, the creation of some of the newly emerging new /Vi/- and /Vu/-diphthongs could have been catalysed by contact with Late British, for it had both /Vi/- and /Vu/-diphthongs resulting from syncope and apocope too (e.g. OW *liu* [liu] < PCl. \**līwā*; see 8.2.9 and Schrijver 2008: §3.6.1–2 for examples). Though the development of the new outgliding diphthongs in Middle English can also be explained by language internal change, it is at least clear that the development of these forms does not contradict any hypothesis of Brittonic influence on the development of the vowels in especially Medieval Northumbria. In general, then, the evolution of the diphthongs in South-Western, Midlands and Northern dialects shows no unexpected twists from the perspective of putative Late British contact. Only the Kentish diphthongs, which show

quite different developments, more similar to those in Frisian and continental Germanic, constitute a problem from the point of view of Late British contact.

## 10.7 Quantity changes

The inherited West Germanic quantitative system which relied on distinction of length in vowels and consonants was evidently in transition during the Old English and early Middle English periods. The changes which occurred, however, are often difficult to assess from written texts. Still, inroads can be made as a result of the unorthodox orthographic systems of a few innovative medieval scribes. It appears from the orthography of certain texts that developments (1)–(4) in below had taken place already during the Old English period:<sup>258</sup>

### (1) Homorganic cluster lengthening

OE	<i>cild</i>	ME	<i>chīld</i>	‘child’
	<i>climban</i>		<i>clīmben</i>	‘climb’
	<i>grund</i>		<i>grūnd</i>	‘ground’

### (2) Closed syllable shortening

OE	<i>cēpan</i>	ME	<i>kēpte</i>	‘keep/kept’
	<i>fīfta</i>		<i>fifte</i>	‘fifth’
	<i>sōfte</i>		<i>sōfte</i>	‘mild, soft’

### (3) Trisyllabic shortening

OE	<i>hāligdæg</i>	ME	<i>hālidei</i>	‘holiday’
	<i>sūþerne</i>		<i>sūþerne</i>	‘southern’
	<i>æmētte</i>		<i>ēmete</i>	‘emmet, ant’

### (4) Phonological degemination

OE	<i>æppel</i> /pp/	ME	<i>ap(p)el</i> /p/	‘apple’
	<i>offren</i> /ff/		<i>offren</i> /f/	‘offer’
	<i>sunne</i> /nn/		<i>sunne</i> /n/	‘sun’

In terms of chronology, Luick dates homorganic cluster lengthening to the eighth or ninth century (Luick 1914–40: 243, 267), and it may be noteworthy that similar tendencies before the clusters /ld/ and /nd/ are also evidenced in some dialects of Old West Frisian (Bremmer 2009:

<sup>258</sup> A later change, known as open syllable lengthening, did not take place until after the twelfth century and thus is outside the time-frame of this enquiry. Diacritic and metrical evidence demonstrates that open syllable lengthening had not occurred in the *Ormulum* (see Fulk 1996: 487, 505 *et passim*).

115). Luick (1914–40: 324, 330) dates closed syllable shortening and trisyllabic shortening to about tenth century or earlier, noting that especially closed syllable shortening begins already in the seventh century. These last two developments are characteristically English developments. Finally, Luick (1914–40: 1013) dates phonological degemination to about the thirteenth century. Recent scholarship has now shown, however, that degemination as a phonological process probably started to occur already in some Old English dialects (see Fulk 1996 and 6.2.1.2 above).

To what extent could some of the above mentioned quantity changes have been influenced by British phonology? It may be relevant that the British quantitative system was in a state of collapse at the time of Anglo-Saxon contacts. When one compares developments as reconstructed for Late British (see 8.2.8), both similar and dissimilar developments can in fact be observed. The first change, homorganic cluster lengthening, finds no parallels in Late British, and it may be relevant that this change has different outcomes in different English dialects. In particular, northern English dialects<sup>259</sup> appear to show irregular lengthening or a complete lack of lengthening before most homorganic groups, giving rise to northern traditional forms, such as /grʊnd, blɪnd, klɪm/ ‘ground, blind, climb’.<sup>260</sup> Usually, it is assumed that lengthening before homorganic clusters was effectively reversed, though not completely, due to occasional lengthened forms (see Aitken 2002: 7–8). Since long vowels did not occur before two or more consonants in Late British, the same constraint may well have been transferred into Brittonicised English in a situation of language shift.

The change known as trisyllabic shortening involved long vowels in the first syllable of three-syllable words. Most examples concern the shortening of long vowels in longer inflected forms, whereby long vowels in disyllabic nouns (e.g. in the nominative singular) have a short vowel in the trisyllabic plural form, e.g. *ċīcen* ‘chicken’, *hēafod* ‘head’, *ǣnig* ‘any’, *hǣring* ‘herring’ (all singular) vs. *ċīcenu*, *hēafodu*, *ǣnige*, *hǣringas* (plural forms) (see Lahiri & Fikkert 1999: 231). As noted above, trisyllabic shortening is a characteristically English change that did not occur in the histories of Frisian, Dutch or German. Long vowels were shortened in Late British in the very same environments as postulated for Old English, namely CVCVCV(C) (see 8.2.8). The difference between Late British shortening and Trisyllabic shortening is that the late British change originated from a difference in word stress, i.e. the Late British long vowel was in a pre-pre-tonic syllable CVCV'CV(C). Nonetheless, as a result of this change the template of a trisyllabic word with a long vowel in the initial syllable did not exist and so it is conceivable that the same prosodic template could have been transferred into English in a situation of language shift.

