I would like to thank Rolf Bremmer, Robert Mailhammer, Karling Rottschäfer, and, especially, Patrick Stiles for giving me valuable comments on this article; however, they are in no way to be associated with the suggestions made in it.


1. INTRODUCTION

Opinions are divided on whether palatalization of *-k(k)-* and *-g(g)- in Old English and Old Frisian resulted from a shared development or arose independently. Earlier scholarship asserted that there was a link. Theodor Siebs wrote that the beginnings of palatalization (but not assimilation) ‘liegen in der englisch-friesischen, das heißt der kontinentalen Periode’. Karl Luick thought that palatalization initiated ‘noch zur Zeit der anglofriesischen Gemeinschaft’. Alistair Campbell concluded that there was ‘nothing to show that the sensitivity of k and g to the nature of following vowels does not date back to a period when English and Frisian were in sufficient contact to develop some common characteristics, but it certainly continued long after the period’, and in his grammar he maintained that palatalization ‘doubtless began in the continental period, for it is a major link of Old English and Old Frisian’.2

Some investigators, however, have argued that palatalization and assimilation were independent changes in Old English and Old Frisian. They argue – Richard Hogg, Patrick Stiles and Hans Frede Nielsen – that English and Frisian do not share the same relative chronology of sound changes prior to palatalization, concluding that Frisian and English must have gone their separate ways before palatalization even initiated.3 These scholars do not

1 I would like to thank Rolf Bremmer, Robert Mailhammer, Karling Rottschäfer, and, especially, Patrick Stiles for giving me valuable comments on this article; however, they are in no way to be associated with the suggestions made in it.


In response to arguments against a shared Old English and Old Frisian development, Robert Fulk, in the forerunner to this volume, presented an alternative chronology and interpretation of Anglo-Frisian sound changes which aimed to bring English and Frisian back to a common dialect at the time when velars were palatalized. Subsequently, Frederik Kortlandt responded to Fulk’s paper, criticizing many points of his chronology and offering several revisions while at the same time agreeing with the main thrust of it, namely that palatalization of velars initiated when Old English and Old Frisian formed a linguistic unity, Anglo-Frisian.¹

In this paper I argue that older scholarship was right to place the beginnings of palatalization in the continental period. I then take up the debate about relative chronology, and show that three out of four of the main arguments against a shared process of palatalization carry no weight while a fourth is inconclusive. However, ultimately it is questionable whether recourse to relative chronology is the ideal approach for assessing whether palatalization was a shared development or not, especially since the origins of palatalization are unknown. In particular, the genealogical (or Stamm-baum) method based on relative chronology cannot adequately deal with sound-change resulting from dialectal diffusion within language continua, and since Patrick Stiles’ has presented good arguments to show that we are dealing with a language continuum, the genealogical approach is bound to have its limitations.

2. PALATALIZATION IN OLD ENGLISH AND OLD FRISIAN

First it may be useful to outline the three environments in which palatalization occurred, they were: 1. Initially: here *k and *g were palatalized by all front vowels (except front vowels deriving from i-umlaut, a condition which holds for velar palatalizations in all positions) and the palatal approximant j. 2. Medially: *-k(k)-, *-gg- were palatalized before *i, *j, while *-g- was palatalized between all front vowels. 3. Finally: *-k was palatalized by preceding front vowels in Old English only, while *-g was palatalized by preceding front vowels in both languages. Some examples are given in Fig. 1. Unlike Old Frisian, palatalized velars are not usually indicated in Old English orthography. In order to indicate them, the convention of a super-


I am aware that there is more dialectal variation in medial and final positions than presented here; however, some of the main issues will be discussed in section 4 of this paper. For more detailed overviews, see K. D. Bülbring, *Altenglisches Elementarbuch* (Heidelberg, 1902), §§491–500; Campbell, *Old English Grammar*, §§426–29; Siebs, ‘Geschichte der friesischen Sprache’, 1288–302.


Finally, many scholars – what

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In brief, palatalized *k* ultimately yields assimilated reflexes but *g* shows two outcomes of palatalization: either it merges with the palatal approximant *j* or it assimilates, yielding OE /d‡/, OFris *dz*. Many scholars explain this twofold development by assuming that *g* differed phonetically according to position at the time of palatalization. By this analysis, the reflex *j* can be derived from palatalization of a voiced velar fricative /ɣ/, and the assimilated variants *d‡* and *dz* from the voiced velar plosive [g], which existed after *n* (i.e. in the combination *ng*), and in the geminate *gg*. Finally, many scholars – what
ever their view is on the relationship between the Old English and Old Frisian palatalizations – distinguish between an earlier process of palatalization and a later process of assimilation, the latter occurring much later and showing variation in Old English and Old Frisian. In other words, the velar plosives *k* and *g* were naturally palatalized somewhat before front vowels (i.e. [c] and [ɟ]), yet these must surely have been followed by some form of secondary articulation too, probably a palatal off-glide, so as to induce dentalization and assimilation: *k* > *c̞* > *ʃ̞* > OE /ʃ/, OFris *ts* and *g* > *j̞* > OE /dʒ/, OFris *dz*.

3. THE HISTORY OF PALATALIZATION

If we want to establish whether palatalization of velars was a shared or independent development of pre-Old English and pre-Old Frisian we should first try to estimate when palatalization took place. If the balance of probability indicates that palatalization of velars had already initiated before the Anglo-Saxon settlement of Britain around the mid-fifth century then the prospect of it being a shared development increases in likelihood. In order to assess when palatalization initiated, it will be easier to first establish when it stopped and then to work back in time.

Most important for assessing when palatalization stopped has always been the question of when *i*-umlaut started, since velars were not palatalized before front vowels resulting from *i*-umlaut, e.g. OFris *kening* ‘king’ < PreOFris *kuning* and OE *kyn* ‘kin’ < *kunni*. Although there is still some uncertainty on the date of *i*-umlaut, Karl Luick’s sixth-century dating provides one workable estimate for English, especially since it has found subsequent support from a detailed study of place-name evidence by Richard Coates.9 Indeed, it is difficult to suggest a much later date because *i*-umlaut is already represented in the earliest attestations of Old English, e.g. in the Franks Casket runic inscription *wylf*<Pre-OE *wulfi* ‘she-wolf’) from about the late seventh century. For Old Frisian, an early dating for *i*-umlaut looks probable too, based on the personal-name *æniwulufu* (< *auni-*) found on the Folkstone Coin runic inscription, c. 600–650, which is usually thought to be Frisian.10 Failing this, Gysseling provides early Old Frisian attestations of unrounded *i*-umlaut in the name *Hrǭgær* (< *Hrǭ-*) appearing in copies of documents which ultimately date to the late eighth century, as

9 Luick, Historische Grammatik, §350. For a discussion of the place-name evidence see R. Coates, ‘On an Early Date for OE i-Mutation’, Linguistic and Stylistic Studies in Medieval English, ed. A. Crépin (Amiens, 1984), 25–37; at 31, Coates argues that *i*-umlaut cannot have been operative long after AD 500 in English.
Assuming, then, that i-umlaut took place by about the sixth century in Old English and between the sixth and eighth centuries in Old Frisian, the usual inference is that palatalization of velars stopped in these languages at the same time.

Some scholars, however, have claimed that palatalization of velars could continue after i-umlaut, arguing that rounded front vowels from i-umlaut did not have the same palatalizing effect as the older inherited non-rounded front vowels. If this is so, and it is most doubtful (see discussion below), palatalization of velars could conceivably have continued as a sound-change somewhat longer, perhaps into the seventh century. But a date much later than this seems improbable for Frisian, since the North Frisian settlements began in around the seventh or eighth century, and while these dialects are thought to have developed independently for many centuries, they show the same palatalizations as in Modern West and East Frisian. The situation in English is much more problematic, however. If Coates is right that i-umlaut cannot have been operative long after AD 500 – nobody, it seems, has yet challenged his arguments – then there is a complication, since it is quite certain that velars were still undergoing palatalization after this date, perhaps until the mid-seventh century, as place-name evidence indicates.

During the Anglo-Saxon migrations and settlement of Britain, which began in the early to mid fifth century, Romano-British place-names containing *k and *g were taken into Old English and show palatalization before front vowels, e.g. Cheviot (Northumberland), Chevening (Kent) < Brit. *keīn- ‘ridge’, Yeavering (Northumberland) < Brit. *gafr- ‘goat’, Cheetham (Lancashire) < *kēd- ‘forest’. The distribution of the last mentioned place-name element – *kēd ‘forest’ – is presented in Map 1. In the fifth century *kēd ‘forest’ had a mid-front vowel *ē (or possibly a diphthong *ēi) which caused palatalization and subsequent assimilation of preceding *k (> *c / > *t > tʃ) in many dialects of English. Evidently, there are few exceptions to k-palatalization. Those exceptions which do exist, e.g. Coedmoor, Hengoed, Pencoyd, are found in the vicinity of the present-day Welsh border, which in former times was further east, hence there was no early British to Old English shift in this area. More exceptions are found in west Devonshire, e.g. Penquit, and in the North, e.g. Culgaith, Tulketh, Penketh, Alkincoats, Clesketts, Bathgate, Pencaitland.

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Map 1: Place-names containing Late British *kHd 'forest'\textsuperscript{12}

\textsuperscript{12} I have made this map using R. Coates, ‘Gazetteer of Celtic Names in England (except Cornwall)’, R. Coates and A. Breeze, Celtic Voices, English Places: Studies of the Celtic Impact on Place-Names in England (Stamford, 2000), 263–345. Some Scottish place-names have also been added to the map using W. J. Watson, The Celtic Place-Names of Scotland (Edinburgh, 1926), 381–82.
It is tempting to explain away the northern forms with Scandinavian influence. However, the areas in question were settled late, and the forms could just as easily continue British pronunciations: Lothian fell to Bernicia in AD 638 (according to the Irish annals), and areas west of the Pennines and north of the Ribble were absorbed by Northumbria after the mid-seventh century. Finally, there is a conspicuous example of non-palatalization in southern Lincolnshire, the district name Kesteven, and, perhaps, the more doubtful Ketton in Rutland. But aside from these few examples palatalized forms abound.

One way of explaining both early i-umlaut and continuing palatalization would be to use once more the argument that palatalization was still an ongoing phonetic process, though not before rounded front vowels. But although this explanation has been offered several times before, and although it seems logical on the face of it, scholars who favour this interpretation have a tendency never to cite living languages which attest such a typology. By contrast, many languages can be cited which have palatalization of velars before both rounded and unrounded front vowels, as Salmons (this volume) demonstrates. An alternative solution, then, is to assume that a phonemic contrast between palatalized and non-palatalized velars already existed prior to i-umlaut and the creation of rounded front vowels, as has been argued for by some scholars. In such a case it would be possible to assume that the velars of Romano-British place-names were palatalized on adoption into English in accordance with the phonotactic properties of Anglo-Saxon. In

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14 Further languages showing palatalization before both rounded and non-rounded front vowels are listed in D. N. S. Bhat, ‘A General Study of Palatalization’, J. H. Greenberg, *Universals of Human Language. II. Phonology* (Stanford, 1978), 47–92. It has obviously been harder for Bhat to find languages which show palatalization before non-rounded front vowels only, but Bhat (p. 61) notes that in English ‘velar palatalization did not take place before the vowel i derived through umlaut from u’, which brings us full circle. However, the notion that there was palatalization after *i* (short, long or nasalized) but not after rounded front vowels has also been used by linguists studying the historical phonology of Slavic, see W. Vermeer, ‘Leading Ideas in the Study of the Progressive Palatalization of Proto-Slavic’, *International Journal of Slavic Linguistics and Poetics* 44–45 (2002–03), 377–94, at 383–84, 387 and footnotes 15 and 21.
other words, there was sound-substitution, but otherwise no new process of palatalization occurred before rounded front vowels.\footnote{16}

To be sure, early Brittonic place-names were assimilated to Anglo-Saxon phonology by a form of sound-substitution. For instance, the voiced velar plosive $^v_g$ appeared in intervocalic position or between a vowel and a resonant in Late British. But in Old English only the voiced velar fricative $^\gamma$ (when palatalized: $[\gamma]$) was found in these positions, with the plosive $^v_g$ only occurring in gemination or after $^v_n$. As a consequence, the Brittonic $^v_g$ was usually replaced by OE $k$ (or occasionally -$gg$-) in these positions, e.g. Eccles (in Lancashire and many other place) from Late British $eglhês$ (cp. Modern Welsh $eglŵys$ ‘church’), ultimately from Vulgar Latin $eclesia$.\footnote{17} By a similar token, the Brittonic property of having unpalatalized velars adjacent to front vowels was not reflected in Anglo-Saxon phonotactics. The evidence suggests that there was an early process of sound-substitution, thus $^v_k$ was palatalized and later assibilated, i.e. $^v_c$/$^v_r$ > $tj$.\footnote{18} This explanation of palatalization of Brittonic place-names upon assimilation seems the most likely scenario, especially given the narrow time-frame of Anglicization of large sweeps of present-day England during the fifth and sixth centuries.\footnote{19}

The evidence suggests that Siebs, Luick and Campbell were right to conclude that palatalization was a pre-Conquest phenomenon. Their judgement, however, was based primarily on the inference that the close similarities with Frisian bespoke a continental origin for English palatalization. Now the

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\footnote{16}{Here I follow the premises of dating sound change outlined by Theo Vennemann, who has drawn attention to the often overlooked fact that following a specific sound change a language may continue to adapt loanwords to its newly defined phonetic/phonological system. Such adaptations, or sound-substitutions, may continue for centuries after the sound change has taken effect, indicating that loanwords can be extremely precarious for dating sound changes. See further T. Vennemann, ‘Betrachtung zum Alter der Hochgermanischen Lautverschiebung’, Althochdeutsch, ed. R. Bergmann, H. Kolb and K. Matzel, 2 vols. (Heidelberg, 1987) I, 29–53, at 32.}

\footnote{17}{See further Jackson, Language and History, 556–57, and K. Cameron, ‘Eccles in English Place-names’, Christianity in Britain, 300–700, ed. M. W. Barley and R. P. C. Hanson (Leicester, 1968), 87–92.}

\footnote{18}{Support for later assimilation has also been argued for on the basis of English alliterations, for which see Minkova, Alliteration and Sound Change, Chapter 3.}

\footnote{19}{I should also point out that there is a further possible factor to consider, namely the possibility of Vulgar British Latin influence especially in southern lowland Britain which could have had the effect of palatalizing Brittonic place-name elements, such as $^v_klôd$ ‘forest’, before the advent of the Saxons. This possibility should not be ruled out. However, I doubt whether it would account for all the toponymic evidence, and we should not forget that there is evidence elsewhere for sound-substitution of Brittonic place-names in Pre-Old English. For a discussion of British Latin influence on Brittonic and Old English see P. Schrijver, ‘The Rise and Fall of British Latin: Evidence from English and Brittonic’, The Celtic Roots of English, ed. M. Filippula, J. Klemola and H. Pitkänen (Joensuu, 2002), 87–110, esp. 108.}
Palatalization of Velars

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If we can agree that palatalization of velars was a property of pre-Conquest Anglo-Saxon dialects and that the homeland of the Anglo-Saxons was northern Germany and parts of Denmark, i.e. close or adjacent to areas where Frisian is or was spoken, we may also like to conclude that palatalization was a shared areal feature of parts of West Germanic. From this prehistoric areal configuration, dialects other than Old English and Old Frisian have later emerged. It is well-known that there is sporadic evidence of palatalized velars in Old Dutch and Middle Dutch which has been ascribed to a prehistoric substrate language usually designated as Ingvaeonic or Frisian. Secondly, there is sporadic orthographic evidence for palatalization in Old Saxon, which, as a close ancestor to Anglo-Saxon, is perhaps hardly surprising. Yet due to the subsequent Franconicization of Old Dutch and the High German influence, especially since the eighth century, on Old Saxon, these dialects are less useful for the present enquiry. This leaves only Old English and Old Frisian, and in this narrower sense the term Anglo-Frisian is often understood.

Assuming, then, that palatalization of velars was an areal feature shared by varieties of Germanic spoken along a large stretch of land in the proximity the North Sea Coast, it seems reasonable to ask how this shared feature originated, such as whether it developed in one or more areas before spreading to other dialects, whether it reflects an archaism lost in other dia-

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21 The designation of this substrate has been influenced by personal ideologies in the past, see E. Hoekstra, ‘K. H. Heeroma: strider en tsjûger foar it ABN. Oer de gearhing tusken taalkunde, taalpolityk en nasjonale identiteit’, UW 44 (1995), 51–68.
22 For a detailed survey of the evidence, see S. Krogh, Die Stellung des Altsächsischen im Rahmen der germanischen Sprachen (Göttingen, 1996), 203–13. Briefly, Krogh thinks that a connection between palatalization in Old Dutch and that in Old English and Old Frisian is possible. However, Krogh rejects a connection with Old Saxon because of evidence for palatalization of velars before front vowels resulting from i-umlaut. Krogh is right to notice this difference, but it does not eliminate the possibility that palatalization of velars initiated before Old Saxon i-umlaut. Due to the scanty data supplied by Old and Middle Dutch, as well as Modern Dutch dialects, the relative chronology of palatalization and i-umlaut cannot be established here.
lects, or whether it developed by some form of prehistoric language contact (e.g. with Vulgar Latin), to name but a few possibilities. Unfortunately nobody knows. But one way of assessing the validity of a shared prehistoric change has been to consider questions of relative chronology. If a single coherent Anglo-Frisian chronology cannot be developed, then it can be argued that Old English and Old Frisian were two separate dialects at the time of palatalization rather than a single language. In this sense, Hogg, Stiles and Nielsen have argued (see note 3) that palatalization was an independent development in Old English and Old Frisian.

However, Robert Fulk has shown that if we look at Anglo-Saxon through the same chronological spectacles as we do Anglo-Frisian, then we are forced to conclude that palatalization was an independent change in Old English too.\(^{23}\) Suffice it to say that two dialects or varieties can share a linguistic development yet variation as well. Another aspect to consider when deducing a relative chronology is that palatalization can have a long life span. Already Campbell described how sensitivity of \(k\) and \(g\) "continued through the periods of Anglo-Frisian fronting, breaking, and retraction before consonant groups and before back vowels".\(^{24}\) Although there is disagreement about which changes did take place while palatalization as a development was active, the fact that palatalization can straddle other sound changes in a relative chronology complicates any analysis and must be taken into consideration. This problem is particularly well known in Frisian studies because, despite the fact that palatalization of velars had been phonologized at the latest after \(i\)-umlaut, a second process of palatalization and assimilation of \(k\) (as well as \(t\) and \(d\)) re-occurred in West Frisian dialects in about the fifteenth century.\(^{25}\) Therefore, it is with these considerations in mind that the following four chronological issues should be addressed.

### 4.1 Breaking and palatal diphthongization

Since there is general agreement that the sound-change known as breaking was independent in both Old English and Old Frisian,\(^{26}\) all phonological processes which postdate breaking must be independent in both English and

\(^{23}\) Cp. Fulk, ‘The Chronology’, 141: ‘The Old English dialects themselves show a similar divergence at an early date. When WGmc \(\ddot{a}\) was fronted [...], it presumably developed first to \(\dddot{a}\), which remains in West Saxon, but then changed further to \(\dddot{e}\) in other Old English dialects as well as in Old Frisian. The raising of \(\dddot{e}\) to \(\ddot{e}\) must have taken place quite early in Old English, since it precedes breaking, as demonstrated by forms like Kentish \(n\ddot{e}or\) “nearer” and Mercian \(n\ddot{e}ol\ddot{h}\ddot{e}\ddot{c\text{c}}\) “approach” and \(n\ddot{e}ow\ddot{e}st\) “vicinity”.

\(^{24}\) Campbell, *Old English Grammar*, §426.


Frisian. In this vein, Patrick Stiles has argued that Old English breaking ‘is demonstrably earlier than palatalization as a phonemic change’, and draws into consideration ‘WGmc. *kerl (cf. G Kerl), which yields OE *ceorl ‘churl’ by breaking, NOT †čierl by palatal diphthongization, a change clearly dependent on the prior existence of palatalization.’\textsuperscript{27} Stiles’ wording is noteworthy: ‘palatalization as a phonemic change’, his intentional use of ‘phonemic’ would seem to indicate that palatalization as an allophonic change may have preceded breaking. But in fact Stiles is quite adamant that even phonetic palatalization cannot be ‘Anglo-Frisian’ when he later writes: ‘palatalization as merely a phonetic tendency cannot be pushed further back to an “Anglo-Frisian” stage’.\textsuperscript{28} Stiles provides, implicitly, two chronologies of sound change (1a–b), whereby only one can produce the desired outcome, namely (1a). But although the chronology given in (1a) will produce the desired Old English output *ceorl, whereas (1b) will not, it is possible to propose an alternative chronology that places palatalization before breaking (1c).

\begin{align*}
(1) & \\
\text{a. Input} & \text{*kerl} & \text{b. Input} & \text{*kerl} & \text{c. Input} & \text{*kerl} \\
\text{Breaking} & \text{*ceorl} & \text{Palataliz.} & \text{*čerl} & \text{Palataliz.} & \text{*čerl} \\
\text{Palataliz.} & \text{*ceorl} & \text{Palatal Diph.} & \text{*čierl} & \text{Breaking} & \text{*čierl} \\
\text{OE} & \text{ceorl} & \text{OE} & \text{čierl} & \text{OE} & \text{čierl}
\end{align*}

The problem with Stiles’ analysis is the assumption that palatal diphthongization must immediately follow or occur contemporaneously with palatalization,\textsuperscript{29} but there is no evidence to suggest this must have been the case. In fact there is more reason to believe that palatalization was not contemporaneous, since palatal diphthongization – in contrast to palatalization of velars – is not found in all Old English dialects.\textsuperscript{30} So while Stiles’ analysis shows convincingly that palatal diphthongization follows breaking, it does not prove that palatalization follows breaking either as a phonemic change or not.

\begin{footnotes}
\item[27] Stiles, ‘Remarks’, 194.
\item[28] Ibid, 196.
\item[29] Karl Luick estimated that palatalization of velars initiated at the end of the fourth or the beginning of the fifth century, and thought that palatal diphthongization probably immediately followed the change. But it is clear that he knows no proof that this must have been the case when he writes: ‘Die (ältere) Palataldiphthongierung hat sich wohl unmittelbar an diesen Wandel angeschlossen.’ See Luick, \textit{Historische Grammatik}, §291.
\item[30] It should be noted that palatal diphthongization, whatever its debated status as a sound change, occurred only in West Saxon and ‘North’ Northumbrian. But in the latter short *e was generally unaffected by it. Consequently, the example OE ceorl can serve as a test case for West Saxon dialects only.
\end{footnotes}
4.2 Breaking and palatalization of the voiceless fricative

Another argument in favour of the chronology breaking then palatalization is the evidence from breaking before *h (phonetically a velar or uvular fricative, [x] or [χ], in post-vocalic positions).\textsuperscript{31} The situation is summarized by Patrick Stiles as follows:\textsuperscript{32}

Phonetic palatalization of the velars in Old English led to a phonemic split in the case of the stops k and g and the voiced fricative ŋ\textsuperscript{5} [IPA [ŋ], SL]. It also affected the voiceless fricative h, although here it did not lead to a phonemic split (cf. Hogg 1992:§2.60 and references). However, because breaking only took place before velar consonants, the voiceless fricative h must have been unaffected by any phonetic palatalization in English at the time of the earlier change of breaking.

Stiles then cites the following data in favour of this argument:

- Pre-OE * wið > Breaking *wið > OE wēoh ‘idol’
- Pre-OE * nǣh > Breaking *nǣah > OE nēah ‘near’
- Pre-OE * hlæχχjan > Breaking *hlæχχjan > OE hlæchhan (with i-umlaut) ‘to laugh’

It seems logical then to place the palatalization of *h at the same time as k and g in the history of English. Consequently, breaking must surely have occurred before palatalization in order to yield the outcomes of breaking cited above. Fulk, however, has argued that ‘it is an unreliable assumption that because h was not palatalized in this word [i.e. Pre-OE *hlæhχjan ‘laugh’, SL] at this time, nor could other consonants have been palatalized.\textsuperscript{33}

If we look to Old Frisian, we find palatalization of *k and *g, yet the evidence for palatalization of h is ambiguous.\textsuperscript{34} One finds OFris siuht(h) ‘he

\begin{itemize}
  \item \textsuperscript{31} For a detailed discussion see Hogg, ‘Old English Palatalization’, 89–113.
  \item \textsuperscript{32} Stiles, ‘Remarks’, 196.
  \item \textsuperscript{33} Fulk, ‘The Chronology’, 145. Note that Bübring, \textit{Altenglisches Elementarbuch}, §§491–501, differentiates ‘Früh-urenglischen Palatalisierungen von ŋ, g, k, gg, kk’ from a later ‘urenglische’ palatalization of χ.
  \item \textsuperscript{34} Patrick Stiles (p.c.) points out to me that the voiceless fricative h seems to have been palatalized in Old Frisian when i stood in the next syllable, as indicated by the following words which failed to undergo breaking: OFris plicht ‘duty’(< *plih-ti-), OFris wiccht ‘weight’(< *wih-ti-), secht ‘illness’(< *suh-ti-). However, Boutkan explains these forms otherwise in ‘On Labial Mutation and Breaking’, 82–83 and fn. 39. Boutkan (\textit{ibid.}) maintains that *-xt- as well as *-xs- had a strong velar character, such that they ‘inhibited the fronting of PGmc *e to e, e.g. nacht “night”, achta “eight”, fax “hair”’. Further, he thinks that there was only breaking of *e (not *i), and that unrounding of i-umlauted *u to e postdated breaking in forms such as secht ‘illness’. In fact, breaking is attested in this
\end{itemize}
sees’ (< *sehip) vs. OFris leith, līth ‘he lies’ (< *legil) and OFris riucht, riocht ‘right’ (< *reht-) vs. OFris rein ‘rain’ (< *regna-). This situation has continued into Modern East Frisian and Standard West Frisian where x did not develop a palatal allophone [ç] before or after front vowels, while it has done so in some North Frisian dialects. The allophonic distribution /x ~ ç/ is quite common cross-linguistically. For example, it has developed in Standard German but not in Swiss German or Standard Dutch, it has evolved in the North Frisian dialects of Moring and Helgoland, but not in the East Frisian of Saterland or on Wangerooge (now extinct). Indeed, there seems to be no conclusive evidence that in pre-Old English the palatalization of *x and the velars *k and *g were parallel developments, instead of independent innovations, occurring perhaps several centuries apart, as in several Frisian dialects. Ultimately, the observation that the voiced velar fricative does palatalize, while its unvoiced (probably uvular) counterpart does not, explains the apparent mystery of why only the latter induces breaking in Old English, e.g. OE feohtan ‘fight’ (< *feht-) vs. OE segl (*segl-) ‘sail’.

4.3 Palatalization in Old English before (ea) (< Gmc *au)

A stronger argument that palatalization occurred independently, in the genealogical sense, in Old English and Old Frisian concerns the twofold development of *k before Gmc *au, which shows different reflexes in Old English and Old Frisian:38

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35 Examples mainly involve the cluster *xt, where *h may have had a strong velar character (see last note). In intervocalic positions and finally, *h was weakened and lost. Evidence for the palatalization of weakened *h seems to be OFris nēi, nēy (< Gmc *nēhōwō ‘nigh, near’). Cases of the intervocalic geminate -hh- followed by a front vowel are rare and almost confined to the Germanic etymon *blahjan ‘to laugh’. However, Old Frisian has only *hlakkia, which could reflect a unique change *-ff- -> (*-kk-?) -> -kk- (for other such problematic cases in Old English, see K. Brunner, Alteenglische Grammatik [Tübingen, 1965], §220, Anm.2). Alternatively, *hlakkia could go back to an unexplained variant pre-form, i.e. cognate with ON hlakka. Nevertheless, several Modern Frisian dialects do show reflexes of the etymon with a velar fricative, and some dialects have a palatal reflex [ç] (e.g. Sylt lachi) while others do not (e.g. Saterland laachje), see Siebs, ‘Geschichte der friesischen Sprache’, 1305.


37 See Hogg, ‘Old English Palatalization’, 96: ‘[W]e have not found any satisfactory solution to the problem of why [ɔ], unlike [x], did not cause breaking.’

The difference between OE *céapian* ‘to trade, buy’ (with palatalization) and OFris. *kapia* ‘to buy’ (without) – both ultimately derived from Lat. *caupo* ‘tavern-keeper; hawker’ – demonstrates that palatalization took place in each language after changes which are unique to it.

This assumption is linked to the development of the Germanic diphthong *au* and its connection with fronting of Gmc *a* yielding OE *ae* and OFris *e*. It is more economical if the development of Gmc *au* to OE *aeo*, and later *ea*, can be linked with a contemporaneous fronting of Gmc *a* > OE *ae* which also caused palatalization of preceding velars; otherwise two separate changes must be posited. By doing so, however, it seems that the fronting of Gmc *a* must also be seen as yet another coincidence common to Old English and Old Frisian, which is likewise uneconomical. At least four different ways around this issue have been proposed in the literature.

1) Karl Luick and, more recently, Kurt Goblirsch have argued that Gmc *a* was fronted contemporaneously in the diphthong *au* in Anglo-Frisian and thus the Germanic diphthong developed to *ea*, which was subsequently monophthongized to *ã* in Pre-Old Frisian.39 According to Goblirsch, the change *æa* > *ã* resulted from *Akzentumsprung* (presumably, velar palatalizations in Frisian were then lost in the process). *Akzentumsprung* must then have been very early, however. Based on onomastic material, Maurits Gysse-ling has argued that Frisian monophthongization of *au* to *ã* can be dated to the eighth century on the basis of place-name evidence.40 But runic evidence, notably the *skanomodu* inscription (*skaun* ‘beautiful’), if it is Frisian, might suggest an even earlier date for monophthongization, around the sixth century.

2) Robert Fulk has offered a slightly different proposal to that of Luick and Goblirsch. He thinks that Gmc *a* was fronted contemporaneously in the diphthong *au* (as well as the diphthong *ai*) and that all three induced palatalizations in Anglo-Frisian. However, Fulk believes that the resulting diphthong *æu* changed back to *au* (not *ã*, which arose later still) in Pre-Old Frisian which caused depalatalization of preceding velars before assimilation took place, i.e. Anglo-Fris *kau-* > *çau-* yielded: (1) OE *twa-*, but (2)

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> PreOFris *kau-* > OFris kā-. But Kortlandt has criticized Fulk’s proposal, since it relies on pendulum-developments which, though not impossible, are uneconomical. Thus, leaving aside the complex issue of the development of Gmc *ai, which Fulk does not elaborate upon in detail, he must posit at least three stages of development for Old Frisian (*au > *æu > *au > OFris ā), whereas Luick and Goblirsch’s proposal has the merit of needing only two (*au > *æa > OFris ā).

3) Raymond Page has argued that Gmc *au developed to *ā not only in Old Frisian but also in earliest Old English before a development of raising and diphthongization before the earliest Old English texts (apparently the resulting *ā must have been somehow distinct from *ā < Gmc *ai). As such, the putative Old English diphthongization of *ā could be compared to a similar process which affected West Frisian after the Middle Ages (OFris ā > ModWFr is ea).

4) Finally, some scholars have argued that Gmc *au was not subject to fronting in Old English until quite late. By assuming that fronting of *au was a later Anglo-Saxon development, which subsequently induced palatalization of preceding velars, the idea of an earlier Anglo-Frisian palatalization of velars need not be dismissed. For instance, Yakov Krupatkin has presumed that the development *au > āa was part of a general Old English development of the Germanic diphthongs in -u which became incorporated into the long vowel system as front-back phonemes, i.e. the Old English high vowels ā and ā had a diphthongal counterpart īu, the mid vowels ē and ē, and the low vowels ār and ā, āa. By this interpretation, the change *au > āa was not dependent on fronting of short *a at all.

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Thus, in addition to the traditional interpretation of the Germanic diphthong *au in Old English and Old Frisian as favoured by Stiles, we find several quite different, competing proposals – the most likely of which seem to be (1) and (4), which are perhaps not mutually exclusive if (4) preceded (1). Undoubtedly, the development of the *au is the core problem for the interpretation of the Anglo-Frisian subgrouping, and its interpretation remains very much a subjective one.

4.4 Different conditioning factors

Stiles has pointed out that the conditioning factors for palatalization in Old English and Old Frisian were different, noting contrasting reflexes of the voiceless velar: OFris tser(e)ke ‘church’, dihk ‘ditch’, rikh(e) ‘rich’ against OE čirice, dēċ, rīče with palatalization.46 Both languages agree in evidencing palatalization before front vowels word initially, but differ mediially and word finally.

The first difference is that only Old English palatalizes *k after *i (and less regularly other front vowels) in absolute final position. It seems likely, however, that, while *k was palatalized after *i in all Old English dialects, it never resulted in assimilation in this position in Northumbria and parts of Mercia.47 Of the few examples where it can be proven that palatalization of *k was due to preceding long or short *i, e.g. iēc ‘I’, dēc ‘ditch’, īc ‘lich, corpse’, wiċ ‘-wich’, piēc ‘pitch’, swiliċ ‘such’, hwaliċ ‘which’, all are unassibilated at least in northern English dialects, but also in parts of the Midlands and East Anglia in Middle English and Modern English dialects. This lack of assimilation has been accounted for in different ways: 1. Due to frication of final *-k under weak stress; 2. Analogical levelling in the paradigm, e.g. dič ~ dicas ‘ditch, dike’ with a northern preference for the un-palatalized variant (in contrast to the South, which preferred the assibilated...

46 Stiles, ‘Remarks’, 195–96. Note, however, that palatalization is attested in OFris rīze nt. ‘riches, property’, see De Tweede Emsinger Codex, ed. K. Fokkema, OTR 7 (The Hague, 1953), at 19, line 56. For this information, I am indebted to Anne Popkema. The Oxford English Dictionary (<www.oed.com>, accessed 16 June 2006) remarks that ‘In ME. the use of the word may have been reinforced by F. riche (= Sp. rico, It. rico), itself of Teut. origin. This would help to explain the early disappearance of the northern form rike.’

47 Palatalization did occur in Northumbrian, as is clear from runic evidence, but not assimilation. For the runic evidence see C. Ball, ‘Inconsistencies in the Main Runic Inscriptions on the Ruthwell Cross’, Old English Runes, ed. Bammesberger, 107–23, at 117—19.

48 The idea that English dike is an Old Norse loan and that English ditch is of native stock has been questioned in H. Ramisch, ‘Re-examining the Influence of Scandinavian on English: the Case of ditch/dike’, Language History and Linguistic Modelling [= Festschrift Fisiak], ed. R. Hickey and S. Puppel, 2 vols. (Berlin, 1997) 1, 561–69.
variant); 3. Scandinavian influence. What this all boils down to is the conjecