A Historical Phonology of English

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Contents

Abbreviations and symbols

AAVE	African American Vernacular English
adj.	Adjective
AmE	American English
ANAE	Atlas of North American English
AN	Anglo-Norman
Angl.	Anglian
AS	Anglo-Saxon
AusE	Australian English
BrE	British English
C	Consonant
CE	Canadian English
DOE	*The Dictionary of Old English*
DOEC	*The Dictionary of Old English Corpus*
EModE	Early Modern English
Fr.	French
GA	General American
Ger.	German
Gk	Greek
Gmc	Germanic
Goth.	Gothic
GSR	The Germanic Stress Rule
GVS	Great Vowel Shift
H	Heavy syllable
IE	Indo-European
IPA	International Phonetic Alphabet
L	Light syllable
LAEME	*The Linguistic Atlas of Early Middle English*
LALME	*The Linguistic Atlas of Late Middle English*
Lat.	Latin
LModE	Late Modern English
LOE	Late Old English

LP	Linguistic Profile
LVS	Long Vowel Shift
MDu	Middle Dutch
ME	Middle English
MED	*The Middle English Dictionary*
N	nasal
n.	Noun
NED	*New English Dictionary on Historical Principles*
Norw.	Norwegian
NY	New York
NZE	New Zealand English
OE	Old English
OED	*The Oxford English Dictionary*
OFr	Old French
ON	Old Norse
PDE	Present-Day English
PIE	Proto-Indo-European
PrG	Proto-Germanic
RP	Received Pronunciation
SAE	South African English
Skt	Sanskrit
Sp.	Spanish
SSBE	Standard Southern British English
SSE	Standard Scottish English
V	Vowel
v.	Verb
WG	West Germanic
WGG	West Germanic (Consonant) Gemination
WS	West Saxon
YE	East Riding of Yorkshire
[ ]	phonetic representation
[C]	ambisyllabic consonant
< >	orthographic representation
*	reconstructed form, also unattested form
†	obsolete
.	syllable boundary
:	rhymes/alliterates with
#	word boundary
~	alternates with
≈	approximately the same as
<	previous stage/the input of a change
>	next diachronic stage/the output of a change

For the full names of the Old English texts, their abbreviations, for named authors, and bibliographical information see <http://tapor.library.utoronto.ca/doe/dict/bibl/index.html> (last accessed 27 May 2013).

For the ME authors and titles see <http://quod.lib.umich.edu/h/hyperbib/> (last accessed 27 May 2013).

In loving memory of

Robert Stockwell

(12 June 1925–28 October 2012)

CHAPTER 1 Periods in the history of English

1.2 Old English (450–1066)

(p. 4)

For shared phonological features between Irish and Welsh, and Irish English and Welsh English see Hickey (1986). He attributes divergent developments, such as the absence of interdental fricatives in southern Irish English and clear /l/ in Irish English, to a Celtic substratum; see also Filppula et al. 2008: 121–2, 204ff. Southern Welsh English reflects the Welsh prosody faithfully, no reduction of final syllables where the vowels may even be lengthened. Western Scotland, Northern Ireland and Liverpool English have the same prosodic properties.

(p. 8)

While we have to acknowledge the inadequacy of the conventional label *Old English*, there is also some justification for using it. We do not have the necessary information to reconstruct separate "Old Englishes" fully, comparable to the "Englishes" of today. Unlike PDE, where demographic mobility is both a leveller and a trigger of language diversity, the regional demographics of Old English tended to be more stable. Studies of accommodation of the phonological patterns of 'outsiders' to locally dominant forms in North America show that age is a significant factor in the convergence of forms: younger people and second-generation speakers are quite advanced in that regard. This means that the levelling of at least the local ethnic differences would be accomplished within a couple of generations, upon which speakers of a particular regional variety would participate in the same phonological changes in progress (see Purnell and Yaeger-Dror 2010 and the references there).

1.3 Middle English (1066–1476)

(p. 10)

The 'end' of Old English and the 'beginning' of Middle English are best dated with respect to individual linguistic features. See the discussion of the periodisation of English in Lass (2000); Lutz (2002).

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(p. 10)

Old French itself is a variety of post-AD 600 (Vulgar) Latin, or Proto-Romance, from which the various modern Romance languages evolved. Vulgar (popular) Latin, as distinct from the stylised and frozen Classical Latin, was spoken in the provinces of the Roman Empire roughly between the second and the eighth century AD, by which time it started to evolve into the various early forms of the Romance languages, including Old French. The first Old French written records go back to the middle of the ninth century.

1.4 Early Modern English (1476–1776)

(p. 16)

Nevalainen (2006: 140–1) reports on the dramatic rise of the population in England and Wales from about two million in 1500 to over five million in 1700. New employment opportunities in the cities led to a much higher percentage of people moving away from the rural areas and settling in urban centres. By 1700, 575,000 people lived in the capital city of London, the most important economic and administrative centre in the country. Population mobility contributed to accelerated levelling of regional variation in the urban communities.

(p. 16)

As reported in Fischer's 1989 informative account, the first large wave of Puritans came primarily from East Anglia; they settled in New England between 1629 and 1640. The second large-scale migration was comprised of Anglicans who settled mostly in Virginia between 1642 and 1675; these newcomers came mainly from the south and the west of England. Yet another wave of immigrants who made their home in the Delaware Valley between 1675 and 1715 were Quakers from the English North Midlands and parts of Wales. The seventeenth-century settlers were not too numerous; Fischer puts the numbers at 21,000 Puritans, 45,000 Anglicans and 23,000 Delaware Valley settlers. The numbers of settlers rose sharply during the eighteenth century; 250,000 'borderlands' immigrants from the Scottish lowlands, from Ulster and from northern England settled the

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Appalachian ‘backcountry’ (the interior South, from Virginia south to Georgia) between 1717 and 1775.

1.6 The evidence for early pronunciation

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The earliest inscriptions in OE are in runic letters. With over thirty symbols, the Anglo-Saxon runic *futharc* was much richer than the twenty-four-symbol earlier Germanic futharc, but the OE runic inscriptions are quite short, some of them are just personal names and there are still many uncertainties surrounding their interpretation, though the recent suggestions in Vennemann (2010) are quite persuasive.

FURTHER READING (p. 23)

Excellent introductions to the background history and the linguistic properties of the earlier periods of English are found in Hogg (2002), Horobin and Smith (2002), Nevalainen (2006), and Tieken-Boon van Ostade (2009), all in the ETOTEL series. Anyone interested in researching the linguistic development and diversification of English should have access to the six volumes of *The Cambridge History of the English Language* (CHEL). The first four volumes are chronological and correspond to the periods outlined in this chapter.

For the linguistic situation in OE, the classic reference is Campbell (1959). Lass (1994) brings the interpretation of specifically phonological issues in line with structuralist and generativist thinking; it is written for professional linguists and can be very helpful. The two volumes of *A Grammar of Old English* by Hogg (1992a) and Hogg and Fulk (2010) incorporate Campbell’s findings, add significantly to the scope of coverage, and provide new insights based on recent theoretical and technological advances. The language of Middle English is surveyed in detail and illustrated in Mossé and Walker (1968), while the most comprehensive phonological description of ME can be found in Jordan (1974). The phonology section in Fulk (2012: 21–56) offers a clear, user-friendly synthesis of the established and more recent reconstructions of the ME sound system.

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The relationship between the new post-Conquest demographics and the development of English has been studied extensively. Some notable early contributions are Berndt (1965, 1972, 1992). *The Beginnings of Standardization*, a collection edited by Ursula Schaefer (2006), presents a good overview of many literary and linguistic factors identifiable as 'the roots' of standardisation. For the literary and cultural contacts between French and English see Wogan-Browne et al. (2009).

Early Modern English is covered in Barber (1997). On the topic of vocabulary growth in EModE see Minkova and Stockwell (2009: 41–3). Further information on vocabulary expansion is found in Hughes (2000: ch. 4 and Appendix, 403–5).

The demographic and cultural roots of American English are presented in Fischer (1989). A very informative synthesis of the history of American English and some ongoing changes can be found in Finegan (2006). On American English, including its British and Irish antecedents, Algeo (ed.) (2001) is highly recommended. Labov et al. (2006) is an excellent reference tool for the state of North American English in the last decade of the twentieth century. On English across the world see Bauer (2002).

Compared with the broad coverage of the historical and cultural background of English, discussions of the methods of phonological reconstruction are less easy to find. The best survey of the relationship between orthography and phonology in OE is offered in Hogg (1992a: 10–52). Lass (1992a) dedicates part of his introduction to the issues of evidence and reconstruction and provides a good treatment of the orthographic conventions in relation to the ME phonemic inventory. Lass (1999) offers a discussion of the methods of reconstructing EModE pronunciation, with special emphasis on the orthoepistic testimony, its merits and pitfalls. The methods of phonological reconstruction above the segmental level in English are evaluated and illustrated in Minkova (2011a).

CHAPTER 2 The sounds of English

2.1 The consonants of PDE

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For a recording of Cædmon's Hymn go to
http://www.wwnorton.com/college/english/nael/noa/audio.htm

(p. 25)

On allophony in PDE: a well-known example of *allophony* in English is the different pronunciation of the voiceless stops [p, t, k] in different environments: aspirated [p^h-, t^h-, k^h-] (+ spread glottis) before vowels in stressed syllables, as in ***p****it*, ***t****oe*, ***c****oal*, and not fully released [-ʔp, -ʔt, -ʔk] (+ constricted glottis) in the coda, as in *ho****p***, *ru****t***, *si****ck***.

(p. 25)

On the International Phonetic Alphabet: a quick introduction to IPA and the principles of phonemic analysis can be found in McMahon (2002: 1–23); see also Giegerich (1992); Kreidler (2004). The history of the IPA as well as the charts of the 2005 revision of the IPA can be found on the website of the International Phonetic Association hosted by UCL: http://www.langsci.ucl.ac.uk/ipa/ipachart.html.

2.1.1 Voicing

(p. 27)

Aspirated consonants are also known as 'spread glottis' consonants; the vocal cords are relatively far apart. The aspiration feature 'spread' interacts with voicing in a complex way. For an introductory discussion of this topic from a phonetician's point of view see Ladefoged (2005: 135–9). A discussion of the phonological aspects of the laryngeal dimensions of voicing and aspiration in English is found in Honeybone (2005); Iverson and Ahn (2007).

2.1.2 Place of articulation

(p. 28)

Voicing is the default glottal state for the nasals and approximants /m, n, ŋ, r, l, w, j/ in English. Being characteristically voiced, they do not have voiceless phonemic counterparts and therefore including the voicing dimension for them is redundant. The

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only exception to the general pattern of voicing in English approximants is the pairing of /w/ with the voiceless labiovelar fricative /ʍ/, which can be phonemically distinctive.

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The most common realisation of /r/ in General American and Southern Standard British English is the (voiced) alveolar central approximant [ɹ]. There are many phonetic varieties of /r/: post-alveolar, retroflex, a tap, a trill. The special properties of /r/ and its history are discussed in greater detail in 5.2.

(p. 28)

/y/ is used as a phonetic symbol by major international dictionaries such as *The American Heritage Dictionary*, the various incarnations of *The Merriam-Webster Dictionary* and the *Chambers Dictionary*. Note that the symbols [j] and [w] can be used both for approximants (**y**es, **w**ell), and for the corresponding high front unrounded glide [j], matching the high front vowel [i/ɪ] (m**i**ne) and glide [w], matching the high back vowel [u/ʊ] (t**ow**).

(p. 33)

The uniform notation system which allows us to compare the phonetic properties of a wide variety of languages was devised in 1886 through the collaboration of a French scholar, Paul Passy, and a British scholar, Daniel Jones. Their chart was defined through a set of **cardinal vowels** along the front and back margins of the trapezium. The cardinal vowels are divided into ‘primary’ and ‘secondary’. The original eight primary cardinal vowels are [i], [e], [ɛ], [a], [ɑ], [ɔ], [o] and [u]. These vowels provided fixed points of reference to which further elaborations could be added. The ‘primary’ and ‘secondary’ cardinal vowels are listed at http://www.phonetics.ucla.edu/course/chapter9/cardinal/cardinal.html, where you will find the vowels recorded by and demonstrated by Daniel Jones and Peter Ladefoged.

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2.2 The vowels of PDE

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On the nature of /ə/ - /ɪ/ contrast see Flemming and Johnson (2007); Flemming (2009). A much more complex account of the various realisations of the English unstressed vowel is presented in Lass (2009), who demonstrates that the cover term /ə/ subsumes a wide range of allophones, all of them appearing in unstressed syllables.

Although vowels in unstressed syllables are generally short, GA regularly allows also [iː] in unstressed position – *comm**ie**, Nanc**y**, witt**y*** – although the actual vowel-length varies, and the realisation may be a tense *and* short [i]. Similarly, a more peripheral vowel [i], shorter than [iː], is attested in regional varieties of British English (a phenomenon dubbed *happ**y** tensing*), and in New Zealand, Australian and South African English. The final vowels of *radi**o**, embry**o**, presto, exp**o*** can be realised as [oʊ], though the latter may be associated with optional secondary or, more likely, tertiary stress.

2.2.1 Short and long vowels

(p. 35)

On the use of the colon diacritic to mark vowel length in English: the *IPA Handbook* (1999: 30) notes that:

> In English, … the contrast between the words BEAD and BID has phonetic correlates in both vowel quality and vowel duration. A phonemic representation which explicitly notes this might use the symbols /iː/ and /ɪ/. But it is equally possible unambiguously to represent these phonemes as /iː/ and /i/ (where the phonemic symbol only explicitly shows the length difference), or as /i/ and /ɪ/ (where only quality is shown explicitly). All three pairs of symbols are in accord with the principles of the IPA (as long as the principle chosen for this pair of vowels is applied consistently throughout the vowels of the language).

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(p. 35)

On the terms *tense* and *lax*: these are features that can be used in the classification of consonants, where [tense] correlates with *fortis* consonants, and [lax] correlates with *lenis* consonants; the *lenis* consonants involve reduced muscular effort. **Lenition** is a process of weakening of the strength of a sound: stops becoming fricatives are said to be **lenited**. The opposition process is called **fortition** (see also 2.5).

(p. 36)

An excellent discussion of the virtues of quality-based (different symbols) vs quantity-based (ː) representation-systems for the contrast in vowels and the problems of finding a single system for all varieties of English is found in Giegerich (1992: 69–72, 79–80, 95–102). The marking of quantity for English long/tense vowels with (ː) is adopted in McMahon (2002); Ladefoged (2005); Cruttenden (2008). In ANAE Labov et al. (2006) use a notation which ignores qualitative differences and instead emphasises the gliding nature of the long vowels, thus the vowel of *lid* is Roman /i/, while the vowel of *lead* is /iy/.

(p. 37)

Further on the **peripherality** of vowels: the short or lax vowels are also more central, less peripheral and lower than the corresponding long or tense vowels. Note here that the non-peripherality (or the more central quality) of the English short vowels cannot be read off the IPA vowel chart for all of the relevant vowels. In any case, the IPA vowel chart is intended as a general inventory of all vowel sounds used in the languages of the world; it does not claim representational precision with respect to the functional properties of vowels in particular languages.

2.2.2 Complexity: monophthongs and diphthongs

(p. 37)

On monophthongs and diphthongs and vowel length: while the short vowels tend to be monophthongal, positional lengthening of the monophthong can be accompanied by

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diphthongisation. Taking the example of the simple vowel /ɪ/, as in KIT, we find that it has an allophone [ɪə] in words like BID in Southeastern US; [ɪə] is also predominant in African American and Caribbean English. The vowel of BED can be realised as both [ɛə] and [ɛɪ].

(p. 38)

On the vowel of CUTE: if treated as belonging to the onset, /j/ is matched only by the labiovelar approximant /w/ as being a [-consonantal] segment filling an onset. Unlike /w/, which can be followed by most vowels – for example, s*weep, twit, quaint, sweat, swagger, squat, quite, swoop,* and so on – /j/ is distributed 'defectively', appearing only syllable-initially after one or more consonants, and the only vowel allowed after it is /u ː/. Hammond (1999: 3, 106, 245ff.) defends the choice of treating [yu] in CUTE as a diphthong rather than a Cy complex syllable onset on the basis of the language game Pig Latin, where the onsets of *brick, spot, queen, Gwen* are not split, producing *ickbray, otspay, inquay, engway*, but the onsets of *cute, puce* are most commonly split, producing *yutkay, yuspay*, and so on.

2.3.1 Syllable structure

(p. 40)

Although placement in the syllable is definitely a major factor in the allophonic distribution of the types of /l/, there are other factors involved in their realisation. Dark laterals in all positions are reported in most non-Southern US dialects, Eastern and Central Scots, AusE and NZE, while Northern BrE varieties (for example, in Northumberland and Durham), Irish English and some Western Scots dialects have clear laterals in all positions (Lass 1987: 100). Carter and Local (2007) challenge the lack of variability and show that at least in two varieties, where the /l/ is described as always clear (Newcastle English) or as always dark (Leeds English), there is phonetic variation correlated with prosodic structure.

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2.3.3 Syllable weight

(p. 44)

On the term ‘mora’: originally the term ‘mora’ was used as a unit of duration: ‘A unit of metrical time equal to the duration of a short syllable’ (OED). We reserve ‘short’ and ‘long’ for the duration of English segments, while syllables are heavy or light, so mora will be used as a term relating to syllable weight.

2.5 Phonological change: some types and causes

(p. 49)

The most recent addition to the set of excrescent *-(s)t* forms seems to be *unbeknown**st*** (1848), which the OED describes as originally colloquial and dialectal. The development of excrescent stops in early Modern English is covered in Dobson (1957: 436–8).

(p. 51)

On phonological strength: a more comprehensive treatment of the definitions and theoretical approaches to phonological strength is found in Zuraw (2009).

(p. 51)

On optimisation and historical phonological change: the theories of the origin and propagation of sound change are still being debated and it is not the remit of this chapter to cover the debate. We will address various explanations of the individual changes in English as we cover them in the following chapters. Hayes and Steriade (2004: 26–7) offer a succinct and clear summary of the debate regarding the nature and role of universal phonetically based constraints on sound change.

FURTHER READING (p. 53)

Students will profit much, as I have done, from consulting some excellent surveys of English phonology: Giegerich (1992); Kreidler (2004). Hayes (2009b) offers a very accessible linguistic overview of general phonological topics and provides useful comparisons between English and other languages. Cruttenden (2008) is the seventh

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edition of one of the most thorough and widely used reference books on English (RP-based) phonetics and phonology. It includes a chapter on sound change and the Old and Middle English sound systems (ch. 6). The book includes spelling information and historical source references for each segment, as well as advice to second-language learners. On the dialect differences in American English see Labov et al. (2006); for the acoustic properties of vowels in AE see Thomas (2001).

The now classic reference work on the interaction of the syllabic structural preferences and sound change is Vennemann (1988); syllable structure is discussed in all of the works cited above.

The literature on phonological change is voluminous and a cursory overview of the patterns and causes of change will not do justice to the serious theoretical debates in this area. A survey of the types and causes of phonological change is found in McMahon (1994); chapters 2 and 3 present a succinct typology of sound change, Neogrammarian, Structuralist and Generativist views of sound change, a discussion of the implementation problem and the interaction between phonology and morphology. Bermúdez-Otero (2007) offers an excellent update of the current theoretical debates on sound change. The monumental *Oxford Handbook of Historical Phonology* (2014), ed. by Patrick Honeybone and Joseph Salmons, will be the most comprehensive and theoretically-informed survey of methods, issues, and approaches to the linguistic study of phonological change.

ASSIGNMENTS

- Define *place of articulation*. What is the difference between a *labial* and a *velar* consonant?
- How many *dental* consonants does English have? Give five examples of dental-final words.
- Give five examples of words beginning with a *palatal* consonant.
- Discuss and illustrate the statement: diphthongs and long monophthongs behave alike in respect to syllable weight; they make a syllable heavy, while open syllables with monomoraic vowels are light.

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- Identify the type of syllable: heavy-light, open-closed in: *even*, *later*, *music*, *poodle*, *garbage*, *constant*, *purchase*, *centre*, *similar*, *secular*, *cushion*, *comedy*.

CHAPTER 3 Discovering the earliest links

(p. 57)

The chart in Figure 3.1 excludes Anatolian and Tocharian, two branches with no living descendants; omitted also are the two branches whose single modern descendants have only minimal lexical influence on English: Armenian and Albanian. Many such charts include a 'dagger' (†), commonly appended to names of languages that are preserved in some written form, but are extinct as spoken languages.

3.4.1 Grimm's Law, or the First Germanic Consonant Shift

(p. 61)

Grimm's Law bears the name of the German scholar Jacob Grimm, one of the two brothers Grimm known as collectors of folk songs and fairy tales. Jacob Grimm had a serious scholarly interest in language history. In his *Deutsche Grammatik* [*Germanic Grammar*] (1819–37) he defined some consonantal correspondences between Germanic and other Indo-European languages of Europe and western Asia, confirming Sir William Jones's reconstruction of Germanic as a branch of Indo-European. The same correspondences were recognised as early as 1818 by the Danish philologist Rasmus Rask, hence the same changes are sometimes also referred to as *Rask's Law*. Rask did not, however, synthesise his observations into a single coherent system and promote that view among other scholars. Seeing the changes as structurally unified was Grimm's great contribution to the study of the evolution of Germanic consonants.

(p. 63)

On (Indo-European) */b^h, d^h, g^h/: the patterns of allophony resulting from IE */b^h, d^h, g^h/ are quite complex and remain unclear (Ringe 2006: 100). Aspirated voiced stops, also known as breathy-voiced stops, are not part of the consonantal phonemic inventory of

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PDE. The ‘foreignness’ of these sounds is conveyed by the spelling of words borrowed from Sanskrit, such as *bhakti* ‘piety’, *buddha* ‘enlightened, awakened’, *dharma* ‘decree, custom, law’; or from Hindi, such as *bhájí* ‘fried vegetables’, *ghaghra* ‘a long skirt ornamented with bells’. The OED shows the pronunciation of <bh-, dh-, gh-> in the loanwords as consistently anglicised to /b, d, g/.

(p. 63)

On the acoustic confusability of /θ/and /f/ in PDE see further Tabain (1998). On the typological markedness of /θ/ in terms of articulation see Maddieson (1984).

(p. 65)

The phonological processes associated with the First Consonant Shift are a good testing ground for various phonological theories. The presentation in 3.4.1 is not committed to any particular theoretical approach, although the prose concerning chain shifts may suggest an ordered application of rules. The shift has been addressed as a function-driven sound change in Boersma (1998), and in Optimality-Theoretic terms in Petrova (2000); Ahn (2003).

(p. 65)

In combinations of two stops – /pt/, /kt/ – only the first stop becomes a fricative, thus IE *ka**p** + **t** ‘to take, seize’, OE *hæ**ft*** ‘haft, handle’, Latin loan *ca**pt**ive*; IE o**kt**ō(u) ‘eight’, OE *ea**ht**a* ‘eight’, Latin loans *o**ct**et*, *O**ct**ober*. Iverson and Salmons (1995) point out the shortcomings of a categorical ‘rule’ prohibiting two fricatives and discuss Grimm’s Law and its exceptions in obstruent clusters in terms of the feature (spread glottis) which, in their account, should replace the feature (voice) used in the traditional accounts.

(p. 66)

On Verner’s Law: the date of Verner’s discovery is variously given as 1875, 1876 or 1877. According to *Encyclopædia Britannica Online*, 1876 is the date of his seminal article (http://www.britannica.com/EBchecked/topic/626310/Verners-law).

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The mechanism of Verner's Law has been much discussed. In addition to intervocalic voicing being a natural process, there are other factors involved in the process. Petrova (2004) offers a literature survey. In her account, the reanalysis of the intervocalic fricatives as voiced is interpreted as a strategy to preserve phonological distinctions previously marked by stress, thus it was the accent shift that induced the voicing.

3.4.3 Early prosodic changes: stress and syllable weight in Germanic

(p. 70)

One of the most important innovations that identify the Old Germanic dialects as different from the parent language is prosodic. However, while fixed initial stress is an important defining feature of Germanic, it should be noted that it is a north-west European prosodic property shared with Celtic, and even more broadly with some Finno-Ugric languages (see Salmons 1992).

(p. 70)

Prefixes could not carry stress in PrG except in some limited circumstances.
A secondary stress could be placed on the second roots of compound words and on the first syllable of some root-like suffixes; for further details see Chapter 9.

Stress-shifting of the type *curious-curiosity, Japan-Japanese, idiot-idiotic, parent-parental* did not exist in Old English. Functional stress-shifting of the type familiar from PDE – *éscort* (n.) - *escórt* (v.), *présent* (n, adj.) - *presént* (v.), *súbject* (n.) - *subjéct* (v.) – is also discussed in Chapter 9.

3.4.5 West Germanic (Consonant) Gemination (WGG)

(p. 72)

WGG is responsible for the presence of geminates in the inflectional forms of verbs, depending on the historical availability of /-j-/ in the paradigm. Lass (1994: 34–9) provides a structural account of WGG, relating it to syllable-structure in Germanic and rejecting the influence of specific phonetic properties of the segments involved in the change. That there was a prosodic component to the gemination is beyond doubt, but the

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productivity of the trigger in OE itself is more of a problem. Denton (1999) hypothesises that the immediate cause of gemination should be sought in the phonetic coarticulation effects of /j, w, r, l/ on the preceding consonant. In her account the coarticulation results in strengthened articulations – a separate set of fortis consonants – which remain distinct from the inherited geminates. The three-way distinction presents additional complications. The separate set of fortis consonants from WGG for OE would be functionally identical with geminates, since both inherited geminates and the geminates caused by WGG must be heterosyllabic – *wul.le, ster.ra, sit.tan, æp-pel* – and the first syllables count as heavy in the verse, while fortis singletons after short vowels leave the first syllable light.

(p. 73)

On the dating of the loss of the approximant /j/ see Campbell (1959: §398.4). Hogg (1992a: 232) writes: 'Consonantal /j/ appears to have been lost in the same set of circumstances as /i, u/' – the loss of /i, u/ known as *High Vowel Deletion*, which is crucially related to stress. However, the parallel front vowel /i/ did not have the same geminating effect on consonants as /j/. In the verbal paradigm, for example weak verbs Class 1, the 2nd (<-i-s-st) and 3rd pers. (<-i-þ) sg. pres. tense indicative have no geminates, and the difference between the 1st pers. sg. pres.tense indicative (<-j-e), as in *fremme* 'I perform' and the imperative sg. (<-i-), as in *freme* 'perform!', is solely in the geminate. Although grammars represent that distinction as the norm (Campbell 1959: §748), the records do not support the idealised paradigm, as a check of *hliehhan* 'to laugh' and *scieppan* 'to shape' in the DOE reveals. On the rise of new geminates in the past tense of some dental-final weak verbs – *blē**dd**e* 'bled', *fē**dd**e* 'fed', *mē**tt**e* 'met' – see 4.1.2.

FURTHER READING (p. 73)

A good introduction to the problems and prospects of research into genetic and linguistic relatedness is found in Diamond and Bellwood (2003). A good source on the topic is also Oppenheimer (2006).

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Indo-European is still the longest- and best-studied family of languages in the world. The bibliography on Indo-European is enormous. One of the most widely used and cited books on Indo-European is Szemerényi (1999), where further references can be found. A good coverage of the history and various theories regarding the grouping of Indo-European and possible relations to other language families is found in Lamb and Mitchell (1991), who used the phrase 'sprung from some common source' in the title of their edited volume.

Anyone interested in the deepest etymological roots of English words should possess *The American Heritage Dictionary of Indo-European Roots* (Watkins 1985). The detailed changes from Proto-Indo-European to Proto-Germanic are covered in Ringe (2006). Robinson (1992) is an excellent comparative survey of the Germanic languages.

The First Germanic Consonant Shift and Verner's Law are described in any survey of the history of Indo-European, Germanic or English. Lass (1994) is highly recommended for its clear and systematic linguistic approach to the phonology of OE. Denton (1999) offers the most comprehensive survey of the literature on West Germanic Gemination. For early accounts of HVD see Kiparsky and O'Neil (1976); Dresher ([1978] (1985); Keyser and O'Neil (1985).

ASSIGNMENTS

- In the following items the first column lists reconstructed Indo-European roots; the second, the related English words which underwent normal changes from IE to Germanic; and the third, cognates borrowed in later English. Fill in the missing words by consulting *The American Heritage Dictionary of Indo-European Roots* (Watkins 1985):

IE root	**Germanic/PDE**	**Later loan in English**
*agr- 'field'	acre	agriculture
*bhreg - 'break'	_____	_____
*dem/dom- 'build, house'	_____	_____
*deru-*dreu- 'steadfast'	_____	_____
*dhig- 'trench, fix'	_____	_____

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*gel- ‘ball, bulb’ _____ _____

*gel- ‘to freeze’ _____ _____

*gen(e)- ‘to beget’ _____ _____

*gher-, *ghor - ‘enclose’ _____ _____

*ghos-ti - ‘stranger’ _____ _____

*k(e)r- ‘heat, fire’ _____ _____

*ker-, kor- ‘head, projecting part’ _____ _____

*leb/lab- ‘lick’ _____ _____

*p(e)lə- *pl- ‘abundance, multitude’ _____ _____

*p(e)t- ‘fly, wing’ _____ _____

*t(e)rə- *tr- ‘cross, overcome’ _____ _____

*ten- ‘stretch’ _____ _____

- Look up the following etymologically related pairs in the OED and try to reconstruct the IE consonant(s) that would be subject to the *First Germanic Consonant Shift*:

(1) *brew-fervid,* (2) *go, ago-heritage, heir,* (3) *know-agnostic,* (4) *call-glasnost,* (5) *fire-pyre,* (6) *rape-raven* (OE *hræfn*), (7) *capture-have, hawk* (OE *heafoc*), (8) *blow-inflate,* (9) *ban–fame,* (10) *do-fa(ct)* ‘something done’, *af-fect,* (11) *water-vodka,* (12) *corn-grain,* (13) *cold-congeal,* (14) *tear,* v. ‘to rip’ - *derma,* (15) *pallid-fallow*.

CHAPTER 4 Consonantal histories: Old English

4.1.1 Singletons

(p. 75)

The alliterative evidence for the development of the velars and the palatals is discussed in Minkova (2003). For a phonological account of the same data with reference to the different contrastive force of place features against voice and manner features see Bermúdez-Otero (2005).

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4.1.2 Geminates

(p. 77)

The absence of geminate approximants /w/ and /j/ is in line with the typological observation that geminate sonorants are typologically less common and perceptually less salient, reported in Kawahara (2007).

(p. 77)

A full discussion of the role of structural complexity in syllable weight is found in Gordon (2006: 129–41). The interesting interplay between mora count and segmental information is discussed in Steriade (1991), who shows that sonorant codas and obstruent codas are treated differently in tone and stress assignment in early Greek. Specifically for English, Hammond (1999: 137) assigns intrinsic mora count to various segments ranging from zero (for [ð, r]) to three moras (for aʊ, ɔɪ). In Hammond's account the coronals, to which the affricates belong, have variable mora count – zero or one. He makes no specific comments on the affricates; as members of the set of coronals their weight varies from zero to one mora. There is also the question of how to syllabify /t͡ʃ/ and /d͡ʒ/. The extreme rarity of word-medial /t͡ʃ/ and /d͡ʒ/ in coda position in PDE (most of the forms are potentially syncopated, as in *bachelor*, *lecherous*, *drudgery*, *imagery*, *vegetable*) makes them very unlikely candidates for ambisyllabicity; compare *latter* [ˈlæ**r**ə˞] with ambisyllabic /t/ with *catcher*, where it is much harder to claim ambisyllabicity.

(p. 77), fn. 5

Cruttenden (2008: 180–4) offers systematic phonetic and phonemic arguments for and against the unitary treatment of /t͡ʃ/ and /d͡ʒ/, coming down in favour of analysing them as unit phonemes. This raises the additional question of whether such units are treated the same as other consonantal units in calculating syllable weight.

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(p. 79)

On contextual constraints on the distribution of geminates see further Pająk (2009) and the references there. The difference between intervocalic geminates and geminates adjacent to consonants can be tested in OE spelling, thus the nominative forms of OE *æppel ~ eppel ~ appel* (<VppV>) ‘apple’ preserve the orthographic geminate consistently, while the inflected forms *æples ~ æple ~ æpla ~ apla*, etc. show frequent orthographic simplification of the double <pp>.

(p. 80)

In addition to the possibility of a long vowel followed by a geminate in the verbal paradigms (early OE *mē**tt**e* ‘met’, *blē**dd**e* ‘bled’), geminates after long vowels are posited before [-r] – for example, *nǣ**dd**re* ‘adder’, *swē**tt**ra* ‘sweeter’, *dēo**pp**re* ‘deeper’ – but the authenticity of the long vowels in them is doubtful and Campbell (1959: 182–3) rightly questions the vowel length of forms such as *nǣddre* ‘adder’, *blǣddre* ‘bladder’, *ǣddran* ‘veins’. There is no phonological or metrical test for that in OE. The three consonants would be sufficient to trigger the type of vowel shortening that occurs before other sequences of three consonants in OE (see further 7.5.1.1).

(p. 80)

On consonant degemination and language contact: Pope (1961: §366) dates the merger of Late Latin geminates with the corresponding singletons to the period from the ninth to the eleventh centuries. The loss of voiceless geminate stops in British Celtic is discussed in Schrijver (2011: 4). The question of Celtic influence has to be left open: Proto-Celtic did have geminate consonants, and the multiple Celtic lenitions also obscure the picture.

4.2.1 The <g>’s of OE

(p. 83)

The <i> spellings alternating with or replacing <g> are particularly frequent in Kentish texts post-vocalically (Hogg 1992a: 264). This suggests vocalisation of /j/ and the formation of new diphthongs in such positions. See 6.5.3, 7.4 and 8.2.2.2 on the

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importance of these OE diphthongs for the subsequent history of the English vowel system.

Diphthong-formation is most likely to occur if the approximant /j/ is in the syllable coda, where the likelihood of loss of friction is suggested by the following forms found in the DOE online:

OE *āweġ* 'away', aw**æig** (ChronD 1052) | aw**eig** | awoeg (Ru), aw**ei** (ÆGram xiii)[1]

OE *be* ~ *biġ*, prep. conj. adv. 'by': bei (Ch 508, xii) … bi**g** … b**ii** (Bede, LS 17.2) | by

OE *dæġ* 'day' (Nom): dæ**ig**; dæ**gi** | d**eig** (xii) | d**aig** (Rec 19) | d**eih** (HomS 46) | d**æi** | d**ei** | d**ai** (xii and after) | d**æ** (PsGlEK), also in compounds as *dæityde* (LawSwer 9)

OE Angl. *grēġ* 'grey' (Nom): gr**eig**, gr**ei** (Corpus Glossary 2, 8th c.)

EOE *ryġ* ~ *ryġi* 'rye' *Ruitone*, Shropshire (1086; now Ryton)

OE *weġ* 'way' ~ *weig* (x59), regular in Ælfric, *wegi* (Ælfric)

Note that some of the spellings are quite early. The evidence for intervocalic palatal <g> also points to possible vocalisation, suggesting the possibility of ambisyllabicity of the approximant (Minkova and Zuraw forthcoming). Some late OE examples are:

OE *dæġe* (dat.) of d**æig**e to d**æig**e (Alc 433)[2]

OE *eġe* 'awe':[3] **eig**e (BenRW), **æi**e (ChronE), **eig**e (acc./dat. sg.); **eie** (dat. sg., ChronE)

---

[1] Here and throughout, for the full names of the Old English texts, their abbreviations, for named authors, and bibliographical information see http://tapor.library.utoronto.ca/doe/dict/bibl/index.html (last accessed 27 May 2013). For the ME authors and titles see http://quod.lib.umich.edu/h/hyperbib/ (last accessed 27 May 2013).

[2] Alcuin, *De virtutibus et vitiis* (London, British Library, MS. Cotton Vespasian D.XIV), twelfth century.

[3] 'The actual *awe*, in 13th cent. *aɣe*, was from Old Norse *agi*, accusative *aga*… The Middle English *eye* (*aye*) and *awe*, were thus in origin and derivation distinct though cognate words, but were practically

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OE *pleġa ~ pleiga* ‘play, n.’ (*AElfric’s Grammar and Glossary*) (late)

OE *weġe* (dat. sg.), *weġes* (pl.) ‘way(s): ***weie****(s)* (x52), ***weig****e(s)* (22) (OED Word-wheel)

Unetymological <g>:

Gmc**basjôn*, OE *berie ~ berige* ‘berry’, pl. berian, berigan, berigen, berigean, Dat. berium (*ÆCHom* II, Num), berion (*ÆHom*), bergum (*GD* MS O), bergeum (*ClGl*), byrgum (*GD* MS C).

(p. 83)

On OE <gg> (<ȝȝ>) spelling: in the earliest texts doubling of yogh can appear also instead of the later <cg> for [dʒ] (see 4.3): ***seġġaþ*** ‘they say’, ***seġġ*** ‘sedge’, ***hryġġe*** ‘ridge’ (see Hogg 1992a: 37–8).

(p. 84)

On devoicing of the final velar fricative [ɣ]: the representation of the change in the OE records varies depending on the dating and chronological provenance of the documents. The devoicing was recorded primarily after the first half of the tenth century in West Saxon, while <g> spellings persist in Anglian (Hogg 1992a: 285–7). Whether the spelling evidence reflects actual resistance to devoicing in Anglian, possibly fuelled by inflected forms where the fricative was intervocalic, or whether it is a matter of conservative scribal practices is unclear; the ME history of the velar fricative (see 5.1.4) is not informative in this respect.

4.3 Palatalisation and affrication of velars in OE

(p. 86)

On the bi-segmental behaviour of [dʒ]: the treatment of <cg> as bi-segmental is shown in lines such as:

---

treated as dialectal variants of the same word, of which *aye* was still used in s.w. *c*1400, while *awe* was in the n.e. *c*1250. The sense-development is common to both.’ (OED)

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… *on þa bri**ċ**g**e** stōp* ‘on the bridge stepped’ *Maldon* 78b

(w w s / w s)

The sequence <-cg-> in *bri**ċ**ge* behaves like <-lf-> in *selfa* in:

… swa he *selfa* bǣd ‘as he himself bade’ *Beowulf* 29b

(w w s / w s)

Neither *bri**ċ**ge* nor *se**lf**a* allows resolution; otherwise the verses will be defective – they will have only three positions.

Compare *Maldon* 78b and *Beowulf* 29b with:

… No hie *fæder* cunnon ‘not they father know’ *Beowulf* 1,355b

(w w s-w / S w)

In *Beowulf* 1,355b *fæ-der* must be resolved; otherwise the verse will have five positions. On these metrical issues see further 10.2.1.

(p. 87)

On [ʃ]: the classic study of the history of [ʃ] is Flasdieck (1958). On the phonological ‘gap’ caused by the historical restriction on long vowels + [ʃ] and the growing acceptability of long/tense vowels plus [-ʃ] in PDE see Iverson and Salmons (2005).

(p. 88)

On the loss of the digraphs <cg> and <sc> in ME: word medial examples of post-vocalic [-dʒ] spelled <gg> are: <bagge> ‘badge’, <cuggel> ‘cudgel’, <jugge> ‘judge’, <legge> ‘ledge’; the spelling with <g> is found in, for example, <aungel> ‘angel’, <iuge> ‘judge’, <sergeaunt> ‘attendant, sergeant’. The spelling <dg(e)> from French, as in <wedge> (1440), <judge> (1441), <pledge> (1463), became more frequent in the course of the fifteenth century. Word-initial [dʒ-] was represented by <g>, as in <gentil> ‘gentle’, <gestur> ‘gesture’, or <j-> and <i-> as in <juparten> ‘jeopardise’, <justice> ‘justice’, <ius> ‘juice’, <Iacobytes> ‘Jacobites’.

> In Dictionaries, the I and J words continued to be intermingled in one series down to the 19th cent. Dr. Johnson, indeed, under the letter I, says ‘I is in English considered both as a vowel and consonant; though, since the

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vowel and consonant differ in their form as well as sound, they may be more properly accounted two letters.' (OED)

4.4 Morphophonemic alternations: fricative voicing. CLOSE enough to CLOSE the door?

(p. 89)

Positing a voiced obstruent /-d/ as the underlying form of the suffix is motivated by the phonotactics of English. As argued in Fromkin (2000: ch. 14), in English two word-final obstruents have to agree in voicing; in underived words, such clusters are all voiceless, for example *ne**st**, pa**ct**, wa**ft***, but not **ne**sd*** [-sd], **pa**cd*** [-kd], **wa**fd*** [-fd], the single exception being *adze*, OE *adesa*, a word of unknown origin. Devoicing is thus an automatic adjustment of /d/ to /t/ when it follows a word-final voiceless obstruent.

Positing an underlying /-t/, on the other hand, would require voicing specific to the preterite suffix in *framed, rained, filed,* and so on, because there is no voicing assimilation after sonorants root-internally, as in *limp, month, lilt, fence, parse.* The preservation of /d/ after voiced segments requires no additional morpheme-specific adjustment.

Finally, schwa-insertion is motivated by the avoidance of word-final [-td], [-tt], [-dt] and [-dd] in PDE; the undesirable identical or too similar cluster is split by the insertion of a vowel before the inflectional /d/. Some accounts posit /-əd/ as the basic shape of the weak preterite morpheme, with the schwa preserved only after [-t, -d]. The objection to that analysis is that with /-əd/ we would have to posit a special rule, which prevents deletion of the schwa from schwa-final stems such as *tilde-d, pajama-d, subpoena-d, visa-d, henna-d,* non-rhotic *pillared, numbered, covered, cornered*.

(p. 91)

On using <ð> 'edh' and <þ> 'thorn' in OE: one of the very useful new tools of the online *Dictionary of Old English* (http://www.doe.utoronto.ca/tools/tools.html) allows a search for all spellings of a particular word in the entire corpus. A spot-check of *bro**ð**or* 'brother' with [-ð-] shows 1,122 <ð> spellings against only 408 <þ> spellings; the

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relative proportions are reversed for *ge**þ**anc* ‘thought’ with [-θ-], spelled with <þ> 168 times vs 23 instances of <ð>. This might suggest that the scribes were not using the letters completely randomly, but we do not have a full statistical picture of the distribution of the letters in relation to their reconstructed pronunciation.

(p. 92)

On the rise of [f] - [v] contrast in inter-voiced position: The word *nephew* (BrE [ˈnɛvjuː], [ˈnɛfjuː], AmE [ˈnɛfju]) has an interesting history: OE *nefa*, corresponding to the now obsolete †*neve*, Lat. cognate *nepot-* was an item shared with other Germanic languages, last attested in English in 1680. In ME the Anglo-Norman *nevou*, *neveu*, *nevew*, *nevu*, *newu* and Old French, Middle French *neveu*, also from Lat. *nepot-* competed with *neve* and eventually replaced it. The first spelling with <f-> for *nephew* in the MED is c. 1450 and the first <-ph> spelling is 1540. The pronunciation with [f], now the standard in AmE but not in SSBE, was probably a spelling pronunciation initially, or a cross-over from a devoiced final [-f] in *neve*. Another pair exhibiting variation is *Steph-Steve-*.

Note that the disyllabic words illustrating inter-voiced [f] acquired initial stress very early, as shown in the scansion of, for example, *And ón ðin óffiz sét agén* (a. 1325, c. 1250) *Gen.& Ex.* 2,071.

For a full discussion of the history of the voicing contrast in English fricatives see Minkova (2011b).

(p. 95)

Lack of stress and possibly ambisyllabic status will account for the voicing of [s] in the early Modern English voicing in French and Latin loans such as *po**ss**ess*, *de**ss**ert*, *di**ss**olve*, where the conditions of voicing replicate Verner’s Law (see 3.4.1). The prefix *dis-* was commonly voiced prevocalically in the eighteenth century – *disarm*, *dishonour*, *disorder* – but only *disaster* and *disease* maintain the voicing.

In relation to prosodically induced voicing of [-f] and [-θ] in function words: there are some results that are difficult to account for: the voicing of [θ] to [ð] is mostly

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restricted to onsets: *this*, *there*, *that*, but no [-ð] in *doth*, *hath*, though *with* with [-ð] is the non-Northern 'standard'. On the other hand, the voicing of [f] to [v], and [s] to [z], as in *of*, compare *off*, and in *was*, is confined to the coda – there is no comparable voicing in onsets: **vor*, **vrom*, **zo*, **zuch*. There seems to be no obvious phonetic or typological reason why the voicing should be asymmetrical both in terms of place of articulation and in terms of syllable position.

(p. 96)

On the 'reality' of a productive fricative-voicing rule in PDE: fricative voicing is alternatively labelled 'laryngeal alternation' in PDE, in recognition of the possibility that the alternation can be attributed to [spread glottis] and de-aspiration rather than [voice]. It is a fruitful testing ground for the interplay between the evidence in the ambient language (voicing is more robustly attested in monosyllables) and the typological preference for preserving the shape of lexical monosyllables and initial syllables. Becker et al. (2012) conducted a set of tests on attested items and nonce words (wugs), and found that the factors increasing the probability of plural voicing are length of the preceding vowel, with longer vowels conducive to voicing; place of articulation, with [f] more prone to voicing than [θ]; and fricative codas more readily voiced in monosyllables and iambs than in trochees. Contrary to the historical data, where the voicing evidence is significantly stronger in monosyllables (predictable from the loss of final syllables in English, see 7.6), they found that PDE speakers tend to prefer voicing in iambs. They report on variation in *giraffes ~ gira[v]es*, *photographs ~ photogra[v]es*, *psychopaths ~ psychopa[ð]s*.

ASSIGNMENT

- Find out whether other <ð> / <þ> spellings support the suggestion that (some) OE scribes preferred <ð> for [ð] and <þ> for [θ].
- Report on the current state of fricative voicing in Devonshire, England.

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CHAPTER 5 Consonantal developments in the second millennium

5.1.1 Phonetic and phonological properties of /h/ in PDE

(p. 99)

An Humorous Day's Mirth is a comedy by George Chapman, first acted in 1597 and published in 1599. Note that both *an historic* and *an humorous* preserve the <n> before an unstressed syllable. The involvement of stress in the preservation and loss of [h-] is discussed in 5.1.2; see also Schlüter 2009: 182–3.

(p. 101)

On the classification of [h]: a sampling of some standard texts shows the difficulty of reaching a uniform description. Kreidler (2004: 62–3) classifies [h] as a glide, distinguished from the obstruents by being [-consonantal] [+ sonorant], while [h] is analysed as [+ consonantal] [-sonorant] in, for example, Giegerich (1992: 119). Hayes (2009b: 21) shows [h] as a glottal fricative in English, but his feature chart (ibid.: 96) defines [h] as [-consonantal] [-sonorant].

(p. 102)

On the voicelessness of [h]: it has a voiced realisation [-ɦ-] medially between vowels, as in *behind*, *anyhow* (Cruttenden 2008: 204), but the laryngeal feature [voice] is not distinctive here as it is in the case of all other fricatives. The feature [spread glottis] can be phonologically distinctive only for the phoneme /h/ (and /ʍ/ in SSBE); the feature is also present in voiceless aspirated stops of the type reconstructed for the development of Indo-European */bʰ, dʰ, gʰ/ to /pʰ, tʰ, kʰ/ in Ancient Greek (see 3.4.1).

5.1.2 The velar and glottal fricatives of OE

(p. 104)

On positing /x/ in early Old English: the unmarked status of /x/ is discussed in Ito and Mester (2001: 291, n. 9). On the unevenness of the /x/ - /ɣ/ distribution see Greenberg (1978: 29ff.)

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Independent external evidence for phonetically distinct positional variants of the /x/ phoneme in OE comes from some early spellings: <h-> is regular in initial position, but sometimes we find <c-> after vowels, most often before <-t>: for example, *mæ**c**ti* 'might', *dry**c**tin* 'Lord' (*Cædmon's Hymn* M).

Howell's (1991: 97) allophony proposal for /x/ is that Gmc /x/ lenited in OE to a vowel-like [h] before returning to [x] in time to condition the development known as Anglian Smoothing; see also Howell and Wicka (2007). An alternative account is proposed by Colin Grant (MA thesis, Indiana University); he also sees the transition associated with Breaking (see 6.5.3) phonologically associated with the vowel rather than the consonant.

(p. 104)

On the scribal loss of <h-> in stressed onsets see further Scragg (1970); Hogg (1992a: 276–82); Minkova (2003: 160–5, 339ff.). An additional factor for scribal loss of initial prevocalic <h-> in OE may be the exposure of scribes to Latin, where the loss of /h-/ had already taken place – this is a possible explanation of the inverse spelling <happel> 'apple' and <hapeltre> 'appletree' in the *Latin–Old English Glossary*, Oxford, Bodleian Library, MS. Bodley 730. LAEME has only vowel-initial <a-/e-/ae-> forms for this frequent word.

5.1.3 Initial glottal fricatives in ME and EModE: ABLE-HABILITATE, WHICH-WITCH, WHINE-WINE

(p. 108)

On *heir*, *honest* and *hour* (and *herb* in AmE) and their derivatives: the question of why exactly these lexical items resisted the general trend of reinstating [h-] is addressed in Schlüter (2009), who finds statistical support for the claim that the survival of *h*-lessness in these items is best accounted for by their high frequency.

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(p. 108)

On the pronoun *it*, OE *hit*: the initial *h* in the pronoun is an innovation in OE. The Gothic form is *ita*, and all early West Germanic records show a vowel-initial form. It is commonly assumed that OE (and Old Frisian) <hit> arose by analogy with the forms *him* and *his*. The reality of [h-] is not reliably ascertainable in the verse, because pronouns are prosodically weak and usually do not contribute to the functional alliteration. The closest test-case would be: *Ic* ***h****it þē þonne ge****h****ate : þæt þū on* ***H****eorote mōst* 'I it you then promise / that you in Heorot may' (*Beowulf* 1,671), but the a-verse is scanned as w w w w w S w (A3; see 10.2.1) and *hit* does not participate in the alliteration. The specifics are still unclear because of the ambiguity of scansion. Bondar (2006) assumes input /h-/ for the pronoun, with h-deletion predicated on the position of the pronoun in the prosodic string.

(p. 108)

On the social attitudes to h-dropping in the nineteenth century: the statement by Sweet (1890) is cited in Mugglestone (2003). It is not surprising that 'proper' initial [h-] is so central to Bernard Shaw's play *Pygmalion*, and its screen version *My Fair Lady*, where the action revolves round the efforts of Professor Higgins, partly modelled on Henry Sweet, to teach the flower-girl Eliza Doolittle to pronounce her mentor's name Henry Higgins and his tricky *In Hartford, Hereford, Hampshire hurricanes hardly happen* with all the [h-]'s in place by blowing into a candle flame.

The full title of Leach's book is *THE LETTER H PAST, PRESENT, AND FUTURE. A Treatise, with rules for the silent H based on modern usage, and notes on Wh*. London: Griffith and Farran, etc. (1880).

(p. 112)

The [hw] ~ [w] contrast for some, and its absence for others, is well illustrated in the following passage:

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> Her glass of neat vodka sat on the white damask table-cloth. Beyond the smear of lipstick, a twist of lemon floated among the ice-cubes. We were sitting side by side, on a banquette.
>
> 'What are you writing about Bruce?'
>
> 'Wales, Diana.' …
>
> 'Whales!' she said. 'Blue whales! … Sperrrm whales! … THE WHITE WHALE!'
>
> 'No … no, Diana! Wales! Welsh Wales! The country to the west of England.'
>
> 'Oh! Wales. I do know Wales. Little grey houses … covered in roses … in the rain …'
>
> (From 'At Dinner with Diana Vreeland' (1982) from the collection *What Am I Doing Here?* by Bruce Chatwin, Picador 1990)

The maintenance of the [hw] ~ [w] contrast in North America is mapped at http://www.ling.upenn.edu/phono_atlas/maps/Map8.html. The comment that accompanies the map refers to *The Linguistic Atlas of the Middle and South Atlantic States* (LAMSAS) based on data collected in the 1930s from speakers born in the late nineteenth century, and states:

> Since the LAMSAS data was gathered, the distinction has rapidly eroded. Map 8 shows only 71 of 587 speakers who maintain it. In this case, 'Distinct' includes all those who were heard by the analyst as pronouncing the voiceless bilabial clearly (62 cases) or not quite clearly (9) cases. There were 3 individuals who thought that the pairs were different, but made no distinction in production; they were considered to be merged.
>
> (From http://www.ling.upenn.edu/phono_atlas/maps/Map8.html)

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This is the picture at the end of the twentieth century. There is no clear regional pattern, and only 10–12 per cent of the speakers preserve the contrast. The simplification of the cluster affects foreign items too, such as Spanish *Juan* commonly pronounced [wan].

On the nature of [hw] ~ [ʍ]: whether 'complexity' equals bi-segmental composition or not is hard to determine. In the analysis of PDE varieties where the sound represented by <wh-> is devoiced/pronounced with spread glottis, its common phonological representation is /ʍ/, a voiceless labialised velar fricative, so we can assume that this is an option for ME too. We should note, however, that both in PDE (Cruttenden 2008: 230), and in ME and EModE, bi-segmental and mono-segmental interpretation is possible, and in the 'popular' perception the contrast is based on [hw-] vs [w-].

5.1.4 Non-initial glottal fricatives in ME: THOUGH-TOUGH

(p. 112)

Long [hh] appeared freely in OE compounds: *feor**hh**us* 'life-house, body-house', *feor**hh**ord* 'life-treasure', *ðea**hh**wæðere* 'nevertheless'. There is only one attestation of a word-final <-hh> in OE, the imperative *ascy**hh*** 'scare away', where the orthography would have been influenced by the geminate in the base form, reconstructed **ascyhhan*, which is not attested in the corpus.

(p. 113)

The only possible stem-final <h> + consonant cluster in OE was <-ht>. [-xs] and [-xθ] could appear across morpheme boundaries. All etymological <-h-> + consonant medial clusters other than <-ht-> also involve a morpheme boundary: OE *heah.re* 'higher', *heah.ne* 'high, acc. masc.'

(p. 113)

On the orthographic evidence for loss of coda <-h> see further Minkova (2006b). Laing and Lass (2003) present early Middle English data from the South-West Midlands indicating vocalisation of the fricative as a phonological possibility (see their Appendix 3,

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276–7). More on earlier coverage and the dialectal distribution of variants is found in Knappe (1997).

Chaucer rhymes his variant of the adverb *enough* (OE ***gen****ō****h***) with *you* (OE *ēow*, ME ***yow***):

> I prey to God that it may plesen *yow*;
> Thanne woot I wel that it is good *ynow* *FrT* 707–8

The value of <ow> in this rhyme probably approximates [oʊ]/[ɔʊ]. In *you* < late OE *eow*, early ME *iou*, yow the diphthong was monophthongised to [u ː] which did not go through the Vowel Shift (see 8.2.2), like *youth*, possibly due to the initial [j-]. The form *enow* shows the normal diphthongisation of input [u ː] 'enough', used only archaically and dialectally today, was in common use throughout Middle English. The OED shows its last recorded uses of *enow* outside Scotland in the second half of the nineteenth century. In the form *enough* the [u ː] is shortened due to the development of the labiodental [-f] < [-x]; the sequence of vowel changes can be reconstructed as [u ː x] > [u ː f] > [ʊf] > [ʌf].

(p. 114)

On the perceptual overlap of [-x] and [-f] after back vowels as a motivation for the [x] > [f] shift in English see Lauttamus (1981); Ladefoged (1982: 262); Minkova (1993: 222–4). The feature [grave] relates to the acoustic energy in the lower frequencies; labials and velars are [+ grave].

(p. 115)

On loss of coda [-x]: loss of /-x/ does not occur in SSBE, where it is of limited distribution. Muthmann (1999: 455) lists only three words in PDE which show /-x/ word-finally: *loch*, *Reich* and *Sassenach*. The PDE *though* is from Old Norse **þōh* which gradually gained over the native *ðēah*, which disappeared from the records before 1500. The ON form shows the development of *f* < *ȝ*, *gh* /x/, as in *laugh*, *cough*, *tough*; *thof* was occasional in literature as late as 1750, and is still prevalent in many varieties from Yorkshire and Lancashire to Hampshire and Devon. In Scotland and northern England

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though is pronounced /θɔː/; the Hampshire and West Somerset *thof* also is /θɔf/, not /ðɔf/ (OED).

(p. 115)

On stem-internal and unstressed-syllable onset /h/: *Weho* is recorded with single stress at http://www.loc.gov/nls/index.html) – the US National Library Service, Library of Congress. The London West End *Soho* can have stress on the second syllable, though the first pronunciation given by the OED is /ˈsəʊhəʊ/. The globalisation of English is undoubtedly contributing to a change in the distribution of /h/ in unstressed syllables, as in the [h]-ful *iroha* [iːˈroha] 'Japanese syllabary' (1832), *pahit* (1902) [ˊpɑhɪt] 'a gin and bitters drink' < Malay *pahit* 'bitter' (OED), *lahar* (1929) [ˊlɑːhɑː (r)] 'volcanic mud-flow' < Javanese (OED); see further *taiaha* (1836) 'Maori club', *taha* (1836) 'a South African bird', *houhere* (1879) [ˈhaʊhɪəriː] 'New Zealand ribbonwood'. In *brouhaha* the secondary stress on the [ha-] may be preserved, but in *yahoo* the secondary stress is rarely heard, leaving [ˈyɑhu] as dominant.

5.2.2 Reconstructing the phonetics of <r> in OE

(p. 116)

If one assumes a stability of realisation of /r/ for hundreds of years, which would be surprising in view of the current evidence of generational shifts in the realisation of /r/, we would expect the /r/ resulting from rhotacism to be an alveolar fricative trill, coalescing with a similarly alveolar pre-existing /r/ in pre-OE (Howell and Wicka 2007: 210). The reconstruction of OE <r> as velar/velarised/uvular, or, more loosely, some back variety of /r/ is found in, for example, Quirk and Wrenn (1957: 145); Hogg (1992b: 103); Lass (1994: 49–50) and references therein. The apical/anterior/coronal/alveolar approximant or tap interpretation is found in Alexander (1985); Howell (1987); Erickson (2002); Denton (2003) and references therein.

For the full set of arguments in favour of the velar nature of /r/ see Lass and Anderson (1975: 83ff.). Reszkiewicz (1973: 57) suggests the possibility of interpreting

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the back allophones of /r/ and /l/ in OE as separate phonemes on the basis of some minimal pairs, for example *earn* 'eagle' with a separate velar /r/ vs *ærn* 'house'. Daunt (1939) pointed out that Old Irish had phonemically velarised and palatalised consonants, and therefore Irish missionary linguists could have interpreted Old English in the same way, in spite of the fact that the OE velarised rhotics were allophonic. As contrastive subtypes of /r/ and /l/ are not posited for any of the varieties of later English, the proposal has not been further explored. Moreover, a spelling representing consonantal velarity is unlikely in view of the restricted scope of the Breaking spellings – none before /-k/, for example.

A more interesting proposal that could be projected to the analysis of OE Breaking, is to treat [əɹ] as a positional allophone of /r/. Heselwood (2009), who defends this analysis for PDE, argues that it is preferable because:

> It is harder in [əɹ] than in other schwa + consonant sequences to identify a point in the signal when the more vocoidal part changes to a more contoidal part. Rather, there is a continuous shift in formant frequencies without the sudden change of acoustic class found in schwa + obstruent sequences. (Heselwood 2009: 77)

Could the spelling with early <u> and later <a, o> be just a graphemic reflex of an allophonic [-əɹ]? If the vowel-to-/r/-glide is phonemically associated with the /r/, as in Heselwood's (2009) proposal for RP, and not with the preceding vowel, some consequences should be addressed. Why would the OE scribes mark the special character of /r/ syllable-finally only in restricted environments? This is not an unanswerable question: it is commonly assumed that the 'Breaking' glide does not develop after long vowels and back vowels because there is no need of additional articulatory or acoustic adjustments – it is only the short front vowels that require the adjustment. There is another consideration of relevance: the digraph spellings <ea, eo> were well established in the orthography of OE, while <-uo-> stands for /-fo-, -vo-, -wo-/, <-ua> for /-wa-, -va-/. For the mid <o> and low back <a> the marking of the glide with <o> or <a> would conflict with other scribal conventions: <oo> was occasionally used for long /o:/ (<good> 'good' (x265), <moor> 'moor'), and an <a> after a vowel was often a mark of length, for

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example <oan> for more common <an> ‘one’. Note that assuming allophonic [-əɹ] for Breaking before <r> entails allophonic [-əl].

A possible phonetic mechanism of the coarticulatory effect of the rhotic on the preceding front vowel can be associated with the development of a transitional glide which bridges the relative height of the front vowels’ third formant, F3, and the low F3 of the rhotic. The presence of the post-vocalic glide may reduce the acoustic salience of the rhotic in the coda, obscuring the difference between apical and uvular rhotics.

Denton (2003: 39) qualifies the reconstructed coronal trill realisation also as ‘rounded’ and as involving a ‘relatively high tongue position’. On the importance of the unifying property of ‘rounding’ in this context see Stockwell (2002a). On American English /r/ see Riera et al. (2009).

(p. 117)

On Breaking before ‘covered’ /r/ or pain coda /r/: as for the additional condition on Breaking described in the literature: the presence of a consonant after <r>, there are good reasons to question the necessity, rather than the potential significance, of the additional consonant to the right. The apparent paucity of forms with Breaking before <-r> in absolutely final position can be accounted for straightforwardly: the overwhelming majority of OE monosyllabic words ending in /-r/ have a long vowel in the nucleus. Alternatively, word-final <-r> appears in unstressed syllables and affixes: *hunger*, *under*, *morðor*, *fær-*. It is then the accidental unavailability of stressed short /i, e, æ/ + /-r/ in word-final position in the ambient language that creates the impression that the effect of /-r/ on the preceding vowel is contingent upon a following consonant. The most frequently cited minimal pair – *bearn* ‘child, bairn’ vs *bær* ‘bore’, p.t. sg. – is not convincing: the form *bær* could be influenced by the past plural form *bǣron*, which has the long vowel and by the related form *-bǣre*, as in *leohtbǣre* ‘light-bearing, luminous’, *lustbǣre* ‘joy-bearing, desirable’. Another ‘last resort’ pair – *ærn* ‘house’ vs *earn* ‘eagle’ (Smith 2009: 56–7) – is dubious because the spellings <earn> for ‘house’ (Bosworth and Toller) and <ærn> for ‘eagle’ (OccGl 81) are firmly in evidence. There is also the process

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of ‘Secondary Breaking’, specific to WS: <i> > <ie>, later <y> before a **single** /r/: <hiere, hyre> ‘her’, <biereþ, bierþ, byrþ> ‘bears’, <tyrþ> ‘tears’ (Campbell 1959: 126–7).

(p. 118, p. 120 ex. 10(a, b))

On coda RC: Howell and Wicka (2007: 209ff.) recognise the ‘strength’ of /r/ in these coda clusters, where epenthesis increases the constriction of the rhotic, but they identify the environment as rhotic + velar, ignoring instances such as *fyrn ~ firen* ‘crime’. Hogg (1992a: 236) defines the nature of the second consonant in such coda clusters more broadly, and accurately, as ‘non-homorganic’. Of greater phonetic significance in the splitting of the clusters in metathesis and epenthesis would be the presence of a labial. The phonologisation of the anaptyctic vowel does not have to be completed: as argued in Hall (2006), there are two types of vowels that can split a cluster: ‘intrusive’ vowels that are simply phonetic transitions between consonants, and real epenthetic vowels that create new syllables. The examples in (10a) are good candidates for ‘intrusion’ which does not result in phonemicisation; it is unrelated to the ‘marked’ nature of the cluster (pace Howell and Wicka 2007), because the input clusters are phonologically well formed in terms of sonority trajectory in the coda.

The phonetic mechanism of vowel intrusion is based on gestural re-timing in the production of the consonants.

> When two consonant gestures are produced with a low degree of overlap, there is an acoustic release between them, which may be interpreted by the listener as a vowel. If the tongue body is in a fairly neutral position, or this period is short in duration, the perceived vowel will sound like a schwa. (Hall 2006: 388)

The motivation for the intrusive vowel is perceptual: it increases the recoverability of the consonantal gestures. Hall reports that Browman and Goldstein (1990) generated tokens of the word *bray* ([bɹeɪ]), and varied the level of overlap between the first two consonants. When overlap between the bilabial and rhotic gestures was reduced, subjects heard *beret*, which can be pronounced [bəɹeɪ] or [bɹ ˌ eɪ].

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(p. 120, ex. 10(c))

On coda -CR: In the -CR case the spelling without an epenthetic vowel <bebr>, <frofr> can, but must not, represent syllabic /r̩/. The most informative discussion of the behaviour of C + sonorant codas in OE is found in Fulk (1992); Fulk shows convincing metrical evidence that the sonorants did not have to be syllabic, which makes the deployment of such items a good criterion for the dating of poetry.

5.2.3 Pre-consonantal /r/-loss

(p. 121)

Hill (1940) contains the most extensive data on pre-consonantal /r/-loss in English. This is a generally neglected contribution to the history of /r/-loss in English, though Windross (1994) does refer to it, but he proposes an alternative to Hill's treatment of the mechanism of the loss based on avoidance of over-heavy syllables (1994: 442). The logic of the Windross hypothesis entails that /-rC/ clusters should be simplified first after long vowels, which does not match the evidence provided by the earliest instances of pre-consonantal /r/-loss.

(p. 123)

On the complexity of retroflex consonants see Hamann (2005: 37). Support for intermediate retroflexion comes from forms such as *purse* [pʊʃ] (Cumberland, Summerset), and spellings such as <scush> for *scurse* 'God's curse'. For an account of rhotic deletion before alveolar sequences in Old Scandinavian see Hamann (2005), and for a discussion of rhotic deletion both before coronals and non-coronals in terms of temporal coordination of the consonantal gestures see Bradley (2007). Hamann (2005) covers the coalescence of morpheme-internal /r/- alveolar which became underlying apicals as in /sʊɑrt/ > /sʊɑt̪/ *svart* 'black'.

(p. 124)

On lengthened vs unlengthened vowels preceding <-rs>: according to the list in Muthmann (1999), *arse*, *parse* (1568) (also with [-z]) and *sparse* (1727) represent the

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total set of monomorphemic words in which <-ars> resulted in [ɑː]. This makes *arse* /ars/ a phonotactically isolated form until the sixteenth century. OFr ***dars***, ME *dase* (1430) 'dace, a fresh-water fish' [deɪs] shows both early loss *and* lengthening of the vowel.

(p. 124)

Windross (1994: 431) is also sceptical about the role of 'compensatory lengthening' in the process of /r/-loss, but he posits lengthening as a necessary first step. His account relies on the structural impetus to 'break up overlong syllables' (1994: 442), while the assimilatory account includes a broader set of factors.

On delayed codification in the non-rhotic varieties see Windross (1994); Hay and Sudbury (2005). The occurrence of hyper-rhoticity is covered in Britton (2007a), incipient derhoticisation in essentially rhotic varieties of English in Wells (1984); Lawson et al. (2008). Reversal to rhoticity in previously categorically non-rhotic accents is covered in Nagy and Irwin (2010).

5.2.4 Post-vocalic /r/-loss

(p. 125)

The hypothesis that historically coda /r/-loss was most advanced in prosodically weak syllables is found in Horn and Lehnert (1954: 917–20); Dobson (1968: §332); Lutz (1994: 172). The spelling <mero> appears in: *Qwhils we go be faith, be mero as wer & schado we see* (Misyn, *The Mending of Life* 128–9). Note the parallel *mero: schado*. The forms cited in (14) are the only two forms without final <-r> in the extensive MED entry on *mirror*. There are no r-less spellings of *mirror* in LAEME. The spellings <fathe> and <mothe> (also <brothe>) are rightly questioned in Horn and Lehnert as 'mistakes'. Hanham (1975) adds editorial <r> to all of them. Checking on these aberrant spellings in the Hanham edition, I found that all eight <r>-less spellings (<brothe> at 34.1, 165.1, 193.10; <fathe> at 108.12, 133.2; <mothe> at 111.22, 114.3, 136.44) are from the letters of only one of the numerous writers: Richard Cely the Younger, d. 1483. The significance of the clustering of 'mistaken' spellings in this writer's idiolect is hard to estimate, but it

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may throw light on the supposition (Hanham 1975: xiv–xv) that Richard was educated apart from the rest of the family.

(p. 126)

On word-final /r/-loss: combining following context and word context, Nagy and Irwin (2010) found that the environments that most favour the constricted realisation/reversal to rhoticity in Boston and New Hampshire are 'word-final, prevocalic (*winTER is*), and word-final, prepausal (*winTER*)'. They do, however, identify word-final restoration of /r/ as stronger in stressed central vowels (*FUR*, *WORK*) than after schwa (*WINTER*). This preference does not apply to other stressed vowels.

(p. 127)

Trudgill and Gordon (2006) suggest that rhoticity was lost in parallel in England, Australia and New Zealand, and quite probably, also in South Africa. They attribute the loss to basic linguistic variability and Sapirean 'drift'.

(p. 127)

If one accepts Heselwood's (2009) proposal for an underlying /r/ in all cases of vocalisation, linking /r/ and intrusive /r/, there is an interesting consequence for the overall phonological structure of non-rhotic Englishes: the low sonority of /i/ and /u/ make them 'most-consonant-like', so all word-forms in English can be analysed as having a phonological form ending in a consonant, or a consonant-like segment (2009: 92). In other words, all word-final syllables in this variety of English are heavy, which would be in line with the so-called *HAPPY*-TENSING, an innovation most characteristic of non-rhotic accents in southern England and in NZE (Trudgill 1999b: 235–6).

Positing a ubiquitous underlying /r/ is not unproblematic. It contradicts the analysis of the /ɔ:/ and /ɑ:/ vowels in RP proposed in Giegerich (1997). For a recent alternative to an account involving surface deletion, positing /r/ as an epenthetic segment, see Uffmann (2007) and the references therein.

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5.2.5 The other liquid: BRIDGESTOWE-BRISTOL. Historical parallels between /r/ and /l/

(p. 129)

On /l/ allophony: other allophones in which /l/ is adjacent to other consonants in onsets and codas are the complex [$\widehat{\text{l̥l}}$] (starts voiceless and ends voiced) in voiceless obstruent + /l/ onsets, as in ***sl****ight*, ***fl****ight*, ***cl****ing* and [$\underline{\text{ɫ}}$] (with a dental articulation of the velarised allophone) in /l/ + [θ], as in *wea****lth***, *fi****lth****y*, *stea****lth*** (see Hayes 2009b: 24–5).

The transcription of *feel*, *cool*, *knealt*, *people* follows Johnson and Britain (2007), who distinguish between [w] representing a coda /l/ and /u/ representing a nuclear /l/. For further discussion of the distribution of vocalised /l/ see Scobbie and Wrench (2003); Johnson and Britain (2007).

(p. 130)

The examples of anaptyxis in /lC/ are cited in Hogg (1992a: 236). Howell (1987: 333) discusses the appearance of anaptyxis between /r/ and /l/ and the following consonant in Germanic ([foləg] ‘volk’ in Thuringian, *welk* [welək] ‘which’ in Dutch), hypothesising that it is the result of incompatibility of apical liquids with adjacent non-homorganic consonants.

Yet another parallel between /r/ and /l/ is provided by the developments in Anglo-Norman, where both liquids are involved in the realisation of a back vocalic glide between the peak vowel and the coda liquid: Lat. *virga* > ME *verdge* ~ *vierge*; Lat. *frātrem* > OFr *frere*, AN *fryer* (Pope 1961: §1,172), Lat. **bellitātem* > OFr *bealte*, *beaute*, ME *beute*.

Two interesting cases of similarity behind the /r/ ~ /l/ alternation are are *Cata****l****ina* < Cathe**r**ine and *co****l****onel*. The OED describes the alternation as follows:

> The early French *coronel* (whence also Spanish *coronel*) was due to the dissimilation of *l–l*, common in Romanic, though popular etymology associated it with *corona*, *couronne* crown. It is still dialectal …, but was supplanted in literary use, late in 16th cent., by the more etymological *colonnel*; and under this influence and that of translations of Italian

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> military treatises *colonel* also appeared in English *c*1580. The two forms were used indifferently by Barret, Holland, Decker, and others; *coronel* was the prevailing form till 1630, but disappeared in writing *c*1650.

The parallelism between /r/ and /l/ is also behind the famous absence of phonemic contrast for [r] and [l] in some Asian languages.

(p. 132)

For more details on the importance of the bi-gestural nature of intrusive liquids and the distribution of American intrusive /l/ see Gick (1999, 2002). On the interaction of adjacent and overlapping tongue body gestures in V + liquid coarticulation effects – deletion, colouring, lengthening – see Proctor (2010). On the sonority-based OT ranking of /r/ over /l/ in intrusive processes see Uffmann (2007).

5.3.1 Initial <kn-, gn-, wr->: KNIGHT-NIGHT, WRITE-RIGHT

(p. 134)

Substitutions of <r> by <w> are also a matter of individual speech patterns, recognisable in some high-profile individuals – Sister Wendy, Frank Muir, Pontius Pilate from *Life of Brian*. In the US this is known informally as *The Elmer Fudd* or *Barbara Walters Effect*. Speaking about technology, one American journalist joked recently that ‘16 years ago, a “***tw****eet*” was something Barbara Walters gave her dog’, a joke apparently not appreciated by Walters.

5.3.2 Final <-mb, -mn, -ng>: iamb-iambic, damn-damnation, singer-linger

(p. 135)

While in the history of English it was the edgemost low-sonority segment that was deleted in <kn-, gn-, wr-> and <-mb, -mn, -ng>, the relative importance of sonority vs segmental markedness in the selection of the deletable segment in onset- and coda-clusters can vary in different languages. The interplay between these factors is currently investigated by scholars interested in the acquisition of consonant cluster by children

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(see, for example, Fikkert (2007); studies by Karen Jesney at http://www-bcf.usc.edu/ ~ jesney/papers.html and references there).

Although the general trend in English has indeed been simplification of final clusters, loan vocabulary has contributed to the acceptability of some new clusters. One such cluster is [-zm] ~ [zm ˌ] ~ [-zəm] in the numerous classical words in *-asm, -ism, -ysm*.

(p. 139)

On the realisation of <ng> in PDE see Vachek (1976: 224–33), Giegerich (1992: 297–301); Gussmann (2002: 46–54); Ellis and Hardcastle (2002); Bermúdez-Otero (2006); Garrett and Blevins (2009); Bermúdez-Otero and Trousdale (2012) and references therein. On the realisations of initial [ŋ-] in foreign words see Minkova and Stockwell (2009: 188–9).

(p. 140)

On <-nd> simplification: sporadic attestations appear quite early. Rhymes *-nd* : *-n*, as in *grounde* : *sowne* 'sound', *Roulande* : *Sowdan* (*The Sowdone of Babylon*, end of fourteenth century) show the instability of coda /n/ + /dental stop, a precursor of a more general tendency towards simplification of any coda cluster ending in a dental stop (see 5.6). William Barnes's nineteenth-century dialect poems rhyme *child* with *mile, smile, stile, while* (Burton 2010: 262).

(p. 140)

Figure 5.4 is an expanded and revised version of the table in Minkova (2006b: 169). Omitted are the initial clusters <hr-, hl-, hn-> since the simplification of these clusters occurred before the end of the thirteenth century, and there is no orthographic discrepancy between sound and spelling in the initial consonants of words like *ring, lot, nap*. The cluster simplification sets refer to underived forms.

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5.4 Other inventory changes: the adoption of /ʒ/

(p. 141)

The absence of initial [dʒ-] in OE is a distributional gap repaired by the borrowing of OFr words such as ***j**ay, **j**angle, **j**argon, **j**uice, **j**ealousy*. Dobson (1957: 208) reports that Robert Robinson's *The Art of Pronunciation* (1617) treats [zj] in, for example, *vi**si**on* as a 'consonant group', virtually a simple sound, for which a special ligature is devised. Luick (1964: 1,079) cites the orthoepist Hodges as the first one to recognise the palatalization in 1644.

5.4.1 More alveolar palatalisations and affrications: s-, t-, d- + -j. GOTCHA, INJUN

(p. 143)

On onset [sj] > [ʃ]: to Walker's list one could add *sumach* 'shrub, leaves used in tanning' with alternating [sju-] ~ [ʃu-] – a fourteenth-century loanword from French, ultimately Arabic. The spelling <sj> in non-French loans such as *sjambock*, *sjogrenite*, is also realised as [ʃ-], because in English [sj-] can only be followed by [uː], while [ʃ-] is distributed freely before all vowels. The loss of the glide is a more general process, applying to all coronals, but not at the same rate in the different varieties, so [sjuː-] is still common outside North America. On the progressive spread of glide-loss in AmE see Phillips (1981b). We return to this process in Chapter 7.

(p. 144)

On <-ion> [ɪ.ən]: Tarlinskaja (forthcoming, p.c.) reports that Surrey's *Aeneid* (1541) and Norton-Sackville's *Gorboduc* (1561) have a negligible number of disyllabic *-ion* (4 per 1,000 lines), but a surprising reversal to disyllabic *-ion* occurs in Marlowe's *Tamburlaine* (1590) (almost 39 per 1,000 lines) and Kyd's *Spanish Tragedy* (1582–92).

5.5.1 The glottal stop

(p. 146)

The evidence for glottal stop insertion in Old and Middle English is discussed in Minkova (2003), where one can find statistics on the disproportionately higher ratio of

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CV- stressed syllables vs V- stressed syllables in PDE and the pre-vocalic glottal stop in German (2003: 175–7). The likelihood of glottal stop insertion was probably higher in markedly careful, declamatory style of delivery.

5.5.2 Voicing of [t] and tapping of [t] and [d]: MATTER-MADDER (p. 148)

More fifteenth- and sixteenth-century examples are listed in Wyld (1953: 312–13); Haugen (1938). Tapping was attested as an eighteenth-century variant, for example *proddestant* labelled by Wyld (1949: 221) a London 'vulgarism'. For further on the conditions and history of tapping in English see Minkova and Zuraw (forthcoming).

On the regional and social acceptance of tapping: the combination of competing glottalisation and the sociolinguistic dimension of tapping may be responsible for its restricted use in SSBE. Indeed, as Haugen (1938: 634) testifies, even in AE tapping has not always sat comfortably with prescriptivists. Discussing the roots of 'voiced *t*' in AE, Haugen expresses

> a whisper of regret at Kenyon's partial endorsement of the idea that 'voiced t' impairs 'distinctiveness in speech'. Even though he [Kenyon] qualifies this statement by saying that it 'chiefly disturbs those to whose speech it is alien', he leaves an opening for the 'better speech' enthusiasts. (Haugen 1938: 634)

5.6 Recent trends: [ts-, ʃm-, ʃl-, ʃt-], MASH POTATO, MANAGE CARE, STAIN GLASS (p. 149)

On the potential for acceptability of the onset clusters [ts-, ʃm-, ʃl-, ʃt-] see Albright (2009).

Stain-glass (2012) used for stain**ed**-glass: 'Stain glass is addicting. Once you start you can't stop', Lawrence said. (*The Abington Journal*, 12 July 2012): http://theabingtonjournal.com/stories/Art-offers-renewed-sense-of-purpose,174198#ixzz21IwT2RLS. C*lo**se*** for *clos**ed*** is from an official announcement on

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the UCLA emergency network, 26 July 2010 11:13:41 a.m.: 'Bruin Walk between LATC and Drake has been completely clo**se.** Traffic is being rerouted …'

(p. 150)

The LAEME pre-1325 records show OE *hǣs* '(be)hest' spelled without <t> only in 16 tokens out of 197 for the unprefixed form; there are 17 instances of *behes**t**(e)* against only 4 instances of *bihese*, the latter all in the twelfth-century *Trinity Homilies.* The rhyme evidence for variability of post-consonantal dentals is cited in Nevanlinna (2007: 274), the only detailed study of coronal stop deletion in ME rhymes to date. The unetymological additions of <t> adopted into the standard are cited in Minkoff (1972: 341). To these one can add *unknownst* (1805) and *unbeknownst* (1848).

FURTHER READING (p. 150)

The history of /h/-loss has attracted much scholarly attention. The evidence for early Middle English [h-] loss is presented and discussed in Milroy (1983); see also Mugglestone (2003, especially ch. 4). Lutz (1991) and Minkova (2003, 2006b), provide a broader documentation and phonological analysis of the developments in the English consonantal system, including the history of /h/ with different results. Lauttamus (1981) is an early and insightful account of the labialisation of the velar labial /x/ to /f/. More recently, Crisma (2009) and Schlüter (2009) provide the most comprehensive empirical bases for the study of initial /h/ in the history of English; anyone researching the topic should consult these studies, which offer different interpretations of essentially overlapping data. For the changing patterns of contrastiveness of /h/ and also the restructuring of the distribution of /w/ and /j/ see Anderson 2001.

The literature on the history and present-day realisation of the rhotics in English is extensive. The classic study by Hill (1940) provides the best survey of the various early hypotheses and supplies an expandable database for further historical research. Denton (2003) is a phonetically based analysis of the type(s) of /r/ in Early West Germanic, including OE. Giegerich (1997) is a strong defence of the continuity of underlying rhoticity in RP. In a different framework, Hay and Sudbury (2005) explore the decline of

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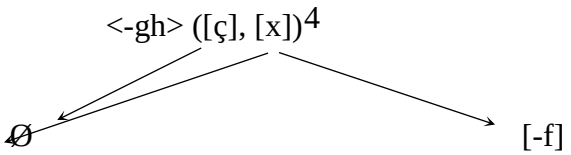
rhoticity in New Zealand English. McMahon (2009) uses the distribution of /r/ in both regional and worldwide data to construct a new network-based model of phonetic distances among the varieties of English.

ASSIGNMENTS

Supply at least three examples illustrating the split in the following diagram. Provide the Old English and ME forms of the words, using the OED:

The development of non-initial [h-]



This could be a project shared by a group of students: using LAEME, document the distribution of <h>-less vs <h>-ful spellings of the words *which*, *whiff*, *while*, *white*, *whither*, *why*. Discuss the findings in terms of (a) regional origin, and (b) the grammatical type (noun, verb, adverb, pronoun, and so on).

- Construct a list of five minimal pair of the type *which* : *witch* and use them to test and describe the state of the [hw-] : [h] contrast in your circle of friends or in your family circle.
- Identify the phonological basis of the misunderstanding in the excerpt cited in Companion Notes to 5.1.3. Discuss briefly the possible relevance of the social and regional background of the participants in the conversation: Diana Vreeland and Bruce Chatwin. Can you think of other such examples from your own experience?
- Report on the findings in chapter 11 (‘Glasgow: accent and voice quality’ by Jane Stuart-Smith) and chapter 12 (‘Edinburgh: descriptive material’ by Deborah Chirrey) in the volume *Urban Voices: Accent Studies in the British Isles*, ed. Paul

4 The allophone [ç] (‘c-cedilla’) is the voiceless palatal fricative realisation of the consonant when it is adjacent to a front vowel, as in <hih> ‘high’. The [x] (‘lower-case x’) stands for the voiceless velar fricative – the allophone realised in the environment of back vowels, as in <toh> ‘tough’.

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Foulkes and Gerard Docherty, London: Arnold, and New York: Oxford University Press, 1999.

- Construct a mini-corpus of OE words in which the 'Breaking' digraph occurs before a single /-r/ coda (inflected and derivational forms) and forms in which the digraph occurs in syllables with 'covered' /r/ (for example, earm 'arm', bearn 'bairn'). Find out whether the records of OE Breaking show greater consistency in -RC # (word-final) environments than elsewhere and comment on the results. (For advanced students: use the DOE and the OE Dictionary Corpus.)
- Examine and compare the rhyming practices of two nineteenth-century poets (suggestions: Swinburne, Robert Louis Stevenson, Longfellow) and comment on the status of the rhotics in the poets' dialect.
- For at least half a century after its publication, John Walker's *Pronouncing Dictionary* was considered the most authoritative reference on the pronunciation of English, especially in the US. Today it is an invaluable source of information on the pronunciation of words in the older stages of the language. Read his description of (a) the consonant /h/, or (b) the cluster [ŋ(g)] and compare his comments on acceptability of certain pronunciations to the comments on the same topics in Cruttenden (2008).
- Discuss the proper names in *Beowulf*: *Dæghrefn, Eaha, Hnæf, Hreþel.* What accounts for their unusual shape in PDE? Compare these names with some unusual names used today, for example *Abihu, Schmoo, Aaliyah, Deisha, Meztli*.

CHAPTER 6 The vowels of OE

6.2 Orthography and the reconstruction of OE vowels

(p. 154)

Ælfric's original text on the vowels of OE reads:

> Of ðam syndon fif *VOCALES*, þæt synd **clypiendlice**: *a, e, i, o, u*. Ðas fif stafas æteowiað heora naman þurh hi sylfe and butan <ðam> stafum ne mæg nan word beon awriten, and for ði hi synd *QVINQVE VOCALES*

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> gehatene. To ðisum is genumen se grecisca *y* <for><intingan><greciscra><namena>, <and><se><ylca><*y*> is on engliscum gereorde swiðe gewunelic. Ealle ða oðre stafas syndon **gehatene** *CONSONANTES* …

(p. 154)

The macrons in citations from OE are inserted in the main text only when vowel length is relevant to the discussion. The OED OE etymologies mark vowel length, and so does the *Dictionary of Old English* (http://tapor.library.utoronto.ca/doe/), though neither the online *Dictionary of Old English Corpus* nor the printed volumes of *The Anglo-Saxon Poetic Records* have macrons over the long vowels.

(p. 154)

For more on Orm's spelling reform see 7.2.1. Lass (forthcoming) is the most extended and theoretically informed discussion of orthographic practices with special reference to the history of English.

(p. 156)

Hogg (1992b: 86) writes that "This variation in spelling suggests that we might be dealing with instances of the phoneme /o/ rather than /ɑ/". In later Mercian and Northumbrian, Old Norse contributed to the restoration of /a/ before a nasal where OE had <o> + nasal (see Bibire 2001: 98–9). The only <o> spellings in ME are in the West Midlands. King (1992) covers the issues and interpretations related to <a> + nasal sequences in the context of OE scribal practices.

Placing OE short [æ] and short [ɑ] in (semi)-independent boxes in this chapter is motivated partly by conformity with standard reference sources, for example Campbell (1959); Hogg (1992a, 2002); Lass (1987, 1994). This is not the only logical taxonomy, nor the most economical one in terms of later changes (see 7.3.1). Colman (1983) shows that the evidence for lexically contrastive status of [ɑ] and [æ] in OE is equivocal at best. She makes a strong case in favour of treating the two vowels as allophonic.

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6.3 I-Mutation: FOOT-FEET, FULL-FILL, SELL-SOLD

(p. 157)

A parallel vowel-harmonising process is reconstructed also for Proto-Germanic, where the short vowels /*i, u, e/ can shift height in harmony with a following vowel: /e/ is raised before a high vowel, and /i, u/ are lowered before a non-high vowel. For the complex details of that harmony see Hogg (1992a: 54–6).

(p. 160)

An example of apparent inconsistency, which is historically motivated, is found with the OE adjectival suffix *-ig*. This suffix is the reflex both of PrG *-ig* and *-ag*, and only the former will trigger I-Mutation (Kastovsky 1992: 390).

(p. 161)

On mutated plurals in athematic nouns: some extremely common root-stem nouns – such as OE sg. *bōc* - pl. *bēċ* ‘book’, with about 1,750 tokens in the OEC, and OE sg. *burġ/burh* - pl. *byrġ* ‘borough’, with over 2,100 tokens – ended up adopting the most common *-es* plural. Already in OE, we find nine instances of <boces/bocas/bokes> ‘books’ and six instances of <burgas> ‘boroughs’. The mutated plural forms are attested in ME, but they did not survive much beyond c. 1300. These items go against the expectation of the token frequency hypothesis, according to which forms that are more frequent are more likely to be conservative in their morphology (Bybee and Slobin 1982; Bybee 2007). Clearly, frequency, important as it is, cannot account for these items. The challenge they present, along with other core vocabulary items that abandoned the pattern of mutated plurals such as OE *āc* ‘oak’, OE *gāt* ‘goat’, OE *hnutu* ‘nut’, OE *furh* ‘furrow’, remains. Further information on the later behaviour of these nouns is needed, but it could be suggested that some phonological factors also contributed to the disassociation of these nouns from the pattern of mutated plurals. One such factor would be the association of mutated plurals with a specific singular stem-type: VVC, as in *gōs* ‘goose’, which makes *burġ/burh* ‘borough’, *hnutu* ‘nut’, *furh* ‘furrow’ outliers. Another factor could be the additional complexity of <-c>-final items such as sg. *bōc* - pl. *bēċ* ‘book’, sg. *āc* - pl. *ǣċ* ‘oak’, in

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which the mutated plural has a (late) OE affricate, while the analogical *-es* plural preserves the singular form of the stem. Of relevance here is the history of the OE homophones: sg. *brōc* - pl. *brēċ/brēcena* ‘breeches’, a historical root stem, with a new singular *brēċ* ‘breech’ (c. 1000) and a ‘double’ plural in PDE, and OE sg. *brōc* - pl. *brōcas* ‘brook’, a masculine *a*- stem, not subject to I-Mutation.

(p. 162)

On non-surviving mutated verbs: the last MED entry for a mutated form of the verb, *hingr(i)an-hingrede* is 1175. A short form of *sprȳtan, spryttan* ‘to sprout’ survives dialectally as ‘sprit’; the OED’s most recent citation is 1911. There is an OED dialectal entry for *rime*, v. too, rare and obsolete, attested after 1450 only in the sense of enlarging holes and pipe-cleaning.

There were many instances in OE in which I-Mutation is recognisable *within* the noun and verb paradigms, where unmutated and mutated forms can coexist depending on the presence of /i, j/ in the PrG inflections, for example 2nd and 3rd pers. sg. present tense indicative and the past subjunctive of strong verbs: *cuman* ‘to come’ – *cymest, cymþ, cyme(n)*; on these alternations see further Hogg (1992a: 129–30, 134–6). In the absence of a recognisable trigger, the mutated forms in these paradigms were levelled in the direction of the base unmutated form.

(p. 163)

I-Umlaut and adjectival forms: the form *Lenten* ~ shortened *Lent* also shows the mutated form of the base *long*, PrG **laŋgito-* OE *lencten, leng(c)ten* with syncope of <i> and voicing assimilation of the velar to [k] before [t]. I-Umlaut is also behind the connection between PDE *FORMER* and *FIRST*. *Former* is an ME comparative of OE *forma* ‘first’, analogical on *formest* ‘foremost’, while *first* is traced back to PrG **furisto-*, a superlative formation on the stem **fur-*, *for-*, with an OE double superlative *fyrmest > fyr(m)est > first.*

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(p. 164)

Derivational suffixes causing I-Mutation: since the domain of the harmonisation is the word, an area which should be explored further is the correlation between the status and productivity of the suffix and its effect on the root. Lass (1992b: 109–10) presents a comprehensive list of mutated and unmutated derivatives of all OE suffixes with <-i->. The picture is mixed for *all* suffixes; even for *-incel*, listed by Lass as 'categorically NON-umlauting', the DOEC shows *rapincel* 'small rope' ~ *repincel*. The set of testable items is minute, however, just four words, not counting *byrþincel* 'little burden', in which the <y> is inherited from the base *byrþen(n)*, an original *-jō* stem.

6.4 OE homorganic-cluster lengthening: CHILD-CHILDREN, HOUND-HUNDRED

(p. 165)

The North-West Germanic lengthening in monosyllabic words is attributed to the constraint on *word-minimality*, whereby a minimal lexical word should be prosodically heavy – either -VV or -VC. The long-term vision of English adjusting all stressed syllables to the optimal weight of VV or -VC goes all the way back to Luick (1898), and is most clearly and coherently articulated in Lass (1992a: 70–83). Although some details regarding the quantitative changes in this book will differ from the essentially teleological account in Luick and his followers, the overall concept of lengthening and shortening of vowels as an 'improvement' of stressed-syllable weight is undoubtedly reasonable, though it needs to be re-evaluated in the context of strong competition from coarticulatory and perceptual factors. For a seminal attempt to unify the quantitative processes of early Middle English on the basis of fine-grained conditioning factors see Ritt (1994).

(p. 165)

On lengthening before <-ng>: only a very limited number of high-token frequency items are potential candidates for pre-[ŋg] lengthening. They are all instances of low *back* short [ɑ], allophonically possibly nasalised [ɑ̃], as in early OE *lang* 'long', *sang* 'song', *strang* 'strong'. In late OE they are reconstructed as having [ɒ:], possibly nasalised [ɒ̃ː], which

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subsequently joined the general raising of [ɔː] to early ME [ɔː] (see 7.1), resulting in ME *lōng*, *sōng*, *strōng*. The long vowel was shortened in ME – the shortening goes back to c. 1200. The story is not clear-cut, though: *any* etymological <-an-> sequence was represented orthographically as <on-> in early West Saxon and Kentish, and in late Anglian texts. We do not know whether this was a purely scribal convention or whether it represented actual pronunciation differences. The orthographic variation continued in ME, where the <on-> spellings are typically found in the West Midlands texts. It is therefore not necessary to posit lengthening of the <-ang> input in order to account for the late ME <-ong> forms.

(p. 166)

The lengthening in PDE *shoulder*, OE *sculdor*, also possibly ME *bulderston* 'boulder-stone' (*a*1300) may be a case of pre-/l/ glide-formation, and thus not a result of pre-<-ld> lengthening. On the cohesiveness or separability of homorganic clusters associated with lengthening: Ritt (1994: 83–4) analyses the obstruent in, for example, *bin[d]an* as *ambisyllabic*, the [d] belonging simultaneously to the stressed coda and the onset of the unstressed syllable. This analysis avoids the problem of positing and accounting for lengthening in disyllabic forms in which the stressed syllable is sonorant-final, as in *bi**n.d**an* 'to bind' – in that analysis the cluster is always in the coda of the stressed syllable. The immediate objections to this otherwise appealing proposal are that there is metrical evidence in OE that syllabification was onset-maximal (see 2.3.2) for intervocalic singletons, and that an ambisyllabic analysis might be a problem because it cannot capture the difference between the lengthening clusters (first syllable VCC-) and tri-consonantal (-CCC-) clusters, where the first syllable will also be VCC-; for example, bi**n[d]**an syllabifies like *ċi**ldr**u* 'chi**ldr**en': ċi**l[d]r**u, yet only the former is lengthened. A solution to this dilemma which preserves the tautosyllabic requirement for lengthening might be that the *only* third element in word-medial -ldC- and -ndC- clusters in OE is a liquid, which might trigger preferred syllabification of, for example, *ċi**ldr**u* 'chi**ldr**en' as ċi**l.dr**u, since *dr-* is a robustly attested word-initial cluster. For a thorough analysis of the data and arguments against positing ambisyllabicity in OE see Fulk (1997). For the

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plausibility of ambisyllabicity in the spoken varieties of early English see Minkova and Zuraw (forthcoming).

(p. 168)

On tautosyllabicity of < Vld>: one possible reason why the presence of the voiced dental stop contributes to the lengthening is the general tendency for vowels to be longer before voiced stops; see further Cruttenden (2008: 160–1) for a survey of the phonetic literature on the relationship between the voicing of stops and the duration of the preceding vowel.

(p. 169)

On *wind*, n. - to *wind*, v. : Levins's (1570) *Rhyming Dictionary*, ed. by Wheatley (1867), lists *wind* 'ventus' and *to wind* 'insinuare, colligere' both as rhyming with *bind, rind, kind*, and so on. See also the couplet:

> But, if unseiz'd, she glides away like *wind*
> And leaves repenting Folly far *behind*
> (Dryden, *Absalom and Achitophel*, l691)

Some of the <-end> words may have had lengthened variants in ME; see spellings such as <**ee**nd(e), **ey**nd(e)> for *end* in the fourteenth and fifteenth centuries (MED).
Unlike pre-[-ld] lengthening, which was not dialect-specific, there are possible dialect differences with respect to pre-[-nd] and [-mb] lengthening: in ME the northernmost dialects show lack of lengthened forms before *-mb* and *-nd*.

(p. 169)

On various hypotheses regarding pre-[-nd] lengthening: Liberman (1992a) offers an energetic dismissal of all earlier hypotheses. His own proposal, ambitiously covering a variety of lengthenings throughout early Germanic, does not escape the specific problem of lengthening of high vowels only, no compensatory loss of the nasal in the case of pre -*nd* lengthening.

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6.4.1 Are pre-cluster lengthenings prosodically incongruous?

(p. 170)

Lass (1992a, 1994) uses the category 'superheavy' to distinguish between -VVCC rhymes and other rhymes in his analysis of the history of vowel length and syllable quantity in English. He considers -VC rhymes 'light', which contradicts the evidence of syllable weight in verse (see 9.2, 10.2.1).

Earlier phonological interpretations of the mora as a weight unit were based on the assumption that syllable weight distinctions are strictly binary: light vs non-light, the latter putting heavy and superheavy together in one bin. The assumption of strict weight binarity has been challenged from different angles: see Hammond (1999) for phonological arguments for assigning different moraic counts to English consonants, and Cohn (2003) on the phonetic evidence for the longer duration of forms with an /l/ or /r/ in the rhyme following certain vowels or diphthongs as resulting in superheavy syllables. Even three weight categories seem to be insufficient: an additional problem arises with the term 'superheavy', since it covers both -VVC and -VVCC syllables, which a more finely tiered hierarchy of weight might recognise, as in the monosyllabic shortening preferentially before single dentals, but not elsewhere in English. For gradient syllable weight see further Ryan (2011a).

(p. 171)

On the 'lightness' of the sonorant in Homorganic Cluster Lengthening: Luick (1898) also suggested overall 'lightness' of *-ld*, *-nd*, *-mb*. In terms of mora-count, Luick's intuition about the weight of the clusters can be translated as the sonorant contributing only a half-mora. The idea of split moras is not new: analysing two Bantu languages, Maddieson (1993) proposed 'splitting' a mora, originally belonging to a postvocalic nasal, but when resyllabified, it is shared between the nasal and the preceding vowel. While there is clearly evidence that the binarity of the abstract weight unit is inadequate, the notion of 'half-mora' is vague: it raises the possibility of further augmentation or reduction to thirds and quarters, invalidating the entire concept. For scepticism about half-moras in English see Minkova and Stockwell (1994: 530–1).

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A separate problem for the treatment of the homorganic clusters as lighter than other clusters ensues from the positive correlation between the sonority of a segment and its contribution to syllable weight. Arguments in a wide range of literature show a steady association between moras and sonorants; see Hammond (1999); Zec (1995); Morén (2003) for further references and discussion. On the other hand, focus on the cohesiveness of the homorganic clusters (see also the discussion of *-st* in 7.5.1.1, 7.5.3), which makes a CVVRC syllable (PDE *mind*) perceptually closer to a CVVC syllable (PDE *mine*), brings the latter type in a predictable alternation with CVCC syllables (PDE *mint*), whose weight is intermediate between CVV and CVVC, but not significantly different from either one (Ryan 2011a). Ryan's findings regarding the weight ranking of CVCC syllables as reflected in the weight-sensitive poetic corpora he studied are applicable to both pre-cluster lengthenings and pre-consonantal shortenings (see 7.5.1.1).

6.5.1 The short vowels in late OE

(p. 173)

On the phonetic values of the late OE short vowels: The position that non-peripherality of the short vowels goes back to OE is analytically more economical – it does not require positing and explaining a later lowering of the non-low vowels. This analysis, however, should not preclude allophonic realisations of short tense/peripheral [i, e, u, o] in specific environments. This 'compromise' solution is offered by the OED; see, for example, the article on the letter <E>, which states: 'There are reasons for believing that in Old English the short *e* had two sounds, possibly /e/ and /ɛ/.'

Hogg (1992a: 200–2) describes the process as 'late OE laxing', sporadic and initially restricted to West Saxon. Specifically for <i>, Hogg writes that 'laxing of /i/ was widespread and frequent' in late West Saxon. For a more radical hypothesis, allowing for [ɪ] and [ʊ] at *any* stage in OE, see Stockwell and Minkova (2002), where even the evidence of pre-cluster lengthening for qualitative identity of short and long vowels in early OE is called into question.

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6.5.3 Diphthongs and diphthongoids

(p. 176)

Some further details on the late OE diphthongs: two of the diphthongs, [æə] as in *strēam* 'stream', and [eə] as in *þēof* 'thief', appear with regularity only in WS. For WG /au/ the Northumbrian spellings are <ea> and <eo>, also used there for WG /eu/. For further dialect differences in diphthongal spellings see Campbell (1959); Hogg (1992a), and all the references therein. Minkoff (1972: 35) provides a user-friendly table of the development of the WG diphthongs in the various dialects.

WG /iu/ is held to be a continuation of an earlier /eu/ before /i, j/ in the following syllable, the environment which is responsible for I-Mutation in OE. In non-WS it appears as <iu>/<eo>, WS <ie>. In late WS OE <ie> alternates with <y>/<i>, suggesting monophthongisation.

(p. 177)

The clearest surviving instances of *Akzentumsprung* involve [-eə]. With [-æə-] the most likely candidate for a diphthong-internal prominence shift is OE *sċēawian* 'to show', for which it is plausible to reconstruct intermediate late OE *[ʃja ː w-] > ME [ʃɔw]. For more information on *Akzentumsprung* and its relation to the long vowel shifts in Germanic see Liberman (1995).

(p. 178)

On the typological rarity of short diphthongs: in Icelandic, often cited as an example of a language with contrastive short and long diphthongs, there are no short diphthongs in open syllables. In Scots the short–long diphthongal contrasts are linked to specific morphological and phonetic conditions. Looking for the Celtic connection, Schrijver (2009) observes that Old Irish has a 'marginal but real contrast' between /iu/ and /i‿u/, but there the quantitative difference is accompanied by a difference in the sonority peak – the <u> in the 'long' diphthong is the peak, so the difference is between a rising and a falling sequence. Of interest is also Schrijver's dismissal of a famous hypothesis, first

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formulated by Daunt (1939) that the short diphthongs may have arisen as a result of Old Irish scribal practice. He points out that:

> Old Irish did not possess <ea>, while Old English did; Old Irish possessed <au>, while Old English did not; moreover, it is not at all evident that the Irish missionaries would use the way they wrote Irish as a model for creating Old English orthography rather than the way they wrote Latin. (Schrijver 2009: 198, n.15)

(p. 179)

On minimal pairs used as an argument for the contrastiveness of 'short' and 'long' diphthongs in OE: the classic references are Stockwell and Barritt (1955, 1961). Danchev (1976) offers a full survey and critique of the minimal pairs argument. The most convincing sustained and updated argumentation against the full phonemic status of the OE diphthongs is found in Stockwell (2002a).

Nevertheless, the phonemic interpretation of /e͡a/, /e͡o/, /i͡e/ is deeply ensconced even in the most recent authoritative phonological accounts of OE: Hogg (1992a); Lass (1994). White (2004) resurrects Daunt's (1939) position that the digraph spellings represent consonantal properties and not diphthongs. For a reaction to his position see Smith (2009: 55–8). Attempting to break away from the strict dichotomy of 'phonemic' vs 'allophonic', Danchev (1976) interprets the 'short' diphthongs as 'weak phonemes', forming a syntagmatic unit with the adjacent palatal or velar consonant, where the whole group functions as a 'strong' phoneme with high functional load. While the idea of gradience is appealing, Danchev's hypothesis does not get around the issue of the merger of the 'short' diphthongs with the corresponding short monophthongs.

6.5.4 Unstressed vowels

(p. 182)

On schwa: the reference to a 'generic' /ə/ here and in 7.6 is an acknowledgement of the potential for unstressed vowels to be realised in a variety of ways, not just in OE, but

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throughout the history of the language (see Lass 2009). On PDE schwas see Cruttenden (2008: 132–3).

(p. 182)

The loss of high unstressed vowels after heavy stressed syllables in pre- and early OE is known as High-Vowel Deletion. The prosodic conditioning of syncope and apocope of unstressed vowels in Germanic and early OE is a complex and much discussed topic (see Lass 1994: 98–102; Hogg 2000). The loss of prosodic conditioning for syncope in the inflectional vowels of weak verbs is discussed in Minkova (2011b).

(p. 183)

On elision in OE verse: if *Beowulf* 1,997b *God**e** **i**c ðanc secge* 'to God I thanks say' is scanned /s w w s s w/, the frequency of the type in Hutcheson's statistics would be 0.0077 per cent (1995: 262). Russom (1998: 21) allows elision as a regular variable in his metrical rules. For scepticism on elision in OE meter see Hutcheson (1995: 129, 262).

ASSIGNMENTS

- Compile a list of nouns belonging to the OE root declension. Check the token frequencies of five nouns in the *Old English Dictionary Corpus.* Check the LAEME database: when do the first attestations of *-es* plurals for these nouns appear?
- Using Figures 6.2–6.4 and the information in 6.5.4, provide a phonetic transcription of the following text from Wulfstan's *Translation of the Apostles' Creed*:[6]

[6] The text is available at http://faculty.virginia.edu/OldEnglish/OEA/creed.html. The homilist Wulfstan died in 1023.

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Wē ġelȳfað on ǣnne God ælmihtiġne

…….....

þe ealle þing ġesċeōp and ġeworhte.

…….....

And wē ġelȳfað and ġeorne witon

…….....

þæt Crīst Godes sunu tō mannum cōm

…….....

for ealles mancynnes ðearfe

…….....

And wē ġelȳfað þæt hine clǣne mǣden gebǣre, Sancta Maria,

…….....

þe nǣfre nāhte weres ġemānan.

…….....

And wē ġelȳfað þæt hē myċel ġeðolode

…….....

and stīðlīċe þrōwode for ūre ealra nēode.

…….....

And wē ġelȳfað þæt hine man on rōde āhēnge and hine to dēaðe ācwealde

…….....

and hine syððan on eorðan bebyriġde.

…….....

The Lord's Prayer[7]

Fæder ūre	Father of us
ðū þe eart on heofenum	Thou who art in heavens
sī þīn nama ġehālgod	Be thine name hallowed
tōbecume þīn rīċe	May thine kingdom come

[7] Matthew 6: 9 (WSCp, eleventh century).

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ġewyrþe þīn wille	May thine will be realised
on eorðan, swā swā on heofenum.	On earth so as in heavens
Ūrne ġedæġhwāmlīcan hlāf syle ūs to dæġ	Our daily loaf give us today
ond ne ġelǣd þū ūs on costnunge	and (do) not lead thou us in(to) temptation
ac ā-lȳs ūs of yfele.	but release us from evil.
Sōþlīċe.	Truly.

- Using the OED online, look up the etymology of the following pairs:

  MOUSE-MICE

  DOOM-DEEM

  MONASTERY-MINSTER

  OLD-ELDER

  FOUL-DEFILE-FILTH

  FOOD-FEED
- Question: does OE allow word-internal hiatus?

CHAPTER 7 Middle English dialects

7.2 Notes on ME spelling (vowels): <TAXI>-<ATAXY>, <TYRE>-<TIRE>, <COME>-<CUT>, <SEE>-<SEA>

(p. 187)

A series of studies by Laing, and Laing and Lass, address the complexities of the medieval writing systems: Laing (1999); Laing and Lass (2003, 2006, 2009). Roberts (2006) is an engaging visual guide to the chronological progression of scripts used in English up to 1500. For a useful student introduction to ME spellings and sounds see Horobin and Smith (2002: 44–50, 60–4).

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(p. 187)

Samuels (1963) identifies four clusters of texts that share certain orthographic conventions. For a definition and discussion of 'focused' variety see Smith (1996: ch. 4). Taavitsainen (2000) shows that a cluster of scientific texts with properties similar to the Type I Wycliffite texts, appear not merely in the Central Midlands but also in manuscripts produced in London in the first quarter of the fifteenth century. This suggests that the spellings of the Central Midlands scientific writing were in competition with the spellings of the Chancery Standard as tributaries to the embryonic London standard.

7.2.1 Letter-to-vowel correspondences in ME (single letters): SUN-SON, CONE-COME

(p. 187)

Figure 7.2: a much fuller list of ME letter-sound correspondences can be found in Fisiak (1968: 13–23); Lass (1992a: 36–8).

(p. 187)

On <i> and <j>: the letter <j> was an allograph of <i>.

> It was very little used in English, where *y* had previously been substituted for final *i*; and it was not till the 17th cent. that the device of utilising the two forms of the letter, so that i, *i*, should remain as the vowel, and j, *j*, be used for the consonant, was established, and the capital forms of the latter, J, *J*, were introduced. … In Dictionaries, the I and J words continued to be intermingled in one series down to the 19th cent. Dr. Johnson, indeed, under the letter I, says 'I is in English considered both as a vowel and consonant; though, since the vowel and consonant differ in their form as well as sound, they may be more properly accounted two letters'. Nevertheless, he proceeds to treat them practically as one, his first word *I* being followed by *Jabber*; *Jam* by *Iambick*, and this by *Jangle*; while the three last words of I are *Juxtaposition*, *Ivy*, *Jymold*. The same practice was followed by Todd, and by Richardson 1820, and even in some later

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> dictionaries. Jodrell in 1820, Webster in 1828, separate I and J, as independent letters. (OED: Letter J)

(p. 188)

On the shape-shifting of <y> ~ <þ> see Laing and Lass (2009), who describe the paleographic basis of the confusion and define the importance of the different scribal practices with respect to <y> ~ <þ> in establishing the regional provenance of texts. The runic *þ* fell into disuse in the fourteenth century though the use of <y> instead of <th> continued in hand-writing into the nineteenth century.

(p. 189)

On <u> ~ <v>:

> It was only in the 17th century that these two letters, both of which had been employed in a double function (see U), were finally distinguished as vowel and consonant; and down to the 19th century words beginning with either letter continued to form one series in dictionaries. (OED)

(p. 189)

Orm worked in the second half of the thirteenth century in the East Midlands. For more details see Parkes (1983). A full bibliography and much more on Orm can be found at *The Ormulum Project*: http://www2.english.su.se/nlj/ormproj/ormulum.htm.

7.2.2 Letter-to-vowel correspondences in ME (digraphs): BEAT-BEET, ROAD-ROOD

(p. 190)

On <ie> and <eo>: the digraph <ie> can also represent two vowels in hiatus in Latin and Anglo-Norman loans such as *d**ī.e**te* ‘diet’, *memor**i.e*** ‘memory’, *glor**i.e*** ‘glory’, *stor**i.e*** ‘story’.

The value of <eo> shown here is the crude traditional matching of letter to sound found in the textbooks. An important paper by Lass and Laing (2005) offers a more sophisticated and empirically realistic picture of the distribution of the spellings and

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realisations of the front rounded vowels based on an examination of over 2,500 relevant tokens from the LAEME database. The analysis shows that ME <eo> was used much more 'prodigally' than previously assumed.

(p. 190)

On the fluidity of the ME scribal practices see the important contributions by Laing and Lass, especially (2009), where further references to the problems of ME writing systems can be found.

7.3.1 Short vowels: DIZZY-BUSY, FURY-BURY, MERRY-MIRTH

(p. 192)

On the *PIN-PEN* merger see Thomas (2001: 52); Montgomery and Eble (2004) and references therein. Further coverage of the environments and lexical items subject to historical pre-nasal raising can be found in Dobson (1957); Jordan (1974). The AmE *PIN-PEN* merger is dated to the second half of the nineteenth century. Thomas (2001) attributes it to the raised quality of the mid-vowel, but this runs against the findings in the phonetic studies, for example Beddor et al. (1986), according to which the predicted effect of nasalisation involves lowering of the high vowels and raising of the low vowels. Since the first formant (F1) is intermediate for mid vowels, the *PIN-PEN* merger is most likely a compromise.

(p. 193)

The unrounding of the mid vowel [ø(ː)] to [e(ː)] of whatever origin was probably more advanced in West Saxon OE than in the Western areas, where some rounding probably continued into ME. It is ignored here because there are no reflexes of the mid front rounded vowels in later English. For the interplay between scribal dialect and orthographic practice with respect to the front rounded vowels in late thirteenth- to early fourteenth-century Hereford see Stenroos (2005). The relationship between lexical frequency and unrounding of [ø(:)] in the *Ormulum* is explored in Phillips (2006: 84–7).

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(p. 193)

On Kentish [e], [e ː] for OE <y>: the lowering and unrounding to [e(ː)] started c. 900 (see Hogg 1992a: 209–10; Brunner 1963: 14). In addition to Kent, <e> spellings for OE [ʏ] and [y ː] in early ME are found also in adjacent Sussex and Essex, parts of Suffolk, Hertfordshire, Middlesex and Surrey (see Brunner 1963: 14–15). The <e> reflex of OE <y> is also found in the dialect of London from the middle of the fourteenth century (Mossé and Walker 1968: 25; Lass 1992a: 55).

(p. 194)

On the lack of [u ː] reflexes of OE [y ː]: the spelling, but not the pronunciation of OE *bycgan* 'buy', ME *<bīen>*, also ME *buy(e)*, *beye(n)*, *beyn*, with a lengthened vowel, is an exception to the orthographic merger of the West Midlands <u> and <i> for the long vowel. The non-survival of [u ː] reflexes does not preclude the variant [u ː] for individual items, so OE *drȳ* 'dry' is completely 'regular', but the first element in *Dru-ridge Bay* (Northumberland) is also based on OE *drȳ* (Ekwall 1960) and must therefore reflect a shortened [u ː] (see 7.4), although it is surprising to find [u ː] so far north.

(p. 196)

On positing markedness of front rounded vowels [ʏ] and [y ː]: for a critique of this type of feature-based markedness of the front rounded vowels see Kaun (1995), and more generally on the lack of correlation between the statistical distribution of front rounded vowels and markedness see Lass (1980: 25–7 and *passim*). Dresher (2009) is the most extensive coverage of approaches to phonological contrast, offering a thoroughly argued defence of the contrastive hierarchy as a theory of phonological contrast. He shows (2009: 79) that in terms of acquisition the contrasts of height and frontness–backness precede the development of a rounding contrast. The distribution of front rounded vowels can also be used as an argument for their special status: 'the typologically preferred number of vowels situated between *i* and *u* is zero' (Kaun 1995: 82), reporting on cross-linguistics surveys of vowel inventories. If patterns of distribution were enlightening in some way, we could indeed say that front rounded vowels are 'odd' in that respect: as

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reported in Mayr (2010) with reference to the *World Atlas of Language Structures*, out of the 562 languages featured there, only 6.6 per cent have front rounded vowels.

(p. 197)

On the possible association between backing of [y] in the environment of palatals see Ladefoged and Maddieson (1996: 148) on the lip-rounding of [ʃ] in English and French.

(p. 198)

On <a> plus coda nasal: Old Norse contributed to the restoration of [a] before a nasal in ME in areas where OE had [o] + nasal, namely Mercian and Northumbrian (see Bibire 2001: 98–9). OE Merican and Northumbrian texts regularly represent PrG [a] + nasal as <o> + nasal, for example *monn* 'man', *gongan* 'go', *lomb* 'lamb'. The only consistent <o> spellings in ME are in the West Midlands; see Appendix 7.1 below for FROM-FRAM LALME maps.

7.3.2 Long vowels: GAE-GO, OAKE (Somerset) - AIKE (East Riding of Yorkshire)

(p. 201)

On the posited general raising of [æ ː] to [ɛ ː]: it should be noted that the change is reconstructed on the basis of spelling with <e(a)> after the abandonment of <æ>, but the actual phonetic value of OE <ǣ> as in OE *lǣdan*, lead, v. may have been [ɛ ː] already in OE, at least in some varieties and environments. In East Saxon OE [æ ː] was lowered to [a ː], which must have been kept separate from the [ɒ ː], since that [a ː] does not go through the raising of OE [ɒ ː] to [ɔ ː] described in section 7.3.2.

(p. 202)

On Chaucer's rhyming of the mid-front vowels: rhymes showing a genuine crossover between [e ː] and [ɛ ː] do exist in Chaucer, though they are less frequent than the 'pure' rhymes. The most common explanation for the mixed [e ː] : [ɛ ː] rhymes is that Chaucer was resorting to slightly impure rhymes for his dialect by importing pronunciations from neighbouring dialects, most likely Kentish; the audience must have been familiar with

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both pronunciations and the impurity of the rhymes was tolerated. For a more detailed discussion of the 'long e' rhymes in Chaucer see Sandved (1985: 20–3); and Ogura (1987: 12–29), whose rhyming data from Chaucer and from fifteenth-century poems suggest that the 'impure' rhymes are in fact instances of lexically specific raising of [ɛ :]. A treatment of Chaucer's 'impure' rhymes as a 'graphological phenomenon' is offered in Rusch (1994).

(p. 202)

On <ea>-<ee>/<ie> and <oa>-<oo> spellings: the practice of distinguishing the two mid vowels in spelling is attributed to Anglo-Norman scribes who transferred the early ME practice of representing [ɛ :] by <ea> to French loans such as *ease* < OFr *aise*, *reason* < AN *raisun* and extended the practice to native words. Similarly, the widely used AN <ie> spelling for [e :] as in *siege*, *relief* was extended to native words with [e :] (Scragg 1974: 48–9). The correlation is helpful for those interested in etymology, but it is also imperfect. Moreover, PDE [i :] is occasionally represented by <i>, as in *kiwi*, *ski*, or other digraphs: <ey> as in *key*, <ay> as in *quay*.

(p. 204)

On the Middle English roots of the Long Vowel Shift: a casual search in the DOE shows <ei> for [i :] in <bei> 'by', <dreigen> 'dry'. 'The full set of early ME <ei/ey> spellings for [i :] have been carefully recorded and analysed in Stenbrenden (2010: ch. 4, pp. 537–9), whose conclusions about the early dating of the diphthongisation should be taken into account in any discussion of the 'Great' Vowel Shift.

The dating of the early stages of the Long Vowel Shift is a very controversial topic. Traditionally, the initial stages of the shift have been associated with the beginning of the fifteenth century. However, the availability of new data in LAEME makes it possible to collect and analyse orthographic data suggesting that the fifteenth century is an unrealistically conservative date for the initiation of the long vowel shift. Of special note here is the work of Stenbrenden (2003, 2011), where the hypothesis of early shifting

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is laid out and defended; see also Stockwell's (2006) sympathetic yet cautious view of pushing the chronological boundaries of the shift back to the thirteenth century.

7.4 The diphthongal system of ME

(p. 205)

On the domain of glide-vocalisation in OE: it is defined as occurring both within the same syllable, in monomorphemic words such as **briġdel* 'bridle', or within the same stem, as in *flīġan* 'cause to fly', where the integrity of the stem is preserved in syllabification. Supporting this is the data in Wetzel (1981), who offers extensive coverage of word-division at line-ends in OE manuscripts showing that in 99 per cent of the cases the division is morphologically governed.

(p. 206)

On pre-h diphthongisation in ME: an orthographic analogue of ME pre-h-diphthongisation can be found in the PDE spellings of the exclamations <ah, eh, oh> where the letter <h> serves to indicate the length and the diphthongal nature of the preceding vowels with <ah> and <eh> preserving pre-vowel shift quality. Note also that in some PDE pronunciation manuals, for example *NBC*'s *Handbook of Pronunciation*, <h> is used as a diacritic marking simply the length of the vowel, thus *wasp* is shown as <wahsp> and *toe* as <toh>.

The regional spread of the 'new' ME diphthongs is covered in detail in Jordan (1974: 115–36).

(p. 208)

On diphthongal length: the hypothesis throughout this book is there is no functional difference between bimoraic and trimoraic nuclei. For an account positing a 'trimoraic nucleus simplification rule' to account for the functional equivalence of the ME diphthongs see Lass and Anderson (1975: 194–200).

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(p. 209)

On the merger of [uj] and [oj]: Horobin and Smith (2002: 67) state that the merger is evidenced by Chaucer's rhyming practice, but there are no examples cited to corroborate the assertion. My own search of the rhymes in Chaucer (the verse portions of the *CT* and *Troilus*) shows self-rhymes only: *oille* : *argoille*; *point* : *disjoint*, *anoint*; *destroy* : *annoy* with AN [uj], and *voice* : *choice* with [oj]; see also Ikegami (1984: 73–4), who reports only self-rhymes in Chaucer. The variability of [uj] ~ [oj] continues into EModE, when in surviving [uj] forms the first vowel is lowered to [ə] and the resulting [əj] may merge with the [əj] from ME [iː], allowing rhymes such as *Banks Div**i**ne* : *j**oi**n* (Alexander Pope, Translation of the *Fifth Book of the Iliad*, 1715).

(p. 209)

On the merger of [-æj] and [-ej]: the merger was most advanced in the North. Using rhyme evidence, We**ɬ**na (2007) adds the northern West Midlands as another area where the merger occurred early. His more detailed history of these diphthongs shows persistence of [æj] into the fourteenth century in the South, though he does not make a commitment to the actual value of the first element of the merged diphthong. The merger, here assumed to be in the direction of the higher nucleus because of assimilation to the [-j]-glide, is in evidence in the first half of the fourteenth century; see, for example, the remarkable set of rhymes in *Sir Tristrem* (342–8):

> Tristrem wan that ther was ***layd***.
> A tresoun ther was made:
> No lenger than the maister ***seyd***,
> Of gate nas ther no bade.
> As thai best sat and ***pleyd***,
> Out of haven thai rade
> Opon the se so ***gray***.

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The text, included in the *Auchinleck* manuscript, is southern (London) c. 1330, while the authorial dialect is more likely Yorkshire (see Putter et al. 2014).

7.5 Quantitative changes: why do they matter?

(p. 210)

On guessing the stressed-vowel quality in nonce-formations and unfamiliar 'real' words: our judgements are based on majority patterns of spelling and ignore 'deviant' spelling-pronunciation correspondences such as *bass*, *Cambridge* with [-eɪ], *tule* pronounced [ˈtuːli] ~ [ˈtuːleɪ], *Job* [dʒoʊb], *taxi* with [-ɪ/i] but *fungi* with [-aɪ], *scone* pronounced [skɒn] and other idiosyncratic spellings. The discussion in the text focuses only on the origin of the *dominant* pattern of correspondences familiar to all literate speakers of English.

(p. 211)

On the gradient contribution of codas to syllable weight: codas have a very specific effect on the duration of the preceding vowel: typically sonorant codas weigh more than obstruent codas; see Hammond (1999); also Gordon (2004) on the weight distinction between CVC [+ obstruent] and CVC [+ sonorant]. For monosyllabic words with short vowels the vowel duration ratio before voiceless and voiced stops is 2:3 (Sharf 1962); see also Cruttenden (2008) for data on *bit-bid* durational differences. The contribution of a diphthong to syllable weight can also be variable: diphthongs also contribute unevenly to the overall syllable weight: 'it is more common for rising-sonority diphthongs to be classified as light …'. On the other hand, 'languages/processes treating at least certain falling-sonority diphthongs as light, or as an intermediate grade between light and heavy, are amply attested' (see Ryan 2011a). The relevance of this to the OE digraph controversy remains to be explored.

7.5.1 Shortenings: CREEP-CREPT, MOON-MONDAY, MOUTH-PORTSMOUTH, LEEK-GARLIC

(p. 212)

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On the shortening of long vowels in unstressed syllables: while it is the case that PrG long unstressed vowels were shortened in OE (PrG **tungōn*, OE *tunge* ‘tongue’, PrG *fadēr*, OE *fæder* ‘father’), it is also the case that the formation of [-j] and [-w] diphthongs as in OE *cræftiġ* ‘strong’, *stāniġ* ‘stony’, *maniġ* ‘many’, *lareow*, láruw ‘teacher, doctor’ (an obscured compound from *lār-þeow*) adds diphthongs to the inventory of unstressed vowels. The non-occurrence of long vowels in fully unstressed positions is part of the phonology of PDE. The only vowels that appear consistently in all varieties of English and in all registers today are [ə] and [ɪ] (Giegerich 1992: 68–9); Gimson (1970: 146–7). There are, however, possible tense or diphthongal realisations of word-final and prevocalic [i] and [ow] in fully unstressed position – *pity*, *fanciest*, *window*, *Ottawa* – where such tense [i]’s and diphthongal [ow] are in variation with [ə] (see Hayes 1995: 14–15).

7.5.1.1 Pre-consonantal shortening: FEED-FED, WIDE-WIDTH, SHEEP-SHEPHERD

(p. 212)

The dating of pre-consonantal shortening is from Campbell (1959: 121–2), who posits seventh- to eighth-century shortening before -CCC and in the first syllable of trisyllabic words. For a discussion of OE shortening specifically before geminate consonants, and further references see Fulk (1998), whose research leads to the conclusion that ‘The general shortening of long vowels in closed syllables therefore seems likeliest to have occurred in the period 867–ca. 1050.’ (1998: 10).

(p. 213)

On *-st* and other coda clusters associated with pre-consonantal shortening: the link between vowel height and shortening before *-st* makes sense in terms of the intrinsic shortness of high vowels – the connection is cautiously offered in Ritt (1994: 102) in relation to the ambivalent syllabification of *-st*, but the shortening in *blast*, *breast*, *lest*, *behest*, all with a stressed long vowel in OE, makes the proposal problematic.

An additional complication arises with stem-final geminates and <-ċ, -sċ>. Loss of length in items such as OE *dīċ* ‘ditch’, *flǣsc* ‘flesh’ is a good indication of the nature of the coda consonant at the time of shortening: <ċ> in *dīċ* (see 4.3) and <sċ> in *flǣsc*

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show the behaviour of functionally bi-segmental sequences, and so, surprisingly, does the <tt> in OE *fǣtt* 'fat', adj., in spite of the general instability of geminates in stem codas (see 4.1.3).

Minkova and Stockwell (1998: 228–30) list 102 OE lexical items undergoing pre-consonantal shortening, classifying them into seven groups depending on syllabic composition, syntactic specification, and derivational history. Their database is not exhaustive. The broadest database of OE–early ME shortenings classified by the type of vowel that underwent the change is found in Weɬna (1978: 62–75).

(p. 214)

On pre-dental shortening in verbal preterites: the tendency for shortened vowels before dentals in strong verbs is attested also by patterns such as *write-writ, ride-rid, glide-glid, smite-smit,* all of them attested after the sixteenth century, and as late as the second half of the nineteenth century for *rid* and *strid* – for a full discussion of this pattern see Branchaw (2010: ch. 4). On the other hand, there is a well-attested trend in AmE to reverse the pre-consonantal shortening in a number of verbs, thus AmE past tense and past participles *dreamed, kneeled, spilled,* and so on; for more examples see Tottie (2002: 150–1).

(p. 215)

On *-th* ~ *-t* alternation:

> From an early period the final *-th* after *ȝ* varied with *-t* (compare *highth*, *height* < Old English *híehþu*), and this form is established in standard English, while *drouth*, *drowth* has continued in Scottish and northern dialects, and is often used by English poets. (OED)

The *-een* in *fifteen, sixteen,* and so on is based on OE *tēn* 'ten'. The shortening of the vowel in PDE *ten* remains a matter of debate.

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(p. 215)

On variability of pre-consonantal shortening before derivational suffixes other than <-(e)d>, *-th ~ t* : *-th ~ -t*: the shortening in *wisdom* must be related to the extremely high token frequency of that word, 853 attestations in OE (see Minkova and Stockwell 2005).

(p. 216)

The syllabic basis of pre-consonantal shortening, also referred to as 'closed syllable shortening', is contrasted to the higher-level, foot-based quantitative processes of trisyllabic shortening and open-syllable lengthening in Lahiri and Fikkert (1999). Closed syllable shortening is used as one of the processes discussed in the light of stratal OT in Bermúdez-Otero and McMahon (2006).

7.5.1.2 Trisyllabic shortening: HOLY-HOLIDAY, SOUTH-SOUTHERN

(p. 217)

On the paucity of early examples of trisyllabic shortening in the native vocabulary: one example found in the literature is *swine-Swinburne*, but it can be questioned. Swinburne's famous volume *Poems and Ballads* (1866), which displays the poet's preoccupation with paganism, was vigorously attacked for its 'feverish carnality'. The satirical magazine *Punch* referred to the poet as 'Mr. Swineborn' – obviously the etymological connection was alive for the magazine's readers.

Selected examples such as putative **cīcenes* 'chickens', *clāvere* 'clovers', *hēafodu* 'heads', *hǣringes* 'herrings', *ǣniġe* 'any, pl.', the full set of items supporting Lahiri and Fikkert's (1999: 231) assumption of a productive shortening in inflected forms can all be shown to be misleading: *cicen* has a short vowel (DOE), *clāvere* is a construct, not attested in the OE corpus, disyllabic *hē(a)fde*, with predictable historical syncopation after a heavy syllable appears 436 times vs only 6 instances of a trisyllabic form *hē(a)efde*, and the vowel is still long in PDE dialects, *herring* is long in ME (MED), *any* is shortened due to lack of stress (see 7.5.1.3).

The scepticism regarding the viability of a trisyllabic shortening rule in OE and ME is shared by Fulk (1998), Bermúdez-Otero (1998). Lahiri and Fikkert assume a link

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between the earlier instances of trisyllabic shortening in the native vocabulary and the later pattern that shapes the PDE allomorphy, but they also acknowledge that the early loanwords – pairs such as many like *clear-clarity*, *cave-cavity*, *serene-serenity* – were not 'compositional':

> The suffixed word was not necessarily derived from a nonsuffixed base. Thus, in early Middle English there is no reason why the derived words should have undergone TSS at all. They were borrowed with short vowels constrained by the prosodic structure and remained as such. (Lahiri and Fikkert 1999: 251)

7.5.1.3 Vowel shortening in unstressed syllables: BUT-ABOUT, LEEK-GARLIC (p. 219)

On vowel shortening in pronouns: the shortening occurs in the object pronoun *us*, also in *them* < ON *þeim*, but not in subject pronouns: *I*, *he*, *she*, *we* must have had long vowels often enough for the vowel shift to affect them. It is tempting to take the contrast between subject and object pronouns with respect to vowel shifting as an example of the interface of syntax and phonology; see the use of reconstructed shortened forms of ME *me* 'me' and *þe* 'thee' as part of the history of the creation of reflexive pronouns in English in Keenan (2002: 344).

The date of shortening of prosodically weak words is uncertain. It is likely that shortened forms were widespread and alternating with the etymologically long vowels already in OE. Forms such as *būtan* and *(on)būfan* do not alliterate in OE verse, the first syllables are not ictic and the vowel length cannot be established by the test of resolution (see 10.2.1). The process of function-word vowel reduction is well documented for all stages of English; see Bell et al. (2009) for recent experimental evidence showing that function words in PDE have shorter pronunciations, after controlling for frequency and predictability.

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(p. 219)

On using onomastic data: onomastic words can behave idiosyncratically, so much so that Clark (1992: 593) suggests that there may be ‘a non-standard, indeed specifically onomastic, branch of English phonology’, but she also recognises that ‘some apparently difficult forms become explicable in terms of unfettered operation of native assimilatory and reductive processes’, and vowel shortening is certainly one of those ‘reductive’ processes.

7.5.2 Lengthenings: GAME-GAMMON, GRAZE-GRASS

(p. 220)

On the correlation between stress and syllable weight see Gordon (2004: 282–3); Ryan (2011a) and the references there. Recall that in the discussion of pre-cluster lengthening (see 6.4.1) we invoked the intermediate weight status of CVCC, which was found in the poetic corpus investigated by Ryan (2011a) to be not significantly different from CVV or CVVC. This gradience of weight is an important aspect of the account of pre-consonantal shortening in monosyllables; it facilitates paradigmatic alternations because the derived forms in *sleep-slept*, *thief-theft*, and so on are prosodically very close to the base forms.

7.5.2.1 ME open-syllable lengthening

(p. 221)

The merger of the lengthened vowels with pre-existing vowels does not proceed in the same way in all dialects; see Wright and Wright (1928: §78) on the North Midlands developments. The mergers of the lengthened short vowels with the long open vowels did not occur instantly. There are good arguments from spelling and rhyming practice that suggest that the lengthened mid vowels were kept separate from [ɛ:] and [ɔ:] until the late fourteenth century in the south (see Liberman 1965a, 1965b).

(p. 222)

On lengthening of high vowels in open syllables: OE d**u**ru [dʊrə] > ME [d**o**:r(ə)] ‘door’ is a standard textbook example. There are, however, two sources for the word: OE *dor*

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and OE *duru*, which differ only in spelling. The DOE shows 21 instances of <d**o**r> in OE, where the lower pre-rhotic form could interfere with the dominant occurrences of the word which are still with <u>, about 425 – the latter may have been customary and do not necessarily indicate a high vowel.

On the non-peripheral nature of short <i> and <u>: compare also the shortening of OE *scīrgerēfa*, ME *scherive* 'sheriff'. The classic study using the lengthening and shortening data as evidence for the height difference in Old and Middle English is Stockwell (1961); see also Stockwell 1985. For a dissenting argument see Lass (1999: 87–9).

(p. 222)

On the evidence for open-syllable lengthening: an early, quite comprehensive coverage of the findings in *Cursor Mundi* can be found in Strandberg (1919). Hebda (2002) takes a closer look at the ultimately inconclusive results of the lengthening before /t/, /k/ in that poem, but another interesting question, the heavy presence of post-vocalic /r/ in the early lengthening data, has not been researched systematically, making this a good MA-level project. The *King of Tars* reference is to the *Auchinleck* manuscript (c. 1330–40) version of the poem, most likely of London origin (Geist 1948). More rhyme evidence is surveyed in Minkova (1982: 44–7). Ikegami's (1984) collection of rhymes shows fully implemented open-syllable lengthening only in late-fifteenth-century Skelton, and Skelton was a northerner living in the south, but it is possible that the tendency shown by earlier southern poets to match lengthened vowels with themselves may be due to conservative rhyming conventions (Ikegami 1984: 314–20, 348–50).

(p. 222)

On open-syllable lengthening and onset-maximal syllabification: although it may seem that onset-maximal syllabification is a prerequisite for open-syllable lengthening, variable ambisyllabicity of the middle consonant is not precluded. A (C)V[C] syllable, where the coda is shared with the next syllable, is still lighter than a (C)VC or a (C)VV syllable. Besides, the data on open-syllable lengthening in English – the macro-perspective – show

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clearly that the involvement of the stressed-syllable type in the process is at best a secondary factor. As shown in Minkova (1982); Ritt (1994); Bermúdez-Otero (1998), the probability of open-syllable lengthening in English is inversely proportional to (a) the weight of the second syllable, and (b) the height of the affected vowel. Almost 85 per cent of the lengthened forms are clear-cut cases of compensatory lengthening. Relevant here is the unstable behaviour of intervocalic clusters that are also possible word-initial clusters: *acre* vs *aspen*, *yeast* (OE Angl. inflected **gest* 'barm'), *weasel* (OE *wesle*).

(p. 224)

On the variable results of open-syllable lengthening: On the possibility of early lengthening of <a> see Hogg (1996). The MED records spellings for OE *fæt*, pl. *fatu* 'vat' as <faat, vat**,** vaat; pl. vātes, fāten, fāte>; for OE *dæl*, pl. *dalu* 'dale, dell', we find the ME spellings <dal(l), daile, dele; pl. dāles, deales, dālen>. The adverb *rathe* [reɪð], AmE also [ræθ] 'quick(ly), soon', is only in regional and literary use. On EModE variable forms see Dobson (1968: §8).

7.6 Reduction and loss of unstressed vowels in ME

(p. 227)

On the limited duration of unstressed vowels see Flemming (2004), who reports research showing a mean duration of 34 ms for English schwa. By way of comparison, the mean duration of AusE /u/ is just under 275 ms (Harrington et al. 1997: 166); and the median duration values for the vowels in *HEAD* and *HEARD* in East Yorkshire are 166 ms and 281 ms respectively (Ferragne and Pellegrino 2010: 14)

On contrastive vowels in unstressed syllables: unstressed [ɪ] is restricted to syllables ending in <-ng> in AmE, but in SSBE it appears freely in all unstressed syllables. The realisation of syllabic sonorants alternates with schwa plus the relevant sonorant: r̩ ~ ər (*water*), l̩ ~ əl (*bottle*), m̩ ~ əm (*bottom*) and n̩ ~ ən (*button*). Marginally, [ʊ] can also be found in unstressed positions, as in carefully pronounced *s**u**perior*, *silh**ou**ette*, but what is realised most frequently instead is [səp-] for *s**u**perior*

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and [sɪlə-] for *silh**ou**ette*; recall (see 2.2) that /ju/ is treated in this book as a sequence of /j/ + vowel, not as a diphthong.

(p. 228)

On the external reasons for reduction and loss of final unstressed vowels: the idea of an English–Old Norse creole has been repeatedly floated in the literature. The interested reader should consult Minkova (1991: 146–9) and Dance (2003: 7, 289–98), who provides an excellent critical overview of the scholarship. Both sources caution against over-enthusiastic creolisation theories.

(p. 230)

On elision in hiatus in ME verse: the common practice of pre-vocalic and pre-[h-] elision of final schwa does not preclude variability. Thus, for example, <*blisse, blissi*> in *Ich habbe sehen bli**sse** & ich bli**ss**i me þrof* 'I have seen bliss and rejoice thereof' (*St Margaret of Antioch*, dated c. 1200–25 (MED)) would have variants ending in [-ssə], [-sə], [-s], and word-final [-ss] would be simplified.

(p. 232)

On syncope in the preterite <-ed>: the specifics on the loss of syllabicity of the preterite inflection are based on Minkova (2009), whose database is from the scansion of Chaucer and Hoccleve. The early ME orthographic evidence for syncope in the verbal inflections is presented in Laing (2009), an excellent example of the usefulness of LAEME for the reconstruction of such morpho-phonological histories.

ASSIGNMENTS

- Discuss the phonological and orthographic histories of PDE *some* < OE *sume* and PDE *come* < OE *cuman* and compare them with *Rome* < *Roma*, *lome*, adv. (archaic) < OE *ylome* 'frequently'.
- Using the OED, find the OE source(s) and comment on the distribution of forms for the following items (based on LALME):

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BURY (Southern areas only)

BUSY

CHURCH

FILL, HILL (Southern areas only)

FIRE

FIRST

- Read Fisiak, Jacek (1997): 'OE hyll in the East Midlands in Early Middle English' in *Language in time and space: studies in honour of Wolfgang Viereck on the Occasion of his 60th Birthday*, ed. Heinrich Ramisch and Kenneth Wynne, Stuttgart: Franz Steiner Verlag and compare his findings and conclusions with the LAEME material, specifically combined <hell>, <hill>, <hull> types from LAEME (maps 213–15) (see Appendix 7.1 below). Of these, 31 cases/51 tokens have <u>, 11 cases/12 tokens <i>, and 3 cases/4 tokens have <e>. How much does this tell us about the actual distribution of forms? Compare with mycel <i, y> (LAEME map 232) at http://archive.ling.ed.ac.uk/ihd/laeme1_scripts/create_map3.php?id=FMW/fmw_much_other-MI.pts and mycel with <u> (LAEME map 236) at http://archive.ling.ed.ac.uk/ihd/laeme1_scripts/create_map3.php?id=FMW/fmw_much_other-MU.pts. You can then combine the two maps by using the interactive feature at http://archive.ling.ed.ac.uk/ihd/laeme1_scripts/create_combo_map.php.
- Discuss the history of the italicised forms in Robert Burns' *Auld Lang Syne*:

  We *twa* hae paidl't in the burn
  Frae morning sun till dine,
  But seas between us *braid* hae roar'd
  Sin' auld lang syne.

- Using a good etymological dictionary, account for the QUANTITATIVE difference in the vowels of the following cognates:

  BATH-BATHE

  BOUND-BUNDLE

  CHEAP-CHAPMAN

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DEEP-DEPTH

HOUSE-HUSBAND-HUSSY

KIND-KINDRED

SHEEP-SHEPHERD

STONE-STANFORD

HOUSEWIFE-HUSSY

WISE-WISDOM

- Look up the etymology of the following sets of words. Discuss their quantitative relations:

  FACE-EFFACE-PREFACE

  MOUTH-MOUTHPIECE-PORTSMOUTH

  DEAR-DEARBORN-DEARTH-DARLING

  OUT-OUTWARD-UTMOST

- Look into the etymology of the following place names in the UK. Identify the change(s) that account for the stressed vowels in these words. Comment also on changes in the unstressed vowels:

  Banham (Norfolk) (bēan + hām)

  Beckett (Berkshire) (bēo-cot 'bee-cot')

  Braddock (Cornwall) (brād-)

  Bratoft (Lincolnshire) (brād-)

  Chepstow (Monmouthshire) (cēap-stōw 'market-place')

  Culham (Berkshire) (OE *cylen* 'kiln' + hām)

  Gateford (Nottinghamshire) (OE *gāt* 'goat', ON *geit* + ford)

  Higham (Kent)

  Shapwick (Dorset)

  Staindrop (Durham) (stān-)

  Stanbridge (Bedfordshire) (stān-)

  Stanley (Derbyshire) (stān-)

  Whilton (Northamptonshire) (OE *hwēol* 'wheel/round hill' + tun)

- Practise reading Chaucer aloud: from the *General Prologue,* lines 1–18.

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Whan that aprill with his shoures soote
(h)wan θat a : prɪl wɪθ hɪs ʃu : rəs so : tə

The droghte of march hath perced to the roote,
θə drʊ(:)xt of martʃ haθ pe : rsəd to : ðə ro : tə

And bathed every veyne in swich licour
ənd ba : ðəd ɛvri vɛin ɪn swɪtʃ lɪku : r

Of which vertu engendred is the flour;
əv (h)wɪtʃ vertju : ənd ʒɛndrəd ɪs ðə flu : r;

Whan Zephirus eek with his sweete breeth 5
(h)wan zɛf(ə)rʊs e : k wɪθ hɪs swe : tə brɛ : θ

- Starting with line 6 of the *General Prologue,* provide your own phonetic transcription of any five of the following lines:

Inspired hath in every holt and heeth
.....
The tendre croppes, and the yonge sonne
.....
Hath in the Ram his half cours yronne
.....
And smale foweles maken melodye
.....
That slepen al the nyght with open ye 10
.....
(So pricketh hem Nature in hir corages),
.....
Thanne longen folk to goon on pilgrimages
.....

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And palmeres for to seken straunge strondes,
.....
To ferne halwes, kowthe in sondry londes;
.....
And specially from every shires ende 15
.....
Of Engelond to Caunterbury they wende,
.....
The hooly blisful martir for to seke
.....
That hem hath holpen whan that they were seeke.
.....

- The following text is Orm's *Envoy*.[9] Write a phonetic transcription of any five lines in the text paying special attention to vowel length.

Icc. þatt tiss ennglissh hafe sett.	I, who have written this English,
……	
Ennglisshe menn to lare;	As instruction for English people,
……	
Icc wass þær þær i crisstnedd wass.	I was, there where I was baptised,
……	
Orrmin bi name nemmnedd.	Called by the name of Orrmin.
……	
& icc orrmin full innwarrdliȝ.	And I Orrmin very earnestly
……	
Wiþþ muþ. & ec wiþþ herrte.	With mouth, and also with heart,
……	

[9] The text is from *The Ormulum Project* website, Department of English, Stockholm University (http://www.english.su.se/nlj/ormproj/adm/envoi/envoi0.htm).

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Her bidde þa crisstene menn. Here pray those Christians

……

Þatt herenn oþerr rédenn. Who hear or read

……

Þiss boc; hemm bidde icc her þatt teȝȝ. This book; I pray them here that they

……

Forr me þiss bede biddenn. Say this prayer for me:

……

Þatt broþerr þatt tiss ennglissh writt. ¶ The brother who this English text

……

Allræresst wrät. & wrohhte; First wrote and wrought,

……

Þatt broþerr forr hiss swinnc to læn; May that brother as a reward for his toil

……

Soþ blisse móte findenn. Amæn. Attain true bliss. Amen.

Notes: Some transcriptions will not agree with the textbook canon. Reduction of prepositions is assumed: *to* is not transcribed [toː] but [tə] and *for* is not transcribed [fɔr] but [fər]. Initial voicing of fricatives in the least stressable words is also assumed: *the* is transcribed [ðə] and *of* is transcribed [əv]. Schwas in rhyming position are optional.

- Transcribing Chaucer: Give a phonetic transcription of FOUR of the underlined words in the Middle English passage below:
  No <u>wyn</u> ne drank <u>she</u>, neither <u>whit</u> ne reed,
  'No wine drank she, either white or red,'
  <u>Hir</u> bord was <u>served</u> moost with whit and blak
  'Her board was garnished mostly white and black'
  Milk and <u>broun</u> <u>breed</u>, in which she foond no lak
  'With milk and brown bread, whereof she'd no lack'

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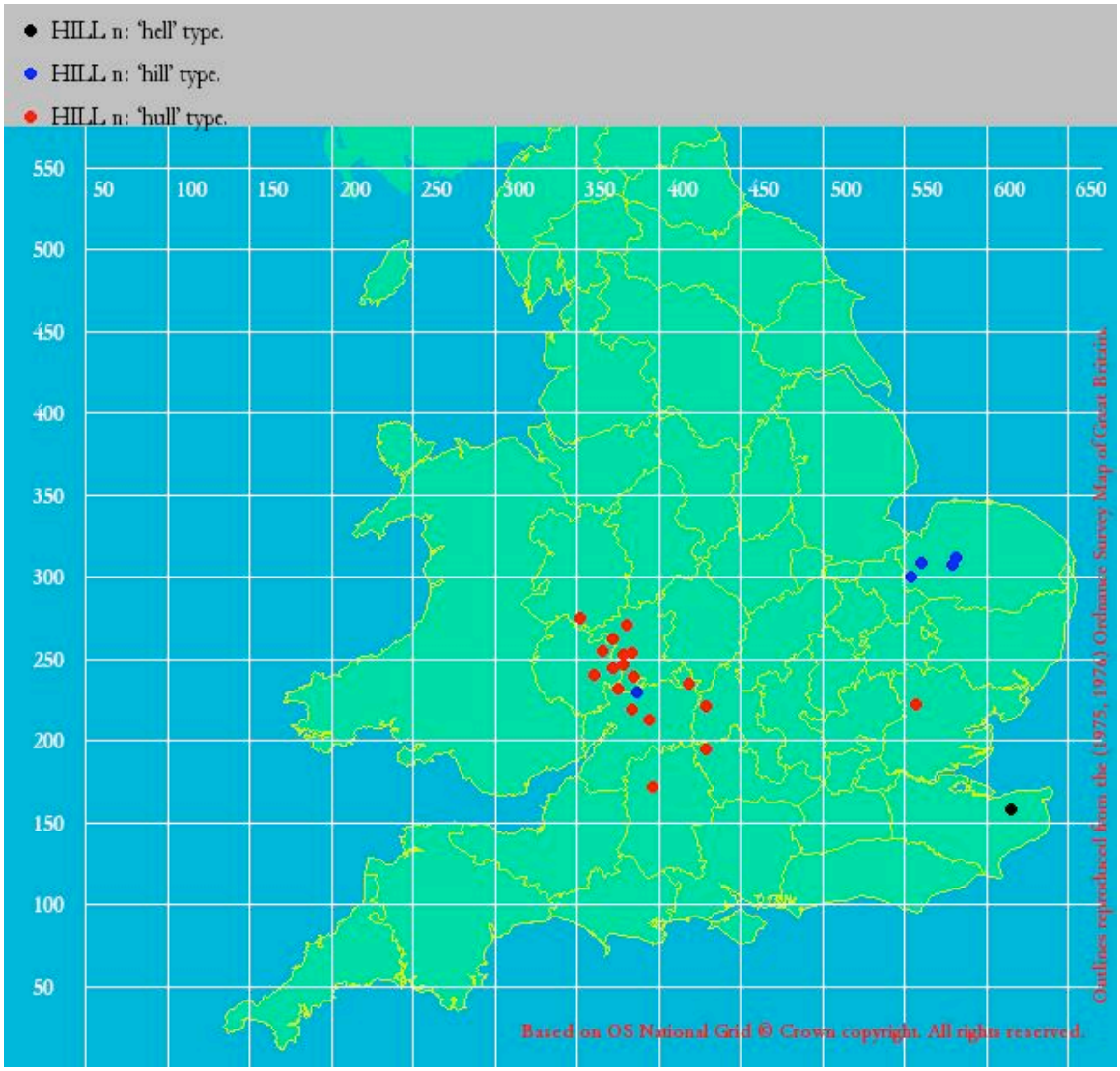
1. ……. 2. …….

3. ……. 4. …….

Appendix 7.1 LAEME maps

Distribution of the reflexes of OE *hyll* ‘hill’ in ME: for the lexeme *hill* LAEME shows attestations in 45 cases/67 tokens. Of these 31 cases/51 tokens have <u>, 11 cases/12 tokens <i> and 3 cases/4 tokens have <e>. How much does this tell us about the actual distribution of forms?



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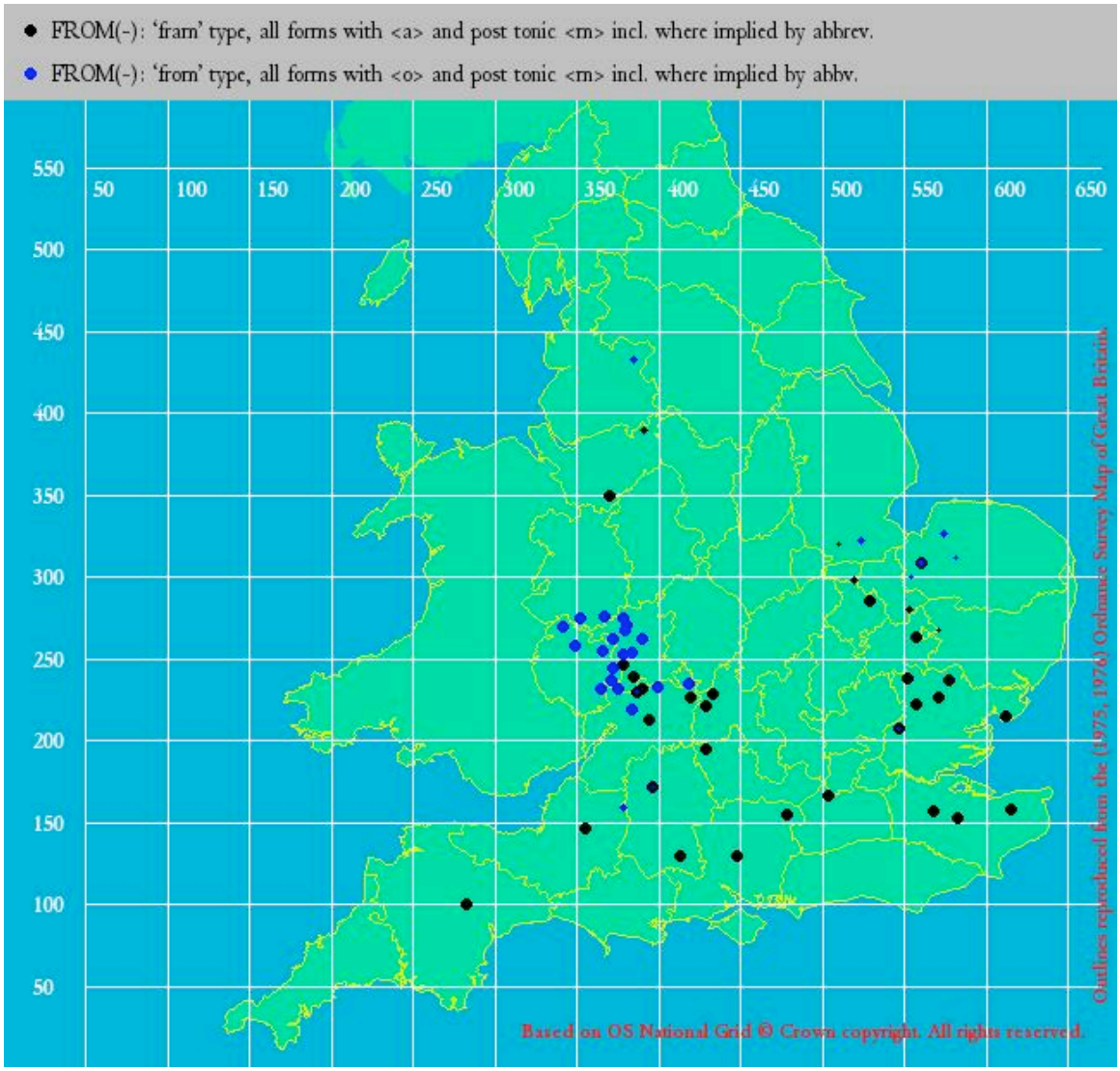
Compare with:

- For mycel <i, y> see Map 232.
- For mycel with <u> see Map 236.



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- For fram ~ from see LAEME maps 205–10.

CHAPTER 8 Vowel quality and quantity in EModE and later

MOTH-MOTHER, DULL-BULL, LOST-POST, FEAR-BEAR, HERE-THERE, MOOD-STOOD-BLOOD, DEAD-BEAD

8.1 Information glut. New sources of phonological reconstruction

(p. 235)

The orthoepists' records are very rich and they have been mined for evidence for the reconstruction of the EModE sound changes by all of the great philologists of the twentieth century. The list of distinguished scholars using contemporary descriptions for the reconstruction of EModE sound values is very long and includes Jespersen, Luick, Dobson and most recently Lass (1999), whose fresh reading of the orthoepistic evidence provides the backbone of his account of the phonology in the EModE volume of *The Cambridge History of the English Language, Vol. III*.

8.2.1 Short vowels: QUASH-QUACK, WASH-WAX, GOD-EGAD, PUTT-PUT

(p. 237)

On the variable realisation of /ɪ/: for Glaswegian 'the KIT vowel is indeed quite retracted to the extent that it can be said, for descriptive purposes, to cluster with central – rather than front – vowels' (Ferragne and Pellegrino 2010). They report retraction in Ulster English too. The acoustic parameters of 'happɤ-tensing' in RP are presented in Fabricius (2002), which also offers an informative survey of the literature on that ongoing change.

(p. 239)

On the variable realisation of /æ/ in PDE: Hawkins and Midgley (2005) report interesting results regarding /æ/ in RP: speakers born in 1976 or after consistently have [a]. They

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hypothesise that ‘whereas lowering in /æ/ seems to have been most rapid at about the middle of the twentieth century, it may still be continuing’.

(p. 240)

On the effect on onset [w] on a following /a/ ~ /æ/: the variability in the US is evident from this statement in Kenyon and Knott (1949: XIX): ‘The key word *watch*, here used, frequently is spoken with **ɒ** in all parts of America, but it is also often pronounced **wɑtʃ**, with **ɑ** as in *ah*, and **wɔtʃ**, with **ɔ** as in *wall.*’

The pronunciation history of *wrath* – BrE [rɔ : θ], [rɒθ], AmE [ræθ], [rɑθ], [rɑ : θ] – is a good example of how convoluted the reconstruction of a specific pronunciation can be. The PDE variants may be traced back either to the noun (OE *wræþþu*), with retraction and rounding triggered by the labialised coronal *[r^{w}-], an intermediate stage in the simplification of /wr-/ (see 5.3.1), or to influence from the OE adjectival form, *wrāþ* > late ME [r^{w}ɔ:θ] (N, Sc. **[a**:]; compare the rhyme *wrath* : *faith* in Burns (1759–96)). The length may vary due to pre-dental shortening or pre-fricative lengthening. AmE [-æ-] may be a continuation of the [æ] pronunciation, disfavoured by eighteenth-century authorities (Walker 1791–1826), or it could be an analogical spelling-pronunciation as in *bath*, *math*.

(p. 241)

On inconsistent lengthening of low vowels before /l/: a full survey of the variant outcomes of back vowel + /l/, both covered and singleton, is found in Jespersen (1909: 289–98).

(p. 243)

On ME [ɔ] as [ɔ ~ ɒ ~ a] in EModE: the stressed vowel of *coffee* (1598) is possibly also a result of [a] ~ [ɒ] merger, since the source is Turkish *kahveh*; see the OED 1601 citation: ‘A certain Liquor which they call *Coffe* ... which will soon intoxicate the brain.’ Another possibility for the [ɒ] in *coffee* is [-ɒʊ] > [ɔ :].

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(p. 244)

On lexical idiosyncrasies of [ɔ ~ ɒ ~ ɑ] in current English: the examples in (4) are from two sources: the OED and the online Dictionary.com (Oakland, CA). Dictionary.com pronunciations are based on AmE. The website claims that their entries are 'licensed from over 15 trusted and established sources including Random House and Harper Collins'. The advantage of using this web source is that it offers IPA transcriptions, it is public domain and it has a huge user base. Note that in Dictionary.com the lengthened variant, OED [ɔː], corresponds to just [ɔ] in the system adopted here.

(p. 244)

On pre-fricative lengthening of [ɔ] in the eighteenth century: Walker was evidently not fully comfortable with his judgemental pronouncement on the lengthening. His objection to the lengthening of *broth*, *froth*, *moth* ('as if written *brawth*, *frawth*, *mawth*') is that it is a 'middle sound approaching to its [= <o>'s DM] long sound in *or*'. He goes on to say:

> Of the propriety or impropriety of this, a well-educated ear is the best judge; but, … if this be not the sound heard among the best speakers, no middle sound ought to be admitted, as good orators will ever incline to definite and absolute sounds rather than such as may be called *nondescript* in language. (Walker 1791–1826: 32)

(p. 245)

On the sources of ME [ʊ]: OFr [o] was raised in Anglo-Norman (Pope 1961: 427), a possible direct line to ME **[**ʊ]. The exact height distance between [o] and the 'raised' vowel is unclear, but in any case the adoption of French words with etymological [o] as <u> ~ <ou> (Middle Fr. *drogue* > 'drug' (1400), OFr *golfe* 'gulf' (1400), OFr *estoffe* 'stuff' (1330), Fr. *côtelette* 'cutlet' (1706)) suggests that the English target short vowel was already non-peripheral [ʊ].

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(p. 245)

On the transcription of the default change of late ME [ʊ]: it is the tradition for British-based dictionaries to differentiate between [ʌ] for the stressed vowel of *cutter, rumba, rumpus*, and the unstressed vowels of these words – [ˊkʌtə], [ˊrʌmbə], [ˊrʌmpəs] – while American dictionaries often use the same symbol for both stressed and unstressed mid central unround vowels: [ˊkətər], [ˊrəmbə], [ˊrəmpəs]. American dictionaries can follow their own 'respelling' practices, so the vowel of *CUT* is transcribed as [ə] (*Webster's Collegiate*), [ŭ] (*American Heritage*), while academically oriented books stick with the IPA [ʌ], for example Kenyon and Knott (1944); Thomas (2001); Kreidler (2004); Wolfram and Schilling-Estes (2006); Hayes (2009b).

8.2.2 The Great/Long/English Vowel Shift

(p. 248)

On rhyming the letter <A> in Chaucer: In *Troilus and Criseyd**e*** (Book I) we find:

> Among thise othere folk was Criseyd**a**, 169
> In widewes habit blak, but natheles, 170
> Right as oure firste lettre is now an **A** …

The character's name is spelled with <-e> 151 times vs only 3 other examples of <-a> (counted from the online *Corpus of ME Prose and Verse* linked to the MED). This suggests that the identification of the 'sound' of the letter is purely visual.

(p. 249)

On identifying the pronunciation of vowels in Old English: for *Æ*lfric (c. 955–c. 1010) the values were identical with the Latin values. Here is how he describes vowels:

> Of ðam syndon fif VOCALES, þæt ***synd clypiendlice***: a, e, i, o, u. Ðas fif stafas æteowiað heora naman þurh hi sylfe and butan <ðam> stafum ne mæg nan word beon awriten, and for ði hi synd QVINQVE VOCALES gehatene.
>
> 'Five of those are vowels, that are vocalic: a, e, i, o, u. Those five letters indicate their names by themselves and without those letters no word can be written, and therefore they are called five vowels.' (*ÆGram* 6.1)

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On the name of the letter <u>: a notable exception in the list of long-vowel names is <u>, whose name was changed to reflect the front rounded pronunciation of that letter in French.

> The name of the letter down to the 16th century was *u*, pronounced like the long *u* of French or Latin origin, and consequently undergoing the same change to /juː/ which took place in ordinary words. The completion of the change is indicated by the use of the letter (*u* or *v*) to represent the personal pronoun *you* in such passages as Shakes. *L.L.L.* v. i. 60 and Dekker and Webster *Westward Hoe* ii. i. (Compare IOU.) In Scotland the name /u/ was locally in use as late as the 19th century. (OED)

For the name elsewhere see OED's citation of Palsgrave's (1530) description of <u>: '*U*, in the frenche tong, where so ever he is a vowel by hym ~ selfe, shall be sownded like as we sownde *ew*.'

(p. 252)

On the non-uniformity of the 'Great' Vowel Shift outside SSBE see Minkoff (1972); Lass (1987); Ogura (1987); *The Cambridge History of the English Language*, vols V and VI. These sources offer excellent information on the specific long-vowel systems outside the mainstream standard varieties. The theoretical implications of the dialectal diversity in the implementation of the Long Vowel Shift in English are discussed in Stockwell and Minkova (1997a, 1999); Minkova and Stockwell (2003a). For the term 'global English', which was first recorded in its current usage in 1962, see Crystal (2006).

8.2.2.1 Chronology and dating

(p. 253)

On loanword adaptation and the behaviour of long vowels with respect to vowel shifting: the early cases of [e:]-raising in Romance loans are collected in Wełna (2004). The entry dates for *friar* and *require*, based on the OED and cited here, are actually earlier than the first scribal record of raising, which are *friar* (1370) and *require* (1340) recorded in Wełna.

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The word ‘machine’ was initially borrowed from Latin *māchina* in its original meaning of ‘structure’, stressed on the first syllable, following the Latin stress rule. Later (1545), the word was re-borrowed from Middle French with a different meaning, namely ‘vehicle’, and the French end-stress was preserved, possibly reinforced by the verb machine, from AN and Middle French *machiner* ‘to plot, intrigue’ (c. 1450), but the diphthongisation associated with native [i ː] did not occur. Compare Wordsworth’s rhyme: ‘And now I see with eye serene / The very pulse of the machine’ (‘She Was a Phantom of Delight’, 1804).

Like *machine* are *aubergine*, *crinoline*, *cuisine*, *feminine*, *figurine*, *gabardine*, *grenadine*, *latrine*, *marine*, *nicotine*, *praline*, *sardine*, *terrine*, *vaccine*, *Vaseline*, but notice *alkaline*, *canine*, *porcupine*, *turbine*. With the same sequence <-ine> we get variable [-aɪn] ~ [i ː n] ~ [ɪn] in *Argentine*, *caffeine* (formerly [ˈ kæfi ː aɪn]), *Caroline*, *iodine*, *quinine*. Another variable ending is <-ile> as in *docile* (1483) [ˈ dəʊsaɪl] ~ [ˈ dɔsɪl], *domicile* (1477) [ˈ dɔmɪsɪl] ~ [-saɪl], *facile* (1484) BrE [ˈ fasʌɪl], AmE [ˈ fæs(ə)l]. Factors such as degree of stress on the relevant syllable, word-frequency and the date of entry in the lexicon are of consequence, but at present we have no account that covers these forms. Similarly, the OFr suffix -ice (-ise), Lat. -itia, -itius, -itium (OED) can have different realisations. For *police* South Midland and Midland US speakers have both [pə’li:s] and [‘poʊ’li:s]; the earlier [‘pɔlɪs] is a common pronunciation in Scotland and Ireland. *Justice*, *novice*, *practice* are completely anglicised, while *caprice* has reverted to its end-stressed French form, though seventeenth- and eighteenth-century pronunciations were either [‘kæprɪs] or [kə’praɪs]; compare Alexander Pope’s rhyme: ‘That counter-works each folly and caprice; / That disappoints th’ effect of ev’ry vice’ (Ess. Man II. 239, 1732). For tri-, di- fi-, li-, and so on see Walker (1791–1826: §§118–39).

(p. 253)

Further on the possible triggers of the long vowel shift: Both Lutz (2004) and Wełna (2004) use the label ‘prelude’ to events arguably related to ME long vowel shifting in general, but not included in the traditional GVS events as summarised in Figure 8.4 or

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Figure 8.5. As shown in 8.2.2.2, Wełna's data on raising of input [e :] does indeed suggest a lexically specific locus of change, French loans, which might well have been at the forefront of a lexically diffuse raising of [e:]. Lutz stays with the traditional assumption of a 'Great' Vowel Shift and uses the early instances of raising of the OE long low [ɒ :] to [ɔ :] to argue that they are part of the shift. This is not unreasonable and boils down to a terminological quibble if we take a broad view of the changes. Lutz's arguments, however, are mostly aimed in defence of a particular analytical position, the type of syllable-cut that the changes are argued to support. Moreover, her account presupposes that the early ME long vowels were matched in height with the short vowels, which leads to the strange implication that at the time of open-syllable lengthening /i : / was [ɪ :], /e : / was [ɛ :], and so on. Her reconstruction of a new slightly higher value for late OE [æ :] > ME [ɛ :] fails to consider the possibility that the differentiation of the spelling practice – <a> for [æ] ~ [a] and <e> for [æ :] ~ [ɛ :] – is fully compatible with the assumption that the short vowel was transcribed as <a> because of paradigmatic alternations [a] ~ [æ], while [æ :] was a dialectal covariant of [e :], so it is quite natural to expect the ME scribes to go for <a> in the short-vowel representation and <e> for the long-vowel representation. She also continues to assume an immediate causal (push-chain) link between the low-vowel raisings and changes which occurred at least a century later; the GVS in her account is the traditionally assumed coherent cause-and-effect sequence affecting only the long monophthongs.

(p. 254)

Further details on the dating of the shift: the progress of the shift in London is discussed in Smith (1996: 101–5), who posits a rather advanced system of long vowels for the lower-class variety of early fifteenth-century London, with fully raised historical mid-vowels and diphthongal high vowels.

8.2.2.2 Mechanism and causation

(p. 256)

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On the unity of the long vowel shift(s): Lass has been one of the most eloquent defenders of the unitary nature of the shift, but Lass (1999: 80) includes the low vowels in what he labels ‘Phase II’ of the GVS, acknowledging that Phase II can be called ‘post-GVS raising’. Nevertheless, the structural appeal of treating the units of the entire PDE long-vowel system as necessarily linked to each other is strong and justifiable in a macro-perspective: PDE alternations of the type *rev**i**se-rev**i**sion*, *n**a**tion-n**a**tional* apply to both high and low vowels.

(p. 260)

On the raised realisation of OE /eː/ and /oː/: the OE spellings are from the DOE Corpus: *HomU* 15 (Robinson), *ChHead* 1204 (Birch 519), *PsGlE*. Early sporadic shortening of [eː] and [oː] to [ɪ] and [ʊ] (see 7.5.2.1) is also of relevance: (OE *wēoc(e)* > ME *week(e) ~ wik(e)* ‘wick’, OE (Angl.) OE *sēoc* > EModE [seːk] > ME *sik* [sɪk] (1225), ‘sick’, OE *rǣdels(e) ~ rēdels*, ME *ridel ~ redel* ‘riddle’, OE *mōnaþ*, ME *mon(e)th(e)* ‘month’, OE *flōd* > ME *fludmarke* ‘high-water mark’ (1291), OE *mōste* > ME *must(e)* (c. 1250).

Wełna (2004) acknowledges written forms such as <shipe> ‘sheep’, <sliep> ‘sleep’, but following earlier scholarship dismisses them as signals of the beginning of the GVS because they did not survive. More to the point is the discussion of the same data in Stenbrenden (2010: 148–51), where she places them in the context of other irregular spellings that *do* constitute evidence for early raising.

(p. 261)

On Northern realisations of the MOUSE vowel in ME in relation to the MOON vowel: for a fully articulated defence of this structural argument in favour of the relatedness of the vowel changes in the upper end of the system see Lass (1976: 65–8). For more details and discussion see also Smith (1996: 98–101, 2007: 138–53). The PDE Northern realisations of the MOUSE vowel are localised and can be lexically specific (see Wakelin 1972: 88–9; Wells 1982; and for the most recent developments Wales 2006: 171, 174).

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(p. 261)

On the dating and evidence for the ME [ɛ :] - [e :] merger: The early date is posited by Kökeritz (1953), and the later date by Dobson (1968). Rhyme evidence of the merger is found in *Havelok the Dane*, late thirteenth–early fourteenth century, Norfolk. For a comprehensive coverage of the rhyme data on the merger in Chaucer, Gower and some fifteenth-century verse, see Ogura (1987: 12–27). Ogura's statistics for the [ɛ :]:[e :] rhymes range from 43 per cent in Chaucer's *Troilus* (mid 1380s) to 66.7 per cent in poems of the last quarter of the fifteenth century.

(p. 261)

On 'crowded' vs 'dispersed' vowel systems as factors in the ME [ɛ :]–[e :] merger: Ogura (1987: 101, 136) refers to earlier accounts of simplification from a four- to a three-vowel height system elsewhere in Germanic due to the 'complexity' of the former. The phonetically based 'dispersion' theory which lies behind such hypotheses is fully articulated in Flemming (1995, 2004).

(p. 264)

On the sources of early rhymes between long monophthongs and diphthongs: *seyde* : *made* is from *Guy of Warwick*, a text most likely composed in the South-Eastern dialect/London in the early fourteenth century (Wiggins 2003). The rhymes *hayte* 'hate': *fayt* 'dissemble' < OE *feġan* : *waite* < AN *waitier* are from *Sir Tristrem*, written in a southern hand (*Auchinleck* manuscript, c. 1330), but the authorship is most likely Northern (see Putter et al. 2014). Wyld (1949: 168) cites the spelling <meden> for 'made' in the thirteenth century, cross-checked for accuracy and confirmed in LAEME: London, British Library, Egerton 613, Hand A, fol. 1v: *Somer is comen*. OFr/AN <ai> can be [aj ~ ej], as in *ass**ail**, ob**ey***, and so on (Wełna 1978: 129–30).

(p. 264)

On the identification of historical [o :], [ɔ :], [ɔw] ~ [ow]: a complicating factor in the case of the low-mid [ɔ :] and the high-mid [o :] is the dual origin of [ɔ :] from raising of

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etymological [ɒ :] and from open-syllable lengthening of [ɔ]. The rhyming practice of southern poets in the fourteenth century shows a tendency for keeping the lengthened long open [ɔ :] separate from the [ɔ :] from OE [ɒ :]. The lengthened [ɔ :] rhymes with itself longer. The rhymes *so* 'so', OE *swā* : *to* 'to', OE *tō*; *wo* 'woe', OE *wā* : *do* 'do', OE *dōn*, from *Havelock,* the *Pearl* poem, and Chaucer, involve only the [ɔ :] descended from [ɒ :]. The full merger of the two open [ɔ :]'s is a very late ME process, not completed until the end of the fifteenth century, though before /-r/ we do find Chaucer rhyming *befoore* (OE *beforan*) with *loore* 'lore', *moore* 'more', both with [ɔ :] from OE [ɒ :] (see Ogura 1987: 128).

The early rhymes suggest that raising of [ɔ :] was more advanced in word-final position, though it is not clear why this should be so. Whatever the motivation, only four lexical items in OE [ɒ :] show that tendency, and of course the implied merger cannot be generalised – it must have been local and lexically specific, as the subsequent history of relevant items shows. Terajima (1985: 122–6) lists a rather disparate set of environments for the raising of ME [ɔ :] to [o :] in ME and mentions the North and the (North)-East as the areas where the raising is attested earlier, without further comment. This is one of the many areas in ME phonology that are still incompletely researched.

(p. 267)

On the structural vs social aspects of the shift: see Watts (2003, 2011: ch. 6), who records and evaluates the disputes over the 'Great' Vowel Shift, and offers an illuminating comparison between the structural linguistic and the sociolinguistic aspect of the changes.

8.2.2.3 Further instability and enrichment: BREW-NEW, DO-DUE, AUNT-HAUNT

(p. 268)

On the similarity of French [y] and ME [i]/[e] + [w]:

> The spelling with <*u*, *ue*, *u-e*>, as in *huge*, *mute*, *future*, *cure* … has also been extended to some native words which originally had a diphthong, and would normally be written with *ew*, as *hue*, *rue*, *true*, *truth* (compared with

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new, *grew*, *strew*). The same sounds /juː/, /uː/ are also represented by *ui* in a few words, as *nuisance, bruise, fruit.* (OED)

(p. 269)

On the loss of [j] in [ju]: the so-called *early yod-dropping* (Wells 1982: 206–8) started in stressed [ju] in the environment of preceding palatals, coronal fricatives and liquids, as in *chew*, *sue*, *rue*. In AmE, and now in Canadian English, the environment for yod-dropping has been extended to include coronals in stressed syllables, as in *tune*, *dew*, *news* with [uː], the so called '*later yod dropping*' (Wells 1982: 247–248); see also Phillips 1981b; and for Canadian English, Clarke 2006. For a discussion of the correlation between lexical frequency and glide-deletion ([ju] > [uː]) see Phillips (2006: 76–81), who concludes that the change affects the least frequent words first, because is it based on surface phonotactic adjustments made for novelty items, while more frequent items are firmly entrenched in the memory and less prone to change.

(p. 270)

On innovative [oi] and [ui]: for an account of the orthoepistic evidence and a schematic trajectory of the EModE merger of historical [ui] with [əɪ] from ME [iː] see Lass (1999: 102–3). The centralised pronunciation was retained in some accents where you can '*bile* [bəil] water' and 'get to the *pint* [pəint]'. Of interest is also the London/Cockney shift (Wells 1982: 308), where the first part of the diphthong in BUY is backed and rounded to [ɒɪ], while in BOY the first part of the diphthong is raised to [oɪ]. Note also that following the common practice in descriptions of PDE this book transcribes the vowel of CHOICE with [ɔi], which implies a lowering of the original nuclear [o] to [ɔ]. If this is a real change, and not a matter of transcription choices, the lowering may be related to the merger of [oi] and [əɪ].

8.3.1 Shortening in monosyllabic words: LEAD (Pb)-LEAD, v., DEAF-LEAF, MOOD-STOOD-BLOOD

(p. 272)

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On pre-dental shortening in monosyllables: excellent surveys are found in Ritt (1997), who discusses the probability of [-d] being interpreted as a past tense marker, and in Phillips (2002), who offers a reasonable coarticulation-based hypothesis for the 'laxing' of [uː] to [ʊ]. She does not discuss shortening before voiceless velar stops, nor front mid-vowel shortening. Ritt rejects the account based on the avoidance of morphological ambiguity of /-d/ and offers a new angle on the pre-dental shortening based on the density of dental final monosyllables in the language. His proposed explanation:

> …assume that word final dental stops were as frequent in Early Modern English as they seem to be today and assume that at a certain period a random selection of monosyllables had their vowels shortened more or less by accident, is it not statistically inevitable that the majority of them will have ended in dental stops, and may these then not have been *blood*, *bread*, *dead*, *dread*, *flood*, *foot*, *good*, *grit*, *head*, *hood*, *lead*, *lead*, *red*, *shred*, *soot*, *spread*, *stud*, *sweat*, *thread* and *wet*? If that was the case, then the apparent frequency of shortenings before dentals may have been nothing but a statistical artifact, and nothing that would require a special explanation at all. (Ritt 2007: 328–9)

The preservation or enhancement of length before voiced obstruents in English is phonetically testable in pairs such as *fade* with [eɪ], but *fate* with [ĕɪ]; compare Canadian *pride* [aɪ] with *price* [ʌɪ], where the lower nucleus will be intrinsically longer. Against this background the fact that the monosyllabic shortenings in English started in words with /-d/ codas remains a puzzle.

(p. 272)

On shortening of [-uː k] to [-ʊk]: within the [-uː k] set, the word *cook* seems to have achieved a 100 per cent shortening earliest, by the first half of the seventeenth century (Ogura 1987: 146–7). OE *flōc* 'fluke, flounder' seems to be the only exception to the shortening. (PDE Southern AmE *duke* with [duː-] is an innovative pronunciation; see 8.2.2.3.) Two items borrowed from Dutch, *spook* (1801) and *snook*, a rare word meaning

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'a derisive gesture', of obscure origin and recorded only twice before the twentieth century (1791, 1879), as well as *Chinook* (American Indian, 1840), were clearly too late to change [-u : k] to [-ʊk]. In the word *gobbledegook* (1944, probably onomatopoeic), *-gook* can be either short or long.

The [-u : g] in *droog* 'friend' in Burgess's *Clockwork Orange* (1962) is simply a transcription of the Russian vowel, which is not contrastive in length, just short tense [u].

(p. 273)

On the relative chronology of raising of OE [o :] to [u :] and shortening of [o :] to [ʊ]: the chronology of long vowel shifting in relation to shortening is still debated, but note Stenbrenden's conclusion, based on irregular spellings for early ME [o :]: 'the raising of the vowel began in the (S-)W Midlands (Wor, Hrf, Gl, Wlt) and in the East (Nrfk, Cam, Ely) in the early part of the thirteenth century' (2010: 536). This spelling-based argument leaves little doubt that for OE [o :] the raising pre-dates the shortening.

(p. 274)

On the variability of /u : / and /ʊ/: the variants seem to be regionally rather than socially marked. McDavid (1952: 109) observed:

> For many of the words derived from Middle English /o : / – and some borrowings that have fallen into the pattern – both /u/ and /ʊ/ occur, without social distinction but with sharply differing regional patterns. This is true of coop, cooper, hoop, goobers, room, broom, root, cooter, food, hoof, roof, spooks, and probably others. For instance, I – a native of upper South Carolina – normally have /u/ in root, cooter, food, roof, spooks, and goober, /ʊ/ in coop, cooper, hoop, and either /u/ or /ʊ/ in room, broom, hoof.

This is also the conclusion in Moen (1979).

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8.3.2 Vowels in relation to /r/: PERSON-PARSON, TEAR, v. - TEAR, n., FLOOR-POOR

(p. 276)

The earliest examples of ME *sterre* ‘star’ recorded in the MED are the name *John Star* (1305–6), and <star> in MS Harley 2,253, LALME: vol. 1. 111. LP 9,260. Herefords.

On the variability of [ɛr] > [ar]: Walker writes:

> Thirty years ago every one pronounced the first syllable of merchant like the monosyllable march, and as it was anciently written marchant. Service and servant are still heard among the lower order of speakers as if written sarvice and sarvant; and even among the better sort we sometimes hear the salutation, Sir, your sarvant! though this pronunciation of the word singly would be looked upon as a mark of the lowest vulgarity. (Walker 1791–1826: §100)

(p. 278)

On the merger of [ɪ] ~ [ʊ] ~ [ɛ] + [r]: in many instances the dialectal variability [ɪ] ~ [ʊ] ~ [ɛ] of the reflexes of OE <y> (see 7.3.1) interfere with the reconstruction of the values of the vowels in ME. The development of ME [-ʊr] is also hard to test since [-ʊ-]’s normal lowering and centralisation would produce the same result, namely non-contrastive [-ə] ~ [-ʌ] (see 8.2.1). The influence of [-r] on length is another interfering factor: items like *burro* (1800) and *jury* (1400) tend to neutralise the length distinction between [-ʊ-] and [uː].

On the different effects of tautosyllabic, ambisyllabic or heterosyllabic /r/: the syllabic position of /r/ is a factor in the operation of ME open-syllable compensatory lengthening: /r/ followed variable schwa/zero is weakly ambisyllabic and its coaffiliation as a coda is not sufficient to block the lengthening, so we find lengthened *blere* ‘blear’, *gere* ‘gear’, *care*, *hare*, *before*, though the lengthening of ME [ɔ] before /r/ as in *before* is really hard to trace. This is consistent with the basically compensatory nature of the process. Lengthening never occurs when /r-/ is the onset of a closed syllable: *baron*, *claret*, *coral*, *florin*, *forest*, *herald*, *moral*, in which case /r/, if fully ambisyllabic, would be expected to inhibit open-syllable lengthening.

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The treatment of relatively recent borrowings in PDE argue *against* ambisyllabicity of /r/; compare *aberrant* (1835), *beret* (1827) with [ɛ], with *acerbic* (1853), *assertable* (1837) with [-ɜː] ~ [-ɚ]. The duration of the vowel can also vary, as in *era* (Lat. *æra*, 1615), *stereo* (Fr. *stereo-*, 1823) with [-ɪə] ~ [-ɛ], *pandero* (Sp. *pandero*, 1914), both [panˈdɛːrəʊ] and [pænˈdɛroʊ]. The historical interplay between vowel height and the treatment of intervocalic post-tonic /-r-/ as ambisyllabic is also unexplored.

(p. 278)

On the sociolinguistic attitudes to /-r/-loss: the acceptance is implicit in Walker's (1791–1826: §§416–19) (still clearly biased) comments on <r>. He starts by saying that 'this letter [R] is never silent'. He adds that 'As this letter is but a jar of the tongue, sometimes against the roof of the mouth, and sometimes at the orifice of the throat, it is the most imperfect of all the consonants.' However, he makes a clear distinction between pre-vocalic and coda /r/ and when comparing the 'rough' Irish /r/ with 'smooth' English /r/ he states: 'In England, and particularly in London, the *r* in *lard*, *bard*, *card*, *regard*, &c. is pronounced so much in the throat as to be little more than the middle or Italian *a*, lengthened into *laad*, *baad*, *caad*, *regaad*.'

(p. 280)

More on the dating of /r/-loss: Windross (1994: 440) discusses the evidence for a date even later than Walker's dating as found in the work of Benjamin Smart's 1836 book *Walker Remodelled.* Smart provides an unambiguous description of coda [-r] which leaves no remnant of doubt that 'in well-bred London society' the retroflex [r] was the norm: 'there is no trill, but the tongue being curled back during the progress of the vowel preceding it, the sound becomes guttural'.

(p. 281)

On rhoticity and non-rhoticity in American English: the importance of political, educational and trade centres whose population was more mobile and more likely to be

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influenced by British prescriptivism in the nineteenth century is pointed out in the literature survey in Fisher (2001: 75–7). This is only one aspect of a much more complex and multi-faceted history of the origins and historical development of rhoticity in North America.

Appendix 8.1 Shakespeare's Pronunciation

The classic studies of the pronunciation of Shakespeare and his London contemporaries are Kökeritz (1953); Dobson (1957). Cercignani (1981) discovers 'modernity' in Shakespeare's pronunciation at the cost of ignoring essentially all the contemporary and near-contemporary evidence, especially the orthoepists Hart (1569), Sir Thomas Smith (1568), Alexander Gil (1619) and Robert Robinson (1617), in favour of puns that have alternative accounts. Crystal (2008: 125–45) offers an accessible discussion of Shakespeare's pronunciation.

Some features that might come in useful if we wanted to imitate Shakespearean pronunciation are:

- No contrast between the vowels of *buck* and *full*. Both [ʊ].
- Incomplete merger of [ɪ ɛ ʊ] before /-r/ in *fir*, *birch*; *refer*, *earn*; and *fur*, *urn.*
- No rounding of [æ] after /w/ in *swan*, *warren*, *swath*, *war*, *warm*, *water.*
- No retraction of [æ] before [f, θ, s] and /r/ in *staff*, *after*, *pass*, *fast*, *path*, *tar*, *tart.*
- Open [ɔ] in *fox*, *top*, also in *off*, *soft*, *cross*, *frost*, *cloth*, *or*, *horse.*
- [i ː] in *see*, *meed*, also *deer*, *weary*, *fierce*, *idea.*
- [e ː] ~ [ej] in *sea*, *mead*, *spear*, *beard*, *smeary*, *great*, *break*, *steak*, *yea*, *pear.*
- [ɛ ː] ~ [ɛj] ~ [ej] *made*, *grate*, *pare*, *scarce*, *vary*, but also *say*, *maid*, *pair*, *fairy.*
- [o ː] ~ [ɔw] *toe*, *groan*, *oar*, *hoarse*, *glory*; *old toll*, *shoulder*, *four*, *fourth.*
- [u ː] *do*, *food*, *moor*, *gourd*, *boorish*, also in *floor*, *court*, *book*, *good.*
- [iu] *yew*, *due*, *chew*, *juice*, *rude*, *blue*, *pure*, *curious.*
- [aw] in *claw*, *all*, also in *half*, *salve*, *calm*, *grant*, *example.*
- [ʌʊ] in *now*, *house*, *sour*, *dowry.*
- [ʌi] *by*, *life*, *fire*, *iron*, *environ*, and many of the <oi> words like *choice*, *voice.*

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- [-tj-, -dj-] in *departure, question, verdure, soldier.*
- [-sj-, -zj-] in *sure, measure.*
- /r/ preserved in all environments.

Appendix 8.2 Old World–New World

Notes on the different outcomes of historical phonological change in the different varieties of English accompany our descriptions in Chapters 3–8. The table below shows some of the most salient historical differences between SSBE and AmE. The table is not exhaustive and it does not cover Scotland, Wales and Ireland. Regional variants, the speakers of which outnumber the standards for both Britain and the US, are not included:

Input	Split		Examples
(1) /a/ + /f, θ, ð, s, ns/	AmE	[æ]/[æ ː]	*staff, path, rather, mass, fancy*
	SSBE	/ɑ ː/	
(2) /r/ + {C, boundary}	AmE	/ɹ/	*firm, partner, hire, star, tower*
	SSBE	Ø	
(3) ME /au/	AmE	/ɔ/ or /ɒ/	*caught, paw, straw, Shawn*
	SSBE	/ɔ(ː)/	
(4) *-ary, -ery, -ory*	AmE	secondary stress	*military, secondary, laboratory*
	SSBE	-	unstressed[10]

[10] The unstressed vowel in SSBE can reduce to [-ə-] or undergo deletion: /ˈsɛkrɪtərɪ/ ~ /ˈsɛkrətrɪ/ vs AmE /ˈsɛkrɪˌtɛri/.

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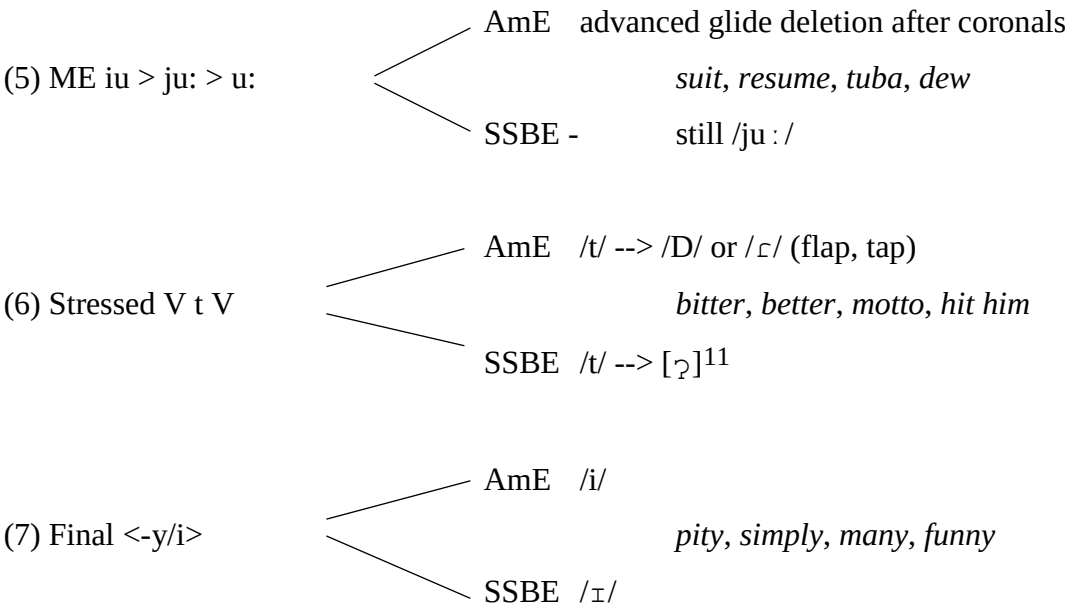

Additional differences

- Vowels (for example, the BE vowel of *bird*, *word*; the AE vowel of *cot-caught*).
- Consonants (for example, the AE form of *what*, *where*, *when*).
- Phonotactics (for example, BE coronal palatalisation in *due*, *Tuesday*, *studio*).
- Prosody (for example, *chateau*, *pate*, *defence*, *offence*, *garage*, *negligee*, *soiree*, *elite*, *papier mache*, *charade*, *bourgeois*, *concierge*, *Renaissance*).

Appendix 8.3 More assignments: other vowel shifts

(a) Here is a list of some other reported vowels shifts in English. Select one and comment on the way it resembles or differs from the English Vowel Shift discussed in 8.2.2:

The Dublin Vowel Shift (Hickey 1998)

The NZE 'short' front vowel shift (Maclagan and Hay 2007)

The South African Chain Shift (Lass and Wright 1985)

[11] In the bulk of the British varieties and in many US accents, coda /p, t, k/ is replaced in casual speech by a glottal stop, thus *cat* is [kæʔ]; /k/ and /p/ are replaced less often than /t/.

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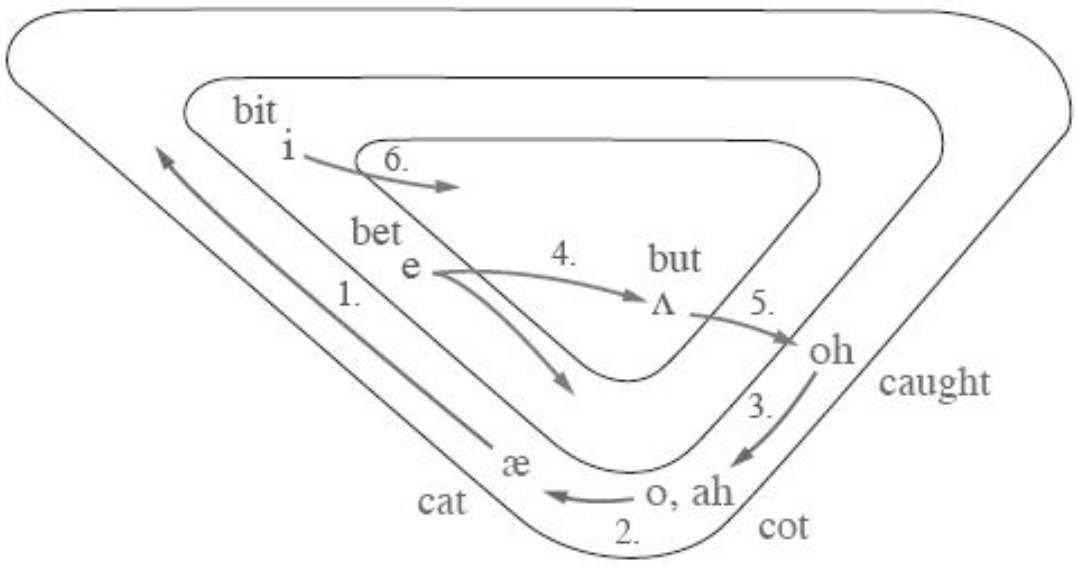
The Northern Californian Vowel Shift (Eckert n.d.)

The Southern Vowel Shift (Labov 1991; Fridland 2000)

(a) Report on the changes associated with the Northern Cities Shift (NCS) which occurs in the Great Lakes region, especially in large urban centres:



The Northern Cities Shift (NCS) © Labov, William (2008), 'Triggering events', in Susan Fitzmaurice and Donka Minkova (eds), *Studies in the History of the English Language IV: Empirical and Analytical Advances in the Study of English Language Change*, Berlin, Mouton de Gruyter, 11–54.[12]

Here are the details in IPA:

(1) /æ/ as in CAT is raised to [eə]

(2) /ɑ/ as in COT is fronted to [a ~ æ]

(3) /ɔ ~ ɒ/ as in CAUGHT is unrounded to [ɑ]

(4) /ʌ/ as in BUT is backed to [ɔ]

[12] Reproduced from Labov (2008: 38), where a good survey of the scholarship on that change can also be found.

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(5) /ɛ/ as in BET is backed to [ʌ] or lowered towards [a]

(6) /ɪ/ as in BIT is lowered and backed (sometimes).

The 'classic' description of the NCS is in Labov et al. (1972). See further Gordon (2001a, 2001b) for an expanded account; also Bigham (2008) and the references there. Note that Gordon (2001a, 2001b) is not on the same page with Labov, nor are Stockwell and Minkova (1988, 1997a); Minkova and Stockwell (2003a).

- Following the model in (4), collect a set of lexical items with stressed short <o>. Comment on the variability of realisations of the vowel in your chosen variety of PDE.
- Discuss the spread of the COT-CAUGHT merger in US English by comparing Map 1: The merger of /o/ and /oh/: invariant responses in production and perception: http://www.ling.upenn.edu/phono_atlas/maps/Map1.html and Map 2: Comparative progress of the /o/ ~ /oh/ merger before /n/ and /t/: http://www.ling.upenn.edu/phono_atlas/maps/Map2.html.[13]
- Look up the etymology of *beast*, *blast*, *breast*, *feast*, *lest*, *priest.* Comment on the possible reasons for the difference in the pronunciation in these items.
- Report on the innovative and the conservative features of Welsh English.

(b) Report on the changes shown in Map 1 and Map 2.

SOME FURTHER READING

The bibliography on vowel changes in EModE is huge. The following selection of references will start the instructor and the advanced student on the rather arduous research trail:

Dobson, Eric John (1957), *English Pronunciation 1500–1700*, **vol. 1**, Oxford: Clarendon Press.

[13] Both from The Atlas of North American English (http://www.ling.upenn.edu/phono_atlas/home.html).

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Dobson, Eric John [1957] (1968), *English Pronunciation 1500–1700*, **vol. 2**, 2nd edn, Oxford: Clarendon Press.

Jespersen, Otto (1909), *A Modern English Grammar on Historical Principles. Part I, Sounds and Spellings*, Heidelberg: Carl Winter's Universitätsbuchhandlung.

Kökeritz, Helge (1953), *Shakespeare's Pronunciation*, New Haven, CT: Yale University Press.

Lass, Roger (1992), 'What, if anything, was the Great Vowel Shift?, in Matti Rissanen, Ossi Ihalainen, Terttu Nevalainen and Irma Taavitsainen (eds), *History of Englishes: New Methods and Interpretations in Historical Linguistics*, Berlin: Mouton de Gruyter, 144–55.

Lass, Roger (1999), 'Phonology and morphology', in Roger Lass (ed.), *The Cambridge History of the English Language, Vol. III: 1476–1776*, Cambridge: Cambridge University Press, 56–186.

Luick, Karl (1898), *Untersuchungen zur englischen Lautgeschichte*, Strassburg: Trübner.

Luick, Karl [1914, 1921–40] (1964), *Historische Grammatik der englischen Sprache*, 2 vols, Leipzig: Tauchnitz.

McMahon, April (2006), 'Restructuring Renaissance English', in Linda Mugglestone (ed.), *The Oxford History of English*, Oxford: Oxford University Press, 147–77.

Ogura, Mieko (1987), *Historical English Phonology: A Lexical Perspective*, Tokyo: Kenkyusha.

Stenbrenden, G. F. (2010), *The Chronology and Regional Spread of Long-Vowel Changes in English, c. 1150–1500*, PhD dissertation, University of Oslo.

Stockwell, Robert P. (1972), 'Problems in the interpretation of the great English vowel shift', in M. Estelle Smith (ed.). *Studies in Linguistics: Papers in Honor of George L. Trager*, The Hague: Mouton, 344–62.

Stockwell, Robert P. (1978), 'Perseverance in the English vowel shift', in Jacek Fisiak (ed.), *Recent Developments in Historical Phonology*, The Hague: Mouton, 337–48.

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Stockwell, Robert and Donka Minkova (1988), 'The English Vowel Shift: problems of coherence and explanation', in Dieter Kastovsky and Gero Bauer (eds), *Luick Revisited*, Tübingen: Günter Narr, 355–94.

Stockwell, Robert and Donka Minkova (1997), 'On drifts and shifts', *Studia Anglica Posnaniensia* 31, 283–305.

Wolfe, Patricia (1972), *Linguistic Change and the Great Vowel Shift in English*, Berkeley: University of California Press.

For Late Modern English see Beal, Joan C. (1999), *English Pronunciation in the Eighteenth Century: Thomas Spence's 'Grand Repository of the English Language'*, Oxford: Clarendon Press.

Burton, T. L. (2010), *William Barnes's Dialect Poems: A Pronunciation Guide*, Adelaide: Chaucer Studio Press is a model study showing how the analysis of rhyme can lead to a coherent reconstruction of historical sound change in a particular dialect.

MORE ASSIGNMENTS

- Choose four of the following rhymes and discuss the phonological history of the rhyming words – include references to origin, time of entry, spelling and reason for the current pronunciation.
- Which rhyme is imperfect for speakers of American English?
- Which rhyme is imperfect for speakers of British English?

From an advertisement for wedding attire (Talbots, 23 July 2012, http://www.talbots.com/online/landing/landingPage.jsp?landingPage=AisleStyle&cmp=emc-20120723_AisleStyle_):

> Introducing Aisle Style:
>
> …THE INVITE, *delight*!

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…THE AISLE, *the style*…
…THE *groom*, THE ROOM!
…THE *bride!* WE CRIED…
…HER TRAIN, *champagne!*
THE *toast*, THE HOST…
…FIRST DANCE, *romance*…
ALL READY? confetti!…
THE LAUGHTER, *ever after*…

- Account for the pronunciation of ten of the bold words in the following verses:[14]

I take it you already **know**
Of tough and bough and cough and **dough**.
Others may stumble but not you,
On hiccough, **though**, lough and through.
Well done! And now you wish, perhaps,
To **learn** of less familiar traps.

Beware of **heard**, a dreadful **word**
That looks like **beard** and sounds like **bird**,
And **dead**—it's said like bed, not **bead**.
For goodness's sake, don't call it **deed**!
Watch out for **meat** and **great** and **threat**:
They rhyme with **suite** and **straight** and **debt**.

1. .....
2. .....
3. .....

[14] From 'Brush up Your English' by Richard Kroug, cited in O'Grady, W., W. Dobrovolsky and F. Katamba (1997), *Contemporary Linguistics: An Introduction*, London: Longman, 614.

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4. .....
5. .....
6. .....
7. .....
8. .....
9. .....
10. .....

CHAPTER 9 The evolution of the English stress system

ALWAYS-CAUSEWAYS, PRÉSENT, n. - PRESÉNT, v. HARÁSS ~ HÁRASS

9.1 Preliminaries: definition of some terms

(p. 284)

On the various uses of ‘accent’: among its many senses, ‘accent’ is also the common term for diacritical marks indicating special segmental properties, for example the acute, grave or circumflex accents on vowels. The preference in this book is to reserve ‘accent’ for the pronunciation component of a particular regional, social or ethnic variety; along with morphosyntactic and vocabulary features, accent is part of the characterisation of any linguistic variety.

(p. 285)

On stress and word-segmentation see Cutler and Butterfield (1992) and references there. The role of stress in child language acquisition is an area of intense research; for a recent survey and further references see Polka and Sundara (2012).

9.2 Syllable structure and syllable weight

(p. 288)

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On prosodic feet: the descriptive survey of word- and phrasal stress in Chapter 9 does not include a discussion of the organisation of the syllables into prosodic feet although the organisation of syllables into feet is one of the tenets of metrical theory. For the pedagogical purposes of this book, however, the additional factor of bracketing syllables into feet will be ignored and the focus will be on the ways in which syllable weight and morphological composition interact with stress historically.

9.3.1 Orthographic evidence for word-stress

(p. 289)

On the use of the letter <e> for unstressed vowels in the native vocabulary in late OE see Campbell (1959: §§368–70, 379) and 7.6. In some of the examples in (1) of this section the shift of stress is accompanied by loss of the final syllable of the Latin original.

9.3.2 Verse evidence for stress

(p. 292)

On the use of prefixes in ME alliteration: the prefix *con ~ com* is possibly a good candidate for carrying conventional initial stress in *Sir Gawain and the Green Knight*, for example 'Þen **c**omaunded þe **k**yng þe **k**nyȝt for to ryse' (*SGGK* 366). Some poets, for example Langland, were more likely to use prefixes in alliteration prefixes. For a fuller discussion of the problems of prefixal stress and alliteration in ME see Minkova (2003: 52–61), where the position is taken that the reconstruction has to be item- and poet-specific. A comprehensive coverage of the data is still outstanding – this is another area where further research can be illuminating.

(p. 293)

On Peter Levins's *Manipulus Vocabulorum: A Rhyming Dictionary of the English Language* (1570): Levins's data is extremely useful, but it also has to be used with caution. He records many unexpected and unlikely, also untestable, pronunciations such as *cardínall*, *cáthedrall*, *délectable*, *éxcusable*, *óbservance*, *villánie*. The 'rhymes' in Levins are often purely orthographic and his markings are inconsistent: 'we haue

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commonly set the accent, which is onely acute, in that place, and ouer that vowell, where the sillable must go vp & be long' (1570: 3). While his accent marks are useful, he leaves many forms unmarked, so we do not know how, for example, *balance* or *advance* are stressed. A very informative overview of the seventeenth- and eighteenth-century records of innovative stress-placement on Latinate loans is found in Lass (1999: 128–33).

9.4.1 OE word-stress

(p. 295)

On the morphological basis of OE stress assignment in OE words: it is commonly assumed that OE had a minimal-word requirement in terms of syllabic weight. Although the final vowels of lexical monosyllables were indeed generally lengthened in all North-West Germanic languages (see 3.4.4), word-minimality in terms of weight was marginally violable in OE: *se* 'that, masc.', *ġe … ġe* 'either … or', *ne*, *ni* 'nor' are independent words composed of single light syllables.

(p. 296)

On suffixal weight in relation to stress: for a full discussion of the importance of weight in matching suffixes to strong/ictic positions see Fulk (1992: 197–210) on 'The Rule of the Coda'.

(p. 296)

On prefixal weight and stressability: the prefix *for-* 'intensive or completive action or process' is the only exception to the correlation between syllable weight and stress – it is the only heavy prefix that never appears stressed in the OE verse corpus. An important factor in this case may be the fact that it is used primarily for the derivation of verbs and adverbs. Nouns with this prefix are derived from the corresponding verbs, for example *forgýfan* 'grant, forgive' - *forgýfung* 'gift', *forgýfestre* 'one who gives', *fordḗman* 'condemn' - *fordḗmednes* 'condemnation'. A little detour to the history of the prefix *for-* tells us that 'in most cases when a vb. with Old English *for-* or German *ver-* has a Gothic equivalent, the prefix appears as *fra-* , which seems to have been originally its *stressed*

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form: compare the two Old English forms *ˈfracod* and *forˈcúð* … which are believed to be accentual variants' (OED) of the Proto-Germanic form meaning 'despicable, morally worthless'. The adj. *forˈcúð* does not appear in the poetic corpus, so its stress contour is untestable. *For-* shows a relatively high proportion of verb-based derivatives in *-end, -ing, -ung, -nes* which would contribute to the overall model of unstressed *for-*, many of them hapaxlegomena:

for-hognes 'contempt'	*for-sacung* 'denial'
for-læte 'deprivation'	*for-sceamung* 'a sense of shame'
for-nyrwed 'unfruitful'	*for-scytt* 'flood-gate'
for-spild 'destruction'	*for-swælednes* 'destruction by fire'

A possible further direction of inquiry regarding the surprising absence of initially stressed nouns with the heavy prefix *for-* will be to establish the threshold at which the preponderance of verbs in a derivational set affects the outcome for all its members. For further details on OE prefixal stress see Minkova (2008a).

(p. 297)

On compound stress and OE meter: as argued by Kury±owicz (1970), it is the compound-stress rule that provided the linguistic foundation of the alliteration schema in verse. A further well-known elaboration of this idea is found in Russom (1987, 1998).

Further on secondary stress in compounds and alliteration: in *seo ðe* ***b****áncòfan / **b**eorgan cuþe* 'it that the bone-chamber / protect could' (*Beowulf* 1,445) *cofa-n* 'chamber, chest' in ***b****áncòfan* appears to match *cuþe*, but this is accidental: the last stressed syllable in the OE verse line does not participate in structurally significant alliteration; alliteration is consistently avoided in that position.

(p. 298)

On doubly alliterating compounds and stress: the equal prominence on both parts of a compound is known also with its German name, *schwebende Betonung*. For an excellent discussion of the linguistic issues and properties of compounds of various degrees of lexicalisation, poetic compounds and their relation to free phrasal groups, see Russom

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(1987: 91–7, 122–4). Russom highlights editorial and interpretation problems as in, for example, *maegen hreþ manna* or *maegen Hreþ-manna* (*Beowulf* 445a), which has been translated as ‘power-glory of men’ and ‘power of the Glory-men’, respectively (Russom 1987: 97). On the use of alliteration as a test for the status of compounds see also Hoover (1985: 69–71); Fulk (1992: 177–83, 252–5); Minkova (1997).

9.4.2 OE stress above the word level

(p. 299)

On the formation of clitic groups in Old and Middle English: the use of lexicalised adverbs with testable stress on the first syllable of the host is illustrated in:

sceall þonne **f**eran *onwég* ‘shall then go away’ *Soul I* 103b

hlemmeð *togǽdre* ‘clashes together’ *Whale* 61b

In ME loss of h- constitutes indirect evidence for the clitic status of h-initial pronouns, shown in spellings such as <a>, <e> for *he*, <am>, for *hem* ‘them’, and so on. For the early loss of <h-> in unstressed words see 5.1.3.

(p. 302)

On prosodic prominence in noun- and coordinate phrases: for the assumption that the phrasal End Rule was absent from Classical OE and that it emerged towards the end of OE or at the beginning of ME see McCully (1997). Arguments against McCully’s position, in favour of positing phrasal right-prominence throughout the history of English, are presented in Minkova and Stockwell (1997b).

9.5 ME stress placement: the native component

(p. 303)

On the pair ALWAYS-CAUSEWAYS: the adverb *always* is from the OE noun-phrase *ealne weg* with ME loss of the adjectival inflection -ne > *al-wei***.** The form *alwei(e)s*, rare before 1400, has the adverbial suffix *-es* (MED). The compound *causeway* is from *caucé-wey, caucy-wey, < caucé , caucy* ‘causey, mound’ + *way* (OED).

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(p. 304)

On the treatment of compounds in ME alliterative verse: an early collection of examples of initially stressed compounds in alliterative compositions of the fourteenth and early fifteenth century is found in Tamson (1898: 20–56).

(p. 304)

On the apparent fluctuations of primary stress in compounds as attested in ME alliterative verse: whether this freedom of using only the onset of the second element in alliteration is a matter of looser verse conventions, or whether compounds such as *ỳʒe-lýddez* 'eyelids', *dòuble-félde* 'double-fold' are morphosyntactically indeterminate between true compounds and phrases is hard to tell. As in PDE, their status could be in flux.

9.6 ME prosodic innovations

(p. 310)

On the accentuation of polysyllabic loans in EModE: valuable new information on specific suffixes and their stressability in EModE is presented in current work by Tarlinskaja (forthcoming: ch. 6), who cites the following examples from the play *The Cardinal* (1653) by James Shirley:

> Of handsome *com-po-si-ti-on*; but with
> His mind, the greater *ex-cel-lence*, I think …
> It speaks my *re-so-lu-ti-on*, before …
> Leave, leave, my lord, these *u-sur-pa-ti-ons* …
> (*The Cardinal*, 1.2.46–7; 2.1.6; 2.3.153)

9.6.1 Grammar, meaning, and stress-shifting: PERFÉCT-PÉRFECT, CANÁL-CHÁNNEL

(p. 311)

On the continuity of OE stress-shifting: the question of whether the limited OE pattern in 9.4.1 was continuous is not settled. The differences are summarised in the following table (from Minkova 2012b):

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	Morphological compositionality	Directionality of stress-shifting	Suffix-weight restrictions	Stem-coda restrictions
Germanic	Yes	No (?)	Yes	No
Romance	No (?)	Yes	No (?)	Yes (?)

With so many question marks it can be said that there are more differences than similarities between OE and PDE stress-shifting. The number of minimal pairs in ME is minute and the rapid decline of native verb prefixation in ME reduces the probability of native pairs as the template to be imitated by the Romance vocabulary. It is probable that stress-shifting was reinvented, triggered by the leftward shift of stress, the trisyllabicity of verbs and the overall tendency of verbs to appear in weaker prosodic positions. Post-eighteenth-century stress-shifts on native words follow the Romance pattern, but unlike the romance stress-shifts, where the prefixes are not usually attached to free roots, native stress-shifts require salient morphological compositionality.

(p. 312)

On *Áugust* (OE) - *augúst* (1664): judging from its (limited) use in verse, the name of the month had initial stress already in OE.

> The noun is short for *mēnsis Augustus* ‘month of August’ … It is based on the adjective *augustus ‘august’*. In the ancient Roman calendar this was the sixth month and thus called *Sextīlis* …; it was renamed in 8 BC to honour Augustus because several of the most significant events in his rise to power, culminating in the fall of Alexandria, had happened in that month. (OED)

The preservation of the stress on the heavy final syllable in the adjective is unsurprising given the late date of (re-)borrowing and the relatively low frequency of the word.

9.7 ME compound and phrasal stress

(p. 313)

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On the alliterative evidence for phrasal stress in adjective-noun phrases in *SGGK*: in *SGGK* either *young* + noun alliterates on the noun, or both the adjective and the noun alliterate. Adjectival *high* + noun alliterates on [h-] twelve times, while the alliteration is on the noun as in line 108 in (30) four times, though some SW collocations such as *high tide, high table* are ambiguous between compound and phrases. There are 8 instances of both adjective and noun alliterating (742, 1,051, 1,138, 1,154, 1,165, 2,197, 2,199, 2,297) and two ambiguous lines (250, 607). Only two NPs with *first* as the modifier alliterate on [f-], vs six alliterating on the noun, and one with double alliteration. The adjective *green* in NPs carries the alliteration or participates in double alliteration in all but two of the attestations in the poem, as in line 451 cited in (30).

(p. 313)

On the indeterminacy of compound vs phrasal stress in S W S metrical positions: the verse evidence for or against the End Rule in ME is inconclusive based on currently available counts. On a more positive note, a full-scale investigation of the distribution of phrasal units in the verse following the methodology in Youmans (1989, 1996) is promising. Syntactic inversions open a window into the meter; for example, it is of significance that monosyllabic adjectives are commonly placed after the head noun, as in 'In widewes *habit blak* …' (*Tr* I 170); 'Nor vnder *cloude blak* …' (*Tr* I 175); compare 'That hir behelden in *hir blake wede*' (*Tr* I 177). For the pentameter material Youmans proposes a hierarchy of strong metrical positions, with position ten being strongest and position four the next strongest, so it remains to be seen what the full matching preferences are in the relevant ME verse corpus.

9.8 Post-ME prosodic innovations

(p. 315)

On the sources of new words and word-elements in EModE: Culpeper and Clapham (1996: 210–11) report: 'For the six languages we considered [Greek, Latin, French, Italian, Spanish, Portuguese] we found that a total of 12,941 words were borrowed into

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English in the 16th century. … Our study shows that 7,052 (54.5%) of these words were from Latin.'

A most informative survey of the patterns of lexicon enrichment in EModE is provided in Nevalainen (1999: 336–76). She also notes (1999: 352) the difficulty of separating an etymologically derived item borrowed as a whole unit, from a form produced by the addition of a recognisable affix; for example, it is hard to determine whether *chastisement* (1303) is the base for *chastise* (1330), or the other way around.

(p. 316)

The stress patterns of the suffix *-ate* are tabulated in Phillips (2006: appendix A). Phillips offers an informative survey of other analyses of the prosodic behaviour of *-ate* verbs and shows that the change from a stressed, historically heavy penult, to primary stress on the antepenult proceeds according to frequency, with the most frequent items leading the change (2006: ch. 2).

(p. 317)

On recent changes in pronunciation*:* an example of a recent stress change is *angina*, which is now /ˈændʒɪnə/ ~ /ænˈdʒaɪnə/ (OED), while Daniel Jones (1924) has only /ænˈdʒaɪnə/. The OED explains: 'The Latin was until recently supposed to be *angīna*, whence the erroneous pronunciation prevalent in English.' Similarly *acumen* < Lat. *acūmen* BrE [ˈakjʊmən], AmE [əˈkjumən] ~ [ˈækjəmən] ~ [ˈækjəˌmɛn] has initial stress noted only in the middle of the twentieth century. Incomplete adaptation is frequent with personal names, for example *Actaeon* (1567): [ækˈtiən] ~ [ˈæktiˌɑn]; *dongola* (1889): [ˈdɒŋgələ] ~ [dɒnˈgəʊlə]; *jacquard* (1841), named after the inventor of the jacquard mechanism of weaving Joseph Marie Jacquard [ʒaˈkær], can be [dʒəˈkɑːd] or [ˈdʒækəd]. The stress variability may be accompanied by preservation or loss of other features of the loanword, thus *marquis* (c. 1330) is either nativised fully to [ˈmɑː(r)kwəs] or it still [mɑː(r)ˈki(ː)].

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(p. 318)

On the pronunciation of polysyllabic words in British and American English: a comparison of the pronunciations of 75,000 items in British and American English is reported in Berg (1999). Berg finds that stress variation affects less frequent polysyllabic words, and it is particularly well attested with proper names. British English tends to shift the stress leftwards more often than AmE; the latter accommodates stress at word-edges more readily than British English.

(p. 320)

On the variability of stress-patterns in derived words: a thorough coverage of the former literature and an innovative probabilistic model of the preservation of stress in derivational processes is found in Collie (2007, 2008).

(p. 321)

On back-clipping: the productivity of back-clipping in EModE and PDE is discussed in Nevalainen (1999: 430–3). Nevalainen (1999: 432) considers the process of clipping as 'not properly established until the fifteenth century' (citing Marchand 1969: 449). For a full-length treatment of the constraints governing clipping in PDE see Lappe (2007). Regarding the possibility of clipping to occur word-finally or word-initially Nevalainen observes: 'It is not perfectly clear whether the process of omitting unstressed initial syllables is the same as the (perhaps more conscious) omission of stressed initial elements.'

(p. 322)

On the negative reaction to word-clipping in the eighteenth century: the most important document recording the attitude to clippings in the early eighteenth century is the famous 1712 *Proposal for Correcting, Improving, and Ascertaining the English Tongue.* The proposal was made by Jonathan Swift (1667–1745), a linguistic conservative, in an open letter to the then Lord Treasurer. It was supported by Dryden (1631–1700), an admirer of

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the *Académie française*, and by Defoe (1660–1731). The *Proposal*'s effect was limited at best.

(p. 322)

On the history of aphetic forms: pre-tonic syllable loss appears to have peaked between 1300 and 1500; it characteristically preserves the stress of the base. Viewed as a 'timeline' bar graph, the OED identifies 386 items with 'aphetic' in their etymologies for 1300–1500 vs 158 for the period 1500–1700, 55 for 1700–1900, and only 4 since 1900: *madumbi* (1951) 'South African plant amadumbi', *lectric* (1955), *yay* 'hooray' (1963), *Merkin* (1990). See also the comments in Minkova (forthcoming).

FURTHER READING (p. 322)

Accessible introductions to the linguistic principles governing stress in PDE can be found in Giegerich (1992: ch. 7); Hayes (2009b: 285–7, 304–5).

ASSIGNMENTS

- Establishing compound stress in ME:

(a) Go to *Literature Online* (LION) (http://lion.chadwyck.com/) and find all attestation of the compounds *eyelid* and *daylight* in poetry composed between 1200 and 1700. Hints:

    Go to Search texts.

    Keyword(s) in Poem: *daylight, eyelid.*

    Publication Date: 1200 to 1700.

    Make sure that the search includes variant spellings and variant forms (for *daylight* you should find 24 entries, 30 hits), for example Lurkkez quyl þe *dayly3t* lemed on þe wowes (*SGGK* 1,180).

Comment on the distribution of the forms.

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(b) Compare the matching of compound stress with meter in the following two lines from *The General Prologue*:

Gat-tothed was she, soothly for to seye	*GP* 468
That hadde a fyr reed Cherubynnes face	*GP* 624

What justifies the acceptability of both placements? Find three additional examples of each type of placement.

(c) How reliable is the evidence for stress in the following Chaucerian lines (all from the *Knight's Tale*)?:

And of the tempest at hir hoom-comynge	*KT* 884
Thurgh-girt with many a grevous blody wounde,	*KT* 1,010
That soone after the mydnyght palamoun,	*KT* 1,467
He hadde a beres skyn, col-blak for old.	*KT* 2,142
A wrethe of gold, arm-greet, of huge wighte,	*KT* 2,145
Gold-hewen helmes, hauberkes, cote-armures;	*KT* 2,500

(d) Study the distribution of *foster-father* (800), *stepfather* (825), *great-father* (888), *godfather* (1,000), *grandfather* (1,424), *church father* (1,654) vs adj. + *father* in a syllable-counting corpus of verse of your choice.

- Stress on affixes in PDE: look up the history of *Cherokee, chimpanzee, coffee, donee, Galilee, guarantee, manatee, nominee, pedigree, trochee, spondee.* Comment on the stress-placement in these words in relation to their origin and morphological composition.

CHAPTER 10 Early English verse forms: from Cædmon to Chaucer

10.1 Preliminaries: speech prosody vs poetic meter, stress vs ictus

(p. 323)

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For some foundational statements and discussion of the interplay between prosody and meter see Kiparsky (1973, 1977); Hayes (1983, 1988, 1989); Youmans (1989); Hanson and Kiparsky (1996). Among the more recent collections offering important insights into the typology and theory of meter are Dresher and Friedberg (eds) (2002); Aroui and Arleo (eds) (2009).

(p. 324)

On the foot typology used to describe early English verse: the classical model of *pyrrhic* and *tribrachic* feet, consisting of two or three *short* syllables, is not necessary or applicable to the analysis of English verse, where syllables are characterised by weight and stress and not length. Adjacent monosyllabic lexical words, for example *white plains*, *played well*, *case closed*, are incorporated into binary feet. The notion of the *spondee* – a foot consisting of a single long syllable in classical quantitative meter – is unnecessary for the description of English verse, the assumption being that of the two adjacent syllables one will have, or at least can be assigned, greater prominence than the other.

10.2 Alliterative verse

(p. 327)

On the conflict between spelling and sound in definitions of alliteration: alliteration is defined as ‘a figure in Rhetorick, repeating and playing on the same letter’ in Thomas Blount’s *Glossographia, or a dictionary interpreting such hard words..as are now used*, 1656. For the appropriateness of treating OE alliteration as phonological rather than graphic identity see Minkova (2003: 78–87). For the ‘visual’ approach to alliteration in both historical texts and current political rhetoric see Halmari (2011); Williams (2011).

(p. 327)

On the ‘fit’ between prosody and meter: Saintsbury’s somewhat arch statement: ‘every language has the prosody it deserves’ (1923: 404) is an early articulation of the relatedness of linguistic properties to the choice of metrical form. The general principle of ‘fit’ is articulated in Hanson and Kiparsky (1996: 294): ‘Languages select meters in

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which their entire vocabularies are usable in the greatest variety of ways.' The classic statements on the adaptability of the Germanic prosodic system to alliterative versification are found in Lehmann (1971: 103, 121–2 and *passim*). Cross-linguistically, alliteration does not always require overlap of alliteration and initial stress; see Fabb (2010: 1,227) on Somali poetry.

10.2.1 Classical OE alliterative verse

(p. 328)

On the continuing scholarly attention to the structure of OE meter: two book-length studies of OE meter appeared in the first decade of this century, Getty (2002) and Bredehoft (2005). A discussion of the account proposed by Bredehoft is found in Minkova (2008b). A detailed survey of the research history on OE metrical structure up to (almost) the end of the twentieth century is found in Stockwell and Minkova (1997b), which is also the basis of the presentation in this section.

(p. 329)

On the uneven syllabic count in OE verses: verses longer than six syllables are untypical. Verses longer than seven syllables are normally matched by shorter verses in the long line, contributing to a more balanced length in the line; see Russom (1987), who also discusses the balancing of foot-length within the verse. Excess stresses and excess syllables characterise the hypermetric verses. Their overall number in the corpus is debatable depending on whether a three-ictic verse is considered normal or hypermetric (see Hutcheson 1995: 317–24).

(p. 330)

On the variable application of resolution: resolution has been shown to depend on the position of the resolvable light stressed syllable and the weight of the resolved unstressed syllable – conditions subsumed under what is known as *Kaluza's Law*. The essence of the Law is that in the position immediately after a heavy stressed syllable resolution will apply only if the unstressed syllable is (historically) light. Thus *Beowulf* 1b *in ġēar**dagum***

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'in yore-days' is [w s / s w], no resolution because *-um* in *dagum* is heavy, but 1,284a *wīg**gryre** wīfes* 'war-terror of woman' [s **s-w** w / s w] with resolution on *gryre* because *-re* is light. The authorities disagree on the extent to which this variable application undermines the notion of resolution; see, for example, Russom (1987: 5.4.1, 5.4.3); Stockwell and Minkova (1997c). Fulk (2002) provides an informative history of the research on OE resolution and reaffirms its relevance to the OE metrical structure.

A question which remains controversial is the validity of the principle of equivalence of a single heavy syllable to a light syllable plus any other syllable outside verse, that is, the assumption that a word like *sǣ* 'sea' is prosodically equivalent to *cyning* 'king', a rather forced abstract equivalence. We already noted that the linguistic evidence for the functionality of syllable weight in OE outside of secondary stress (see 9.4.1) is weak. The role of weight in the morphology of Classical OE was no longer transparent (Minkova 2011a), which suggests that the equivalences covered by the notion of resolution in the meter had possibly developed into a learned convention with a weak linguistic foundation. The possibility of careful scrutiny of syllabic weight by the Church-trained clerics who recorded the poems is in line with the strong emphasis on Latin in monastic education (see Lapidge 1986).

(p. 332)

On matching compounds to metrical positions: an alternative analysis of matching compound stress to metrical positions would be to allow 'cascading' sequences of the type s-w s w w / s in ***m**éodosètla oftḗah* to count as two positions, so the matching in terms of positions is (1) ***m**éodo-*, (2) *-sèt*, (3) *-la of-* and (4) *-tḗah*, making the first foot in this verse a three-position foot. In that approach, the 'short' foot is simply monosyllabic, and there is no need to posit a zero-filled W position. For an insightful discussion of the balance of feet in the verse see Russom (1987, 1998). Russom develops a hypothesis regarding the correspondence of foot patterns to native word patterns.

(p. 334)

On the relative prosodic strength of the members of a verb-complement string in

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Germanic: a very useful discussion of the earlier statements and their relevance for the account of OE meter is found in Getty (2002: 139–47). In his formulation 'In a phonological structure containing a syntactic head and any of its complements, the complement must be the strong member of the phrase' (2002: 143–4). In that analysis the strength of the complement is defined as a constraint (COMPLEMENT → STRONG), according to which when a phonological phrase 'unites two phonological words in a relationship of syntactic complementation, the complement is generally strong and the head generally weak'. It is quite likely that this prosodic pattern is one of the factors behind the functional stress-shifting with some prefixes in OE (see 9.4.1), as well as the productivity of stress-shifting of the type *présent-presént* in EModE and PDE (see 9.6.1)

(p. 335)

On the rarity of Type A3 in the off-verse: the counts in Hutcheson (1995: 125) show 1,322 a-verse attestations of singly alliterating Type A (*Hī hyne þā æt**b**ēron* (*Beowulf* 28a)) vs only 14 in the b-verse. Hutcheson's database covers 13,044 long lines, representing approximately 40 per cent of the extant OE poetic texts.

(p. 337)

On the selective use of phonological variants in verse: the awareness of paraphonological options goes back to the earliest English writings on meter. Gascoine writes:

> This poeticall licence is a shrewde fellow, and covereth many faults in a verse, it maketh wordes longer, shorter, of mo sillables, of fewer, newer, older, truer, falser, and to conclude it turkeneth ['modifies'] all things at pleasure, for example, *ydone* for *done*, *adowne* for *downe*, *orecome* for *overcome*, *tane* for *taken*, *power* for *powre*, *heaven* for *heavn*, *thewes* for good partes or good qualities, and a numbre of other whiche were but tedious and needelesse to rehearse, since your owne judgement and readyng will soone make you espie such advauntages. (Gascoine 1575: 470)

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(p. 339)

On the optionality of final schwa elision in OE verse see Minkova (1991: 62–8); Minkova (2003: 145–8). Russom (1998: 21) follows the assumption articulated in Sweet (1922: §374) that 'There can be no doubt that weak vowels were often elided before another vowel in ordinary Old English speech' and considers elision as 'active' in the verse corpus. I am not aware of the existence of a full corpus of elidable prevocalic schwas in OE verse that would enable us to test statistically the probability of elision against the frequency of the corresponding verse-patterns. Until then we can stay with the assumption that the principle of gradient well-formedness in verse (Youmans 1989) allows both types of metrification *and* performance.

10.2.2 Continuity and reinvention of alliterative versification in ME

(p. 340)

On the forms of versification used in the first two centuries after the Conquest: arguments against linking the literary prose compositions using alliteration to the reappearance of a new alliterative tradition in the fourteenth century are found in Russom (2004). Examining the properties of the alliterative *Harley Lyrics* (first half of the fourteenth century), Cable (2009) rejects the suggestion that the form in these partly alliterative compositions is based on thirteenth-century prose. Instead, he posits a separate type of template, which is neither 'native' nor 'foreign'.

(p. 342)

On the awareness of the difference between letter and sound: Ælfric (*On Letters*) writes:

> A letter is *stæf* in English and it is the smallest part in books and is indivisible. … Each letter has three aspects: **name**, **shape**, and **strength**. The name is how it is called: **a b c**. Shape, how it is formed. Strength, what its influence is among the other letters. (Throop 2008: 18).

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(p. 343)

On the scholarly tradition and terminology used in ME alliterative metrical studies: the classic, and still very valuable study of ME alliterative verse is Oakden (1968). Jefferson and Putter (2009) is a landmark twenty-first-century collection showcasing recent research in the area of alliterative meter. On the imbalance of the a- and the b-verse see Cable (1991: 86); Duggan (2001: 481).

The terminology used in various studies is inconsistent; this book follows the commonly recognised terms in the scholarship on ME alliterative verse, including the unfortunate term 'strong' dip (W) for a weak position filled by more than a single syllable.

(p. 344)

On the rarity of more than one 'strong' dip in the b-verse: in Minkova's (2009b) database the [W S W S] type occurs only in 2.3 per cent of the b-verses.

(p. 345)

On morphosyntactic change and its relation to the differences between Old and Middle English alliterative verse: the extent to which the ME alliterative verse-forms reflect linguistic change can be debated, but it is unlikely that the loss of inflexional syllables is the sole trigger of the metrical and parametrical innovations in ME. As in OE, the 'strong' dips in ME are filled by a combination of inflexions and prosodically weak monosyllables, which suggests that the loss of inflexions was largely irrelevant for the development of this verse form. On the other hand, it is logical to look to morphosyntactic change as a factor in the choice and popularity of a specific verse form. Indeed, such proposals have been in the literature since at least 1956, when Lehmann suggested that 'With the further weakening of inflexional endings after the time of composition of the late Old English poems such as the *Judith*, the alternating rhythm is almost mandatory' (Lehmann 1971: 100).

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10.3 Introduction of rhyme, syllable-counting and binary foot structure

(p. 346)

On the use of rhyme in OE alliterative verse: except for *The Rhyming Poem*, the late tenth-century poem *Judith* has the highest proportion of end-rhymes (see Greenfield and Calder 1986: 222), but there are other metrical irregularities in that poem, of which incidental rhyming is just one.

(p. 346)

On the introduction of rhyming: a very useful outline of the early use of rhyme in English, its origin, including the possibility of Celtic influence, and the relationship between rhyme, syllable-counting and music is found in McKie (1997); see also Stanley 1988. Harmon (1997) places the use of rhyme in perspective, tracing its perfection and perseverance in post-medieval verse forms.

(p. 348)

On the loss of inflections and the development of analyticity and the emergence of rhyme: the classic reference is Lehmann (1971). Two more recent statements illustrating the hypothesis of a link between inflectional loss and rhyme are: 'the slow process of loss of inflections favoured end-rhyme over alliteration' (McKie 1997: 822); and the emergence of rhyme as a unifying expressive and mnemonic device, can be accounted for by reference to a single linguistic principle: Indo-European languages tend to change from one morphological disposition to another. They change, that is, from a state of being synthetic-suffixal toward a state of being analytic-prefixal. (Harmon 1997: 15)

(p. 350)

On counting final <-e>'s in ME: the estimate of 70 per cent of regular lines in the *Owl and the Nightingale* is found in Tarlinskaja (1976). Her analysis of *The Owl and the Nightingale*, *King Horn* and *Floris and Blancheflour* is based on weak *-e*'s as separate syllables everywhere except when they are in an elision environment (1976: 71); a 'pre-Chaucerian' approach to counting, as distinct from the optional *-e*'s in Chaucer. Minkova

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(1992) argues that as early as 1250 the language allowed the same options which were available to poets of the late fourteenth century. A full list of the conditions allowing paraphonological optionality in the behaviour of unstressed vowels in ME is found in Minkova (2009a: 78–89).

For a different view of the regularity in early rhyming verse, based on four beats rather than on an exact count of syllables, see Duffell (2008a: 80–1).

(p. 351)

On iambic vs trochaic cadences in the history of English verse: the difference between iambic and trochaic lines can be blurred in *performance*, both of the older and of more recent verse. To illustrate: the opening two feet of Antony's speech in *Julius Caesar* (III, ii): *Good friends, sweet friends*, (let me not stir you up / To such a sudden flood of mutiny) can be delivered trochaically: *Good friends* (S W), *sweet friends* (S W), with emphasis on the adjectives, and iambically (W S), with emphasis on *friends*. To identification of the line *Good friends, sweet friends, let me not stir you up* as 'iambic' is justified by the fact that it is embedded in an iambic metrical context; the violation of the rhythm in the line adds to its artistic value.

(p. 352)

On matching non-primary stresses to S-positions in early iambic verse: the freedom of matching weaker, or even fully unstressed syllables to strong metrical positions is characteristic of the early iambic compositions such as *The Ormulum*. For more detail see Minkova (1996).

(p. 352)

On the Monosyllabic Rule: Gascoine's (1575) commentary on the freedom of matching monosyllables was well known to other early writers on meter. A similar observation is found in King James's 'Ane schort treatise containing some relulis and cautelis to be obseruit and eschewit in Scottis poesie' (1584): 'the maist pairt of thame [monosyllables] are indifferent, and may be in short or long place, as ye like'. The 'indifference' of

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monosyllables in verse is reasserted also in Puttenham's influential three-part book *The Arte of English Poesie* (1589). On the use of the rule in generative metrics see Kiparsky (1977: 191); Hayes (1988: 222). The Monosyllabic Rule was defined for later verse, but it is applicable both to the scansion of ME iambic verse and ME alliterative verse (see Minkova 2009a: 94–7). Its exact application: is it prosodically stressed or unstressed monosyllables that are 'mismatched' more often? which types of monosyllabic lexical words are more prone to mismatching to metrically weak position? in the different verse modes of ME and the different poets, e.g. Chaucer vs. Gower, has not been researched.

(p. 355)

On loss of schwa in polysyllables and in inflections: a discussion of the loss of final schwa in polysyllabic words is found in Minkova (1991: 158–63). The realisation of the final *-e* in trisyllabic words can be sensitive to grammatical function and class; see Minkova (1991: 149–50); Cable (1991: 76–81) on the grammatical correlates of schwa deletion in ME. Cable believes that the poets were quite conservative with respect to the final vowels. The position taken here is that by Chaucer's time most final vowels were lost from the spoken language, especially in the northern varieties, but could still be used in speech and especially in verse for metrical reasons – the tendency to select conservative forms is a recognised device in poetic composition.

(p. 356)

On the evolution of isosyllabicity: the overview in this chapter does not address the more detailed interplay between number of strong positions and number of syllables as determining the typology of the composition. Focus on beats rather than number of syllables opens up the possibility of positing a transitional form, *dolnik*, which mixes mono- and disyllabic weak positions for some pre-Chaucerian material. On the latter see Tarlinskaja (1976); Duffell (2008a: 77–81).

10.4 Chaucer and the invention of the iambic pentameter

(p. 357)

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The chronology of Chaucer's works is not fully fixed (see Benson 1987). While the famous *Prologue* to the *Canterbury Tales* is dated 1387, some of the tales are older, so the dating of the collection 1387–1400 is only an approximation. The progression of metrical modes seems to be from early pentameter for lyric poems only, tetrameter for narrative verse, and then abandoning the tetrameter and using the pentameter for all verse.

On the ease of learning and replicating the tetrameter template the classic reference is Burling (1966); see also Hayes 1988. Chaucer's iambic tetrameter is not completely or monotonously regular. As documented in Duffell (2008a: 81–92), the distinction of 'perfect' iambic tetrameter belongs to Gower (?1330–1408).

(p. 357)

On the components of Chaucer's pentameter line: for research history and further details see Duffell (2008a: 86–9); Stockwell and Minkova (2001); Minkova and Stockwell (2003b).

(p. 358)

On line-final extrametricality: the extra syllable at the right edge is the second syllable of a feminine rhyme, which alternates with masculine rhymes seemingly freely. If the feminine part of the rhyme ends in *-e*, for example *soote* : *roote*, the realisation of the final *e-* will be optional, depending on the morphosyntactic nature of the word; *soote* in the opening line of the *General Prologue* modifies a plural noun, *shoures*, and *roote* in line 2 follows a preposition (*to the*), so the *-e* is probably syllabic. On the other hand, in … is this a mannes hert***e***? (*Tr* III 1,098), *Cryseyd**e*** : *abreyde* (*Tr* III 1,112–13), the final *-e* was most likely purely orthographic and would not have been realised. The extrametrical unstressed syllable can be a separate word, thus *drede is* : *dedis* 'dread is : deeds' (*WBT* 1,175–6), *thevys* : *grief is* (*SumT* 2,173–4). Extrametricality is tightly controlled: only a single unstressed syllable can follow the last stressed position in the line. On line-final extrametricality in other trditions see Piera (2009: 290 in Aroui and Arleo (eds.)): "…stressless line ends have never been reserved for particular meters".

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(p. 362)

On the hierarchy of feet within the line: the prototypical iambic pentameter line, as shown in (47), is a condensed version of the arboreal representation in Youmans and Li (2002: 153). The representation was originally proposed for Milton, but as argued by them, it is an accurate representation of Chaucer's iambic pentameter too. The hierarchical relations of the strong positions both in the early tetrameter and in the pentameter were documented by stress-profiles in Tarlinskaja (1976). For students of Renaissance verse Tarlinskaja (1987) provides extensive data on the different stress-profiles in Shakespeare.

(p. 365)

On enjambment: informative statistics and discussion of the evolution of enjambment and its use in various Elizabethan and post-Elizabethan work are found in Tarlinskaja (1987: 177–201). Duffell's *Statistical Tables* (2008a: 240–55) are very valuable because of the great range of authors and features they include, because of the evaluation of statistical significance of the findings, and above all because the percentages cited are testable and replicable.

ASSIGNMENTS

- *Scansion practice lines:* (*Beowulf*) (answers given below)

  Him ðā Scyld gewāt / tō gescæphwīle'then Scyld went / at destined time'
  felahrōr fēran / on frēan wǣre.
  'full strong to fare / in Lord's keeping'

  Hī hyne þa ætbǣron / tō brimes faroðe,
  'they him then carried / to briny's current'

  swǣse gesīþas, / swā hē selfa bæd,
  'precious companions / as he himself bade'

  þenden wordum wēold wine Scyldinga;
  'when word wielded / friend of Scyldings'

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lēof landfruma lange āhte.
‘loved land-ruler / long reigned.’

Answers

26	Him ðā Scyld gewāt / tō gescæphwīle	B	C
	felahrōr fēran / on frēan wǣre.	A	C
	Hī hyne þa ætbǣron / tō brimes faroðe,	A_3	C
	swǣse gesīþas, / swā hē selfa bæd,	A	B
30	þenden wordum wēold wine Scyldinga;	B	D
	lēof landfruma lange āhte.	D	A

Sir Gawain and the Green Knight (*SGGK*), ll. 37–60

Key: w = single unstressed syllable filling a weak position
W = two or more unstressed syllables filling a weak position
(w) = extrametrical unstressed syllable – always verse-final
S = stressed syllable filling an ictic (strong) position

w S W S (w) W S S (w)
Þis **k**yng lay at **C**amylot vpon **K**rystmasse 37

W S w S (w) S W_3 S
With mony **l**uflych **l**orde, **l**edez of þe best,

S W_4 S w S (w) W S S (w)
Rekenly of þe **R**ounde **T**able alle þo **r**ich breþer,

w S S W S w S w S (w)
With **r**ych **r**euel o**r**y3t and**r**echles merþes. 40

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w S W S (w) w S W S (w)
Þer **t**ournayed **t**ulkes by **t**ymez ful mony,

S W S w W S w S (w)
Justed ful jolilé þise gentyle kni3tes,

W S W S S W S (w)
Syþen kayred to þe court caroles to make. 43

S(?) W S S W_3 S w S (w)
For þer þe fest watz ilyche ful fiften dayes,

W_3 S W S (w) w S W S (w)
With alle þe mete andþe mirþe þat men couþe avyse; 45

w S W S S W S (w)
Such glaum ande gle glorious to here,

Sw(?) S W S S W S (w)
Dere dyn vpon day, daunsyng on ny3tes, 47

W S W S (w) w S W S (w)
Al watz hapvpon he3e in hallez andchambrez

w S W S (w) w S W S
With lordez andladies, as leuest him þo3t.

W_3 S W S (w) w S W S (w)
With all þe wele of þe worlde þay woned þer samen, 50

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Þe most kyd kny3tez vnder Krystes seluen,

And þe louelokkest ladies þat euer lif haden,

And he þe comlokest kyng þat þe court haldes;

For al watz þis fayre folk in her first age,

On sille, 55

Þe hapnest vnder heuen,

Kyng hy3est mon of wylle;

Hit were now gret nye to neuen

o hardy a here on hille.[15]

- Using the online MED (public domain, http://quod.lib.umich.edu/m/mec/), scan and comment on the alliteration in lines 1,637 through 1,644:

  1,637 Syr Cadore of Cornewalle comaundez his peris,
  1,638 Sir Clegis, Sir Cleremus, Sir Cleremownnde þe noble,
  1,639 'Here es þe close of Clyme, with clewes so hye:
  1,640 Lokez the contrée be clere, the corners are large;
  1,641 Discoueres now sekerly skrogges and oþer,
  1,642 That no skathell in þe skroggez skorne vs hereaftyre;
  1,643 Loke e skyfte it so þat vs no skathe lympe,
  1,644 For na skomfitoure in skoulkery is skomfite euer.'

[15] From *The Alliterative Morte Arthure*: *A Critical Edition*, ed. with an Introduction, Notes and Glossary by Valerie Krishna, New York: Burt Franklin, 1976.

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Word Index

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Names Index

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