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<sup>259</sup> The other exceptional dialect here seems to be Kentish, which, based on Middle English spelling evidence, seems to show shortened vowels in monosyllabic forms but lengthened vowels in disyllabic forms, e.g. ⟨lamb⟩ /lamb/ vs. ⟨lombe⟩ /lɔ:mbə/ (see Luick 1914–40: 330).

<sup>260</sup> I.e. southern and Received Pronunciation forms show lengthened /i:/ and /u:/ plus the effects of subsequent diphthongisation as a result of the Great Vowel Shift.

The other characteristically English change which occurred sometime during the Old English period is closed syllable shortening. By this change, a long vowel was shortened when followed by two or three consonants, e.g. OE *fīfta* (< \**fīfta* ‘fifth’), *brǣmbilas* (\**brǣmb(i)l-* < \**brǣmbil-* < \**brǣmbil-* ‘brambles’).<sup>261</sup> The change finds a parallel in Late British, since long vowels were shortened before two consonants in the prosodic template CVC’CV(CVC) (see 8.2.8 – note, however, that the stress placement was different in Late British and [Pre-]Old English). Although the quantity systems of other older Germanic languages were changing in the medieval periods too, it may be relevant that West Germanic languages and dialects do not show the highly similar types of developments which Late British and Old English share, therefore the notion of Late British prosodic influence on early Old English must also be viewed as a possibility.

Recent discussions by Fulk (1996) and others have confirmed that degemination must have preceded open syllable lengthening. Briefly, geminate consonants were lost everywhere, except in intervocalic position after short vowels, where a contrast OE *sunne* ‘sun’ vs. *sunu* ‘son’, was preserved. As such, this system could be described as marking a difference in syllable contacts: short vowel + tautosyllabic consonant + vowel vs. short vowel + heterosyllabic consonant + vowel. In this situation, geminate consonants, which already attained a much reduced function, being restricted only to intervocalic position after short vowels, had a tendency to lose phonological status and reduce in terms of phonetic length, while retaining their function of closing the syllable. It is unclear from the twelfth-century *Ormulum* text whether such intervocalic geminate consonants had at that stage lost phonetic length. Yet the system can effectively be described as one which preserved a contrast: closed syllables with short vowels vs. open syllables and closed syllables with long vowels. As Mailhammer (2007: 53, 2009: 266–73) points out, although the phonological status of geminate consonants was lost in England (because they predictably always followed a short vowel), geminate consonants<sup>262</sup> may have retained phonetic length into the twelfth century and longer. Indeed, there is evidence to suggest that in Late Northumbrian texts of the tenth century consonantal length was no longer distinctive. Rather, it seems a difference in syllabic structure was being indicated by scribes, i.e. single consonants were marked as being either tautosyllabic or not (see 6.2.1.2; indeed Fulk 1996 has argued that this situation was general in classical Old English). The evidence indicates that a mixed type quantity system based on syllable structure, in many ways similar to that found in the

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<sup>261</sup> It seems that this process took place in stages, though the precise dating is unclear. In English there came a general shortening in Old English also in monosyllabic forms before a consonant group, e.g. *dūst*, *ǣht*, *lēoht* ‘dust, property, light’ (< \**dūst*, \**ǣht*, *leoht*). This same development also occurred in Brittonic but not until after the Late British period, since the Welsh forms *sawdl* ‘heel’ and *mawrth* ‘Tuesday, March’ (< \**stāt-lo*; L *Mārtis*) evidence the diphthongisation of /ɔ:/ (< \*/ɑ:/) > /au/ (cf. Sims-Williams 1990: 254, McCone 1996: 163), which probably did not take place until about the eighth century (Jackson 1953: 697).

<sup>262</sup> These are so-called prosodic geminates (see 6.2.1.2).

*Ormulum*, also pertained to varieties of Old English. And since this system can be partially deduced from texts, it is even more likely that this situation pervaded the spoken idiom much earlier. This transition from a quantitative system to one that depended on contrasting syllable contact types seems similar to that in Late British and even to some varieties of Modern Welsh; so the situation in medieval English may in some way have been influenced or catalysed by contact with Late British.

## 10.8 Summary

Previous theses by Murray, Samuels and Aitken which argued that restructuring of the Old English long vowels was due to Gaelic, Scandinavian and French influence, respectively, were surveyed in this chapter but viewed as untenable. On the other hand, a comprehensive contrastive analysis of the Late British long vowels did suggest that a number of long vowel developments occurring especially, though not exclusively, in northern medieval sources could potentially find explanations within the context of a Brittonic language-contact scenario. These developments included: unconditioned fronting of /o:/; raising of /æ:/; and possibly the development of Old English /ɑ:/ to /a:/ and /ɔ:/ in northern and southern dialects, respectively. An analysis of the developments of the short vowels revealed that the Late British vowel system contained most of the short vowels in Pre-Old English. However, the threefold reflex of PGmc \*/a/, namely [æ, a, ɒ], found no comparisons in the Late British system, which only had one, probably central, low vowel /a/. Thus, the usual merger of the three Old English low short vowels, as appears in late Old English manuscripts, may well receive an explanation within the context of Brittonic influence. As for the diphthongs, the Old English falling-type diphthongs were generally lost (except in Kentish), and new closing diphthongs were formed in many ways similar to those in Late British, though whether this could have been influenced by British contact is difficult to determine. Finally, a number of so-called quantity changes in Old English were discussed in the light of similarities and differences in Late British. Here a number of developments in Old English were identified which could receive a possible explanation within the context of Late British contact, due to the different syllable structure constraints that existed in Late British.

## **PART IV: CONCLUSION**





## 11 Conclusion

This thesis has investigated the possible influences of Brittonic on the early phonological development of English. Two approaches were used. First, by comparing the probable phonological systems of Late British and Pre-Old English at the time of contact, I determined to what degree their sound systems were similar and dissimilar. On this basis, it was possible to gauge which segments may or may not have been susceptible to change in a situation of language shift. Secondly, specific phonological changes in Old English and Middle English were reconsidered with an eye for possible Brittonic influences too. Thus, by submitting the data to two forms of analysis – prognostic on the one hand, diagnostic on the other – this investigation was less selective and consequently more impartial than previous studies into early Brittonic influence on English. In this final chapter, I collect and interpret the main results of the Chapters 6, 7 and 10 and show, where possible, how they may fit into ongoing linguistic research into Anglo-Saxon and British relations ca. 450–700 AD.

### 11.1 Results

The first thing that one observes from the various contrastive analyses scattered throughout Chapters 6, 7 and 10 are the many similarities in the phonologies of Late British and Pre-Old English. The consonant phonemes of Pre-Old English existed in Late British, though not all of their positional variants (Chapter 6); the complexity of syllables in both languages was roughly equal (Chapter 7); despite having very different vowel inventories, both languages had front, front-rounded and back-rounded vowels, and up to four heights of vowel (Chapter 10). Thus, owing to the large number of similarities in the phonological systems of Late British and Pre-Old English, one would not predict phonological structuring on a radical scale, as can occur when two languages with vastly different phonological systems come into contact. Where the phonologies of Late British and Pre-Old English did *not* differ, phonological change is *not* expected, and indeed is *not* typically found. This observation constitutes a result in itself, and though it is not especially convincing as an argument for Brittonic influence on English, it does not militate against the notion either. Within the analysis offered here, it forms an integral, if subordinate, finding.

More persuasive as an argument for Brittonic influence on English are the possible changes in English phonology that do correspond to differences in the reconstructed Late British sound system. At numerous times in this investigation, I have re-evaluated specific phonological developments in English after comparing and contrasting the phonologies of Late British and Pre-Old English. These included:

1. Irregularities in palatalisation of velar consonants, in particular /k/ (6.2.1.1)
2. Non-etymological double consonant graphs, especially /p, t, k, m/ (6.2.1.2; 6.2.3.2)
3. Phonation, in particular lack of aspiration, of plosives (6.2.1.3)
4. Phonemicisation of a voice contrast in fricatives: /f, θ, s/ vs. /v, ð, z/ (6.2.2.3)
5. Simplifications of /mb, nd, ŋg/ to /m, n, ŋ/ in intervocalic and other positions (6.2.3.1)
6. Non-etymological uses of /h/ (6.2.2.4)
7. Loss of glottal stop epenthesis (6.2.1.4)
8. Irregularities in the development of /sk/ to /ʃ/ (7.2.2.1)
9. Preservation of /hw/, and the northern merger of /kw/ and /hw/ > /χw/ (7.2.4; 7.2.4.1)
10. Raising of /æ:/ (10.2.2.2)
11. Development of /ɑ:/ to /a:/ in the North vs. /ɔ:/ (South) (10.2.2.3)
12. Unconditioned fronting of /o:/ to /ø:/ (10.2.2.4)
13. Merger of /æ, ɑ, ɒ/ > /a/ (10.4.2)
14. Loss of Old English falling diphthongs and creation of closing diphthongs (10.6)
15. Quantity changes (10.7)

Clearly, some of the above developments represent stronger cases for possible Brittonic influence than others, and I have also at times made clear that some such developments were subject to other influential factors as well (such as Viking Norse influences in examples 1 and 8 above). The strength of any proposal for foreign influence on Medieval English phonology is usually rather weak when viewed in isolation; only by positing an assemblage of possible foreign influences do such proposals gain plausibility. With this in mind, I intend to consider several relevant, probably non-coincidental connections of these results in the remainder of this chapter and draw, where appropriate, on other supportive research. In particular, I want to examine the linguistic geography of some of the phonological changes that were investigated.

## 11.2 Geography of results

Overall, one cannot help but notice that very little possible Brittonic influence on English phonology can be detected in southern Britain, in particular in the south-eastern corner of England, on which basis modern British and American Standard pronunciations were ultimately formed. This fact alone raises the question whether indeed Late British was spoken in the lowland areas of Britain by the fourth and fifth centuries, or whether in fact Vulgar Latin was widely spoken among Romanised Britons, as is sometimes claimed (see 2.2 and 2.4). While it has not been my main objective to investigate possible Latin influences on English, it is fair to say that some phonological developments in English could conceivably have resulted from either British Celtic or British Latin influence, e.g. loss of glottal stop epenthesis (6.2.1.4), merger of /æ, ɑ, ɒ/ at /a/ (10.4.2), loss of Old English falling diphthongs (10.6), and possibly some quantity changes (10.7). More interesting for the hypothesis of Vulgar Latin influence in southern

England are a handful of developments which appear in late Old English and Middle English and which are basically restricted to Southern and South Midland dialects. These are:

S1. Voicing of initial fricatives: /f, θ, s/ become /v, ð, z/ (6.2.2.2)

S2. Frication of /w/ to /β/ (6.2.5.1)

S3. *H*-dropping and other non-etymological uses of /h/ (6.2.2.4)

In my discussions of changes S1–S3 I tentatively concluded in each case that contact with Vulgar Latin may have been an influential factor, and especially for features S2 and S3. Yet I also noted that there is another problem with these changes: they are found in some continental varieties of Germanic too, most obviously medieval and modern dialects of Dutch, spoken south of the River Rhine.

Since Germanic-speaking areas of the Lower Rhine were within the boundaries of the Roman Empire too, and since in some of this area a Brittonic-like variety of Celtic had significantly yielded to Vulgar Latin, the possibility of Vulgar Latin influence on these varieties of Germanic cannot be ruled out either. If so, one wonders whether changes S1–S3 could have been brought over from the Continent as a result of an early settlement of southern Britain from the lower Rhine region. In this connection, one might also consider whether the estimated limits of a low front vowel /æ:/ (< PGmc \*/æ:/) in West Saxon and early Kentish, in comparison to /e:/ of Anglian dialects (see Map 12) might also result from different migration patterns. Such consideration might be especially relevant since it is thought that, roughly speaking, a reflex /æ:/ was found approximately below the Rhine and /e:/ above it (see 9.2.2). The notion of ‘Saxon’ and indeed ‘Jutish’ settlements emanating from the Lower Rhine area seems to be both historically possible and logistically plausible and has been argued for on different grounds before (see Bennett 1955, Gysseling 1981, Oppenheimer 2006: 267–330). If such was the case, the degree to which Vulgar Latin influenced the development of southern Old English in England would of course be considerably diluted.

Another possibility that has sometimes been suggested to explain the changes that occurred in both Kent and the Low Countries is continued cross-channel influences from the Lower Rhine area as well as Frisia. It has been noted that Kentish, including surrounding dialects of Sussex, Surrey and Essex, underwent a number of phonological developments which are suggestive of continued contact with Continental North Sea Germanic varieties, e.g. the merger of the *i*-mutation products /y:/ and /ø/ at /e:/, the change of /ð/ to the plosive /d/, and the creation of rising diphthongs with a palatal on-glide *gōd* > *guod* ‘good’ (see Samuels 1971: 9–11, Nielsen 1985: 250; against the idea is Voss 1995). These changes appear in late Old English documents at around the same time as S1–S3 above; however, they have a much more limited geographical distribution – predominantly Kent – and so are, I think, of a different pedigree. In short, it appears possible that Latin influence is ultimately responsible for some phonological changes found in southern Britain as well as Germanic dialects of the Lower Rhine area. Significantly for

this thesis, however, very few, if any, markers of Brittonic influence on English phonology were found in the south of England.

In the north of Britain, there occur many examples of phonological change which could potentially have resulted from contact with Late British. On the one hand, one finds some developments, such as the phonemicisation of a voice contrast in fricatives (6.2.2.3), which are not exclusively northern but seem to have initiated in the North. On the other hand, there are some developments that must be considered exclusively northern in character. These are:

- N1. Irregularities in palatalisation of velar consonants, in particular /k/ (6.2.1.1)
- N2. Unexpected gemination of /p, t, k, m/ (6.2.1.2 and 6.2.3.2)
- N3. Simplification of /mb, nd, ŋg/ to /m, n, ŋ/ (6.2.3.1)
- N4. Merger of /kw, hw/ > /χw/ (7.2.4.1)
- N5. Development of /ɑ:/ to /a:/ (north) (as opposed to /ɔ:/ in the South) (10.2.2.3)
- N6. Fronting of /o:/ to /ø:/ (10.2.2.4)
- N7. Inconsistent Homorganic Cluster Lengthening (10.7)

Of the above, developments N3–N7 are of particular interest as these together form a bundle of isoglosses, the southern limits of which mark off what can be best described as a Northumbrian vs. Southumbrian border zone. Based on the evidence of both medieval and modern dialects, these northern features are found in some frequency north of the Humber–Ribbles line, though they are also found with some regularity further south in north-midland areas, especially from northern Lincolnshire (Lindsey) to the Mersey, and sporadically further south in the central midlands.

There seems to be a consensus among scholars that the Northumbrian–Southumbrian dialect division has its roots in the Old English period. Kolb and later scholars sought a connection with the old kingdom and ecclesiastical boundaries of Northumbria and Mercia (Kolb 1965: 153, Brook 1978: 62, Wakelin 1977: 102, Wales 2006: 42–8). It can be agreed with Kolb that the dialect boundary does correspond quite closely to the estimated division of the Northumbria–Mercian, though, within the context of this thesis, it can hardly be ignored that the Anglo-Saxon division itself almost certainly goes back at least to Roman times due to the correspondence with the fourth-century province *Brittania Secunda*, whose southern boundary probably stretched approximately from the Humber to the Mersey (e.g. Higham 1993: 50, Pryor 2005: 160). This Roman province, we assume, was separated into a number of petty British kingdoms after the departure of the Romans – Deira and Bernicia being the two easternmost. Many of these kingdoms clearly came under successive Anglo-Saxon rule, despite retaining their Celtic names.<sup>263</sup> As interesting as this continuity of Romano-British political geography is, it still

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<sup>263</sup> Likewise, the Anglo-Saxon ecclesiastical structure looks increasingly like it was founded on older Romano-British structures. Mann (1998) inferred that the early establishment of the Anglo-

does not explain why an English dialectal divide arose here in Anglo-Saxon England. Three explanations have been proposed for this division and are discussed below.

First, Trudgill (1999: 35) has suggested that the boundary may reflect 'Anglo-Saxon Europe-to-Britain settlement patterns'. Trudgill is not very explicit in explaining what he means by this statement, but I assume it rests mainly on the idea that different Germanic tribal groups settled in Britain and therefore some dialectal differences may have been transplanted from the Continent. Unfortunately, he provides no data in support of this idea of Europe-to-Britain settlement patterns. Also, Nielsen's seminal study of phonological and morphological correlations between Old English and the continental Germanic languages, furnishes no evidence for Trudgill's idea. Rather, Nielsen (1985: 258) concludes that: 'The pre-invasion correspondences between the OE dialects and the continental languages are few and even contradictory, and there is nothing in the evidence to suggest that the OE dialects were the direct successors of ancient tribal dialects transferred from the Continent'. More likely, then, the phonological isoglosses which divide Northumbria and Southumbria were not imported from the Continent but developed in Britain itself.

Secondly, some scholars believe that two focal dialect areas arose by natural language evolution after the Anglo-Saxon settlements. Wakelin (1983: 11) argued that contact and communication between northern and southern speakers could have been impeded by the natural barrier of the Humber, noting that it fans out into over half-a-dozen tributaries and 'over an area of remote and sparsely-populated land (at least during the medieval period), which, even today, still consists mainly of moorland, dales and hills, sheep-farming country'. Political boundaries may also have worked to create dialectal division. Because of the British Kingdom of Elmet, in the West Riding of Yorkshire, Northumbria and Mercia effectively had no common border until King Edwin's forces overthrew it soon after 616 (see Breeze 2002b). Furthermore, Stenton (1971: 33) emphasised that Elmet was crucial in reinforcing a division between Northumbria and Southumbria. For one thing, it 'must have been a serious obstacle to any military co-operation between the invaders of northern and southern Britain [...] it must have kept the Northumbrian invaders apart from any of the earlier confederacies formed among the southern peoples' (Stenton 1971: 33). Taking these ideas one step further, Wales (2006: 44) reasoned that the territorial division 'may have confirmed a perception of difference between the North and the South, and even of an essential distinction between Northumbrian English and dialects further south'. In short, it could well be imagined that, due to the aforementioned topographical and geopolitical factors, two focal dialect areas could develop to the north and south of the Humber

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Saxon bishoprics was most likely just a re-establishment of earlier British bishoprics. After Gregory the Great had sent Augustine to Britain in AD 597, he ordered him to establish a metropolitan bishopric in London and another at York, each of whom was to consecrate twelve bishops in his province, and 'since at the time Augustine had no access to either London or York, it seems likely that Gregory was basing his proposed organization on documents relating to the British Church which he found in the papal archives' (1998: 33).

in the fifth and sixth centuries. Even so, this line of argument does not address why particular sound changes – specifically, changes in Northumbrian English – occurred. The changes themselves could be viewed as accidental or random; but several of them do not strike one as being particularly common or even natural phonological changes that would have spontaneously occurred.

The third explanation considers Scandinavian influence. Samuels (1985) viewed the southern Humber–Ribble boundary as an indicator for the limits of intense Scandinavian influence. But while there is lexical evidence from the *Survey of English Dialects* that more Scandinavian loanwords are found above of the Humber–Ribble area than below it, they soon peter out to the north of Tees–Solway line, which remained under English control (note also that Scandinavian place-name elements are rarely found above the Tees–Solway line). By contrast, the phonological developments listed in N1–N7 above do not become obsolete north of the Tees–Solway line but carry on into Durham, Northumberland and Lowland Scotland. It is true that Samuels attempted to explain N5 and N6 by Scandinavian influence (10.2.1.2), speculating that these two developments might have spread north of the Tees and into Scotland by later migrants. But this argument is untenable, since Norse loanwords would have a greater chance of diffusing among the Scots than less salient phonetic variation in the pronunciations of vowels. When Kolb introduced the concept of the Scandinavian belt, he was keen to stress that the northern and southern boundaries of strong Scandinavian influence on English were of a very different nature, and that the northern Tees–Solway belt was ‘stabiler und schärfer und auch historisch erstaunlich fest’ (1965: 149).<sup>264</sup> Since changes N1–N7 clearly stretch north of the Tees–Solway boundary, they do not serve as good candidates for Scandinavian influence and are more likely to predate the period of Scandinavian settlement.

None of the three proposals above is able to provide a plausible account for the northern phonological developments, and so we are justified in thinking that they may have resulted from Brittonic influence, consequently helping to create an early dialectal division in English. Why, however, Brittonic phonological influence may have been stronger in the North, is not yet entirely clear. Jackson (1963: 60) reasoned that the likelihood of a survival and assimilation of considerable numbers of Britons amongst Anglo-Saxons was more probable in northern England than anywhere else and that Celtic influence was more likely there than anywhere else.<sup>265</sup> Indeed, the more fertile lowlands of Britain – in particular, areas of south-east England and the East Midlands – would have been a more popular choice for settlement than the more barren highland areas of Northumbria and western England which were at a greater distance from the continental homeland of the settlers and more different from their accustomed Continental habitats. Although very little is known about the early Anglo-Saxon settlement of Deira and Lindsey, the subsequent Anglo-Saxonisation to the North and West of these kingdoms appears to have been

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<sup>264</sup> ‘more stable and more sharply delineated and also historically astonishingly robust’.

<sup>265</sup> To quote Jackson (1963: 60): ‘if it [i.e. Celtic influence on English, SL] is true anywhere it is likely to be true here [i.e. Northumbrian, SL]’.

rapid. Archaeologists, too, have often inferred that the North of England became Anglo-Saxon in a rather different way from the South of England, pointing to various signs of population continuity through what was undoubtedly also a turbulent time (cf. 2.2 for archaeological details, and on Bede's testimony of Æthelfrith and Cadwallon's bloody rampages in Northumbria see 2.1). The findings of this study strongly suggest that the social and linguistic contacts between Britons and Anglo-Saxons was different in the North than in the South of Britain since more possible Brittonic phonological influences are registered northern English dialects.

### 11.3 Interpretation

In the preceding section, I reasoned that there was a more pronounced Brittonic phonological influence on English in the North than in the South. But can this view be corroborated by further linguistic evidence? In particular, the question should be asked how the results of this thesis compare with the more extensive research that has been carried out in the domain of Brittonic morphological and syntactic influence in English. Since both phonological and morphosyntactic influences are thought to have arisen in English as a result of language shift, we should expect to find at least some correspondences in these results which, in turn, may help us to piece together a more realistic picture about what took place during the Anglo-Saxon settlement of Britain and the subsequent centuries.

Although research into the linguistic geography of proposed Brittonic morphosyntactic influences on English is still ongoing, significant first steps to a possible regional typology of Brittonicisms have already been made in two articles by White (2002, 2006). Following a survey of nine morphosyntactic features in his 2002 article and (a somewhat optimistic) ninety-two possible features in his 2006 article, White concluded that the highest number of correspondences between English and Brittonic is found in the South West and the North, while the lowest number of correspondences is found in the South East (2002: 167, 2006: 324). In other words, both my study and White's posit significant Brittonic influence in the North and a general lack of influence in the South East. Where our investigations differ, however, is in their assessments of Brittonic influence in the South West. In this region, White posits substantial Brittonic morphosyntactic influence; I have not been able to uncover significant phonological influence there.<sup>266</sup> Since my investigation and White's differ in regard to the South West, it may be suspected that one or both of our studies are flawed. My investigation may, for instance, have

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<sup>266</sup> White's 2006 paper also posits some phonological parallels between Brittonic and English which may have resulted from contact. In particular, he cites the voicing of initial fricatives and retroflex /r/ as two possible Brittonicisms in the South West (citing Tristram 1995a, 1995b). However, Tristram does not claim that the two features resulted from Brittonic influence in her articles, nor do I see any clear grounds for doing so (see 6.2.2.2 and 6.2.4.2). There is a greater likelihood that these phonological features were transferred into South-West British from English than vice versa.



given too much attention to the often more salient phonological isoglosses separating the North and the South – especially in Chapter 10, which considered the developments of vowels and diphthongs. However, the same cannot be said about Chapters 6 and 7, which investigated consonantal developments. In what follows, I will assume that the results of both studies are basically right but must be interpreted differently.

One of the most interesting results of White's research into the regional typology of suspected Brittonic influences on English is that some overriding differences in the type of Brittonic morphosyntactic influence in the North and South West can also be distinguished. As a general rule, the North is characterised especially by the precocious simplification of inflectional morphology in nominal, pronominal, adjectival and verbal paradigms, coupled with the abandonment of inherited Germanic uses of case and grammatical gender. On the other hand, the South West, apart from experiencing a good amount of simplification too, is also characterised by earlier introduction of structural features and categories, most especially in the verbal domain (e.g. periphrastic *do* and progressive *-ing* – both of which are periphrastic constructions involving verbal nominalisation). Thus, in addition to some evidence of simplification we also find what amounts to complexification of grammar in the South West, through the introduction of additional constructions and categories. Hence White speaks about the 'Northern Simplification Package' and the 'Southwestern Nominalization Package' (2002: 156 *et passim*). In my view, the tendency for different forms of influence in the North and South West may have resulted from slightly different situations of language acquisition and language shift in the two regions.

Turning first of all to simplification, it is easy for any student who has studied Old English to understand how difficult it is to acquire even a basic knowledge of its opaque, irregular and often redundant inflectional morphology. By the same analogy, it is not hard to imagine that in a situation of group second language acquisition the inflectional morphology of (Pre-)Old English would have been a prime candidate for simplification. This point has been spelled out most clearly by Trudgill (2009), who argues that simplification occurs at its most dramatic in short-term language contact situations involving language learning by adults who naturally encounter difficulties in acquiring opaque, irregular inflectional morphology. By virtue of the same argumentation, Trudgill also dismisses the view that such simplification in especially the North came as a result of Norse influence, since relations between Norse and Anglo-Saxons were characterised by cohabitation and intermarriage on equal terms, leading to substantial child language acquisition among the disproportionately larger numbers of native English speakers. In other words, Norse speakers may well have induced further simplification, but the main agents of this process were Britons.<sup>267</sup> Thus, in a situation of adult and adolescent language learning we

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<sup>267</sup> Furthermore, Norse settlements in the late ninth to mid-tenth century are too late to account to account for simplification in late Northumbrian documents. Glosses of the *Lindisfarne Gospels* and the *Durham Ritual* (both ca. 950) already show outstanding decay of the Old English declensional system and likewise reveal a large number of occurrences of the demonstrative

should expect to see simplification. Since the North of England is viewed as the focal area of simplification, it is likely that there was more adult language acquisition there than anywhere else. In such a situation we ought also to find some transfer of structural properties, mainly calquing and, importantly for this thesis, imperfect acquisition of phonetics and phonology.

English dialects in the South West, although subject to simplification too, show good evidence for the integration of new features, leading essentially to a complexification of grammar. Trudgill argues that complexification typically arises from long-term co-territorial contact situations involving childhood bilingualism. For instance, McWhorter (2008) cites periphrastic *do* and progressive *-ing* as examples of Brittonic-induced complexification that emerged as a result of long-term bilingualism and language shift in especially the South West. In situations of extended bilingualism, new contrasts would arise, i.e. features occurring in the neighbouring Brittonic language may have been copied, by internal change rather than borrowing (cf. Dixon 1997: 19). Therefore even if a development may seem to be driven by internal change, it may still be external in nature (which would of course in part account for the difficulty of explaining some such developments in English as being the result of Brittonic influence).

Both Trudgill's and McWhorter's views of possible Brittonic structural influence differ in detail but are broadly compatible. There is enough evidence to make a case for simplification and complexification as a result of Brittonic influence in the North and the South West. There was just more simplification in the North than in the South West, and more complexification in the South West than in the North. One explanation for this difference would then be that, all things being equal, there was more adult learning in the North, leading to more intense simplification of Old English inflectional morphology, earlier loss of grammatical gender and a more pronounced Brittonic 'accent' in the English of this region. By contrast, in the South West, there was more childhood bilingualism probably resulting from longer periods of co-territorial habitation, resulting in a slightly higher level of proficiency in the acquisition of Anglo-Saxon morphosyntax and, importantly for this investigation, phonetics and phonology.

Ultimately, the reasons for the different modes of language shift must be sought in the sociohistorical circumstances that pertained to both areas. In the South West we are fortunate to have some textual evidence to support the view that there was a significantly large population of Britons – mainly but not only slaves – living among Anglo-Saxons and protected by Anglo-

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pronoun with nouns of different historical gender (see Campbell 1959: 222, Jones 1988: 26). The two Northumbrian sources were glossed outside of the Danelaw, namely in Chester-le-Street, i.e. not in an area of Scandinavian settlement or intense contact. Only a modest number of Scandinavian loanwords – many of which uncertain – can be spotted in Aldred's glosses. There is no evidence to suggest that Aldred had any Scandinavian ethnic background. Aldred himself mentions that his father was called Alfred (see Roberts 2006: 30) – a no doubt unpopular choice of name among recent Scandinavian settlers.

Saxon law. These circumstances, as inferred from the Wessex laws of Ine of the late seventh century (see Grimmer 2007, Lutz 2009: 239–44), would admit for the scenario of co-territorial existence and bilingualism, involving better acquisition of English especially as a result of child acquisition.<sup>268</sup> The contact situation in the North is more elusive. Although very little is known about the early Anglo-Saxon settlements of Deira and Lindsey, the subsequent Anglo-Saxonisation to the north and north-west of these kingdoms appears to have been rapid. Bede's narrative charts a very turbulent and bloody period, especially from the late sixth to the early seventh century. We can only hypothesise that in these regions long-term coexistence of the two ethnic groups was less typical than in the South West, leading in general to a higher level of imperfect adult acquisition. It is also possible that there were fewer Anglo-Saxon settlers in the North than in the South, due to their being more sought after farmland in the southern lowlands and, moreover, because the South is closer to the Anglo-Saxon homelands. Thus, there may well have been a proportionally much larger number of Britons to Anglo-Saxons in the North than in the South and South West, reducing the amount of contact between both ethnic groups and possibly leading to a situation of large numbers of Britons essentially learning English from their own people (i.e. similar to the situation in Ireland in recent centuries). In general, then, there is some evidence to support the view that the sociohistorical circumstances in the North would have resulted in more adult language learning than in the South West, which in turn would have led to a more pronounced Brittonic 'accent' in the North.

#### 11.4 Outlook

Throughout this dissertation I have taken an open-minded view towards the possibility of Brittonic influence, while being acutely aware of the uncertainties of much of the evidence and the difficulties of making statements about the distant past. Importantly, the comparative analyses, on which much of this study has hinged, have resulted not so much from my groundwork but from that of other scholars working within their own disciplines of either Celtic or English historical phonology. This fact alone ensured the required level of impartiality throughout. It is to be hoped that by subsequent augmentation of the data which underlies these analyses – as a result of occasional runic finds or through the reinterpretation of place-name evidence – further refinement can be brought to parts of the reconstructions offered here, which will lead to new insights. Given what is known about the phonological systems of both languages at the time of contact, it will now at any rate no longer be sufficient to claim there was no phonological influence on English without actually suggesting what influences ought then to have occurred in English. Clearly, the linguistic evidence will always be patchy. Bridges with other historical, archaeological, and perhaps even genetic evidence need to be made. It is

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<sup>268</sup> King Alfred's laws, promulgated in the late ninth century, no longer address the legal status of Celts, which has been taken by some scholars as an indication that by the ninth century, ethnic Britons had largely been integrated within Anglo-Saxon society (Pelteret 1995: 84).

necessary, furthermore, to hypothesise about models and simulations of change and to compare and contrast other attested contact situations (as I have tried to do). Though much remains obscure, I am optimistic that, also thanks to this contribution, a more nuanced picture of Britain's linguistic heritage is emerging, which can be set beside the seemingly more advanced research of other disciplines. Due to the unlikelihood of discovering new historical tracts, like those of Gildas or Bede, it is now mainly through the excavation of land and language that we can hope to gain further insights into the dark centuries of British history.



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- Zosimus, *Historia Nova* = see Ridley 1982.





## Samenvatting in het Nederlands

De dissertatie onderzoekt de mogelijke Brythonische invloed op de vroege fonologische ontwikkeling van het Engels door middel van een contrastieve analyse van de beide klanksystemen, gesteund door methoden van de historisch-vergelijkende taalwetenschap. Onder andere worden de volgende ontwikkelingen onderzocht:

1. Onregelmatigheden in de palatalisatie van de velaire medeklinkers, in het bijzonder de /k/ (6.2.1.1)
2. Niet-etymologische dubbelschrijving van medeklinkers, in het bijzonder van /p, t, k, m/ (6.2.1.2 en 6.2.3.2)
3. Fonatie, in het bijzonder afwezigheid van aspiratie, bij de ploffers /p, t, k/ (6.2.1.3)
4. Fonemisatie van stemcontrast in de wrijfklanken: /f, θ, s/ vs. /v, ð, z/ (6.2.2.3)
5. Vereenvoudiging van de klusters /mb, nd, ŋg/ tot /m, n, ŋ/ (6.2.3.1)
6. Niet-etymologisch gebruik van /h/ (6.2.2.4)
7. Verlies van de epenthese van de glottisslag (6.2.1.4)
8. Onregelmatigheden bij de ontwikkeling van /sk/ naar /ʃ/ (7.2.2.1)
9. Behoud van /hw/ en de noordelijke samensmelting van de /kw, hw/ > /χw/ (7.2.4.1)
10. Palatalisering van /æ:/ (10.2.2.2)
11. Ontwikkeling van /ɑ:/ tot /a:/ (in het noorden) (in tegenstelling tot /ɔ:/ in het zuiden) (10.2.2.3)
12. Onvoorwaardelijke palatalisatie van de /o:/ > /ø:/ (10.2.2.4)
13. Samensmelting van /æ, ɑ, ɒ/ > /a/ (10.4.2)
14. Verlies van de Oudengelse dalende tweeklanken en ontstaan van sluitende tweeklanken (10.6)
15. Kwantiteitsverandering bij klinkers (10.7)

In de Zuid-Engelse dialecten, in het bijzonder in de zuidoostelijke hoek van Engeland, kunnen maar zeer weinig voorbeelden van mogelijke Brythonische fonologische invloed gevonden worden. In het noorden daarentegen, zouden veel voorbeelden van fonologische verandering het resultaat kunnen zijn van vroege contacten met het Brythonisch. Specifiek noordelijke ontwikkelingen zijn bijvoorbeeld de nummers 1, 2, 5, 9, 11, 12, 15 uit de lijst hierboven.

Globaal gezien kan men stellen dat de bevindingen van deze studie sterk aangeven dat de sociale and talige contacten tussen de Britten en de Angelsaksen in het noorden van Brittanië anders waren dan in het zuiden. Deze uitkomst is grotendeels verenigbaar met onderzoek naar de Brythonische morfosyntactische invloed op het Engels, zij het met één uitzondering: morfosyntactische invloed is in het verleden vaak geponeerd voor de Engelse dialecten in het zuidwesten, terwijl deze studie er niet in geslaagd is veelbetekenende Brythonische fonologische invloeden bloot te leggen in dezelfde streek.

Verschillen in het type van Brythonische morfosyntactische invloed in het noorden en het zuidwesten zijn behulpzaam bij het bieden van een verklaring voor de fonologische resultaten.

Als algemene regel kan men stellen dat het noorden gekenmerkt wordt door de vroege vereenvoudiging van de verbuigingsmorfologie, de naamvalsmarkering en het grammaticaal geslacht. Afgezien van het eveneens ondergaan van een aanzienlijke mate van vereenvoudiging, wordt het zuidwesten meer gekenmerkt door de vroege introductie van Brythonisch-achtige structurele kenmerken en categoriën, in het bijzonder in het domein van het werkwoord.

In het slot van deze dissertatie wordt aangetoond dat er in het zuidwesten meer jeugdtweetaligheid was, het resultaat van langere perioden van samenleving in hetzelfde gebied, en dat tot een enigzins hoger bekwaamheidsniveau in de verwerving van de Angelsaksische morfosyntaxis, fonetiek en fonologie geleid heeft. In het noorden daarentegen waren er waarschijnlijk in verhouding veel meer Britten dan Angelsaksen. Dit heeft geresulteerd in meer taalverwerving onder volwassenen, wat op zijn beurt weer geleid heeft tot een intensievere vereenvoudiging van de Oud-Engelse verbuigingsmorfologie en een uitgesprokener Brythonisch “accent” in het Engels van de streek.

## Curriculum Vitae

Stephen Laker was born in Guisborough, England, on 25 April 1976. After gaining A-levels from Prior Pursglove College at Guisborough in 1994, he spent a gap year in Munich, Germany. He subsequently enrolled as a student at the Ludwig Maximilian University in Munich in 1995 and graduated with a first class degree in German Linguistics, Semitic Languages and English Linguistics and Medieval Literature in 2002. The following year he became a doctoral research student (*assistent in opleiding*) at Leiden University, where he wrote most of this dissertation over a period of four years. In the period from 2008 to 2009 he took up a visiting lectureship in English Language and Linguistics at the University of Manchester, England. He is currently employed as a lecturer in English Language and Linguistics at Kyushu University in Japan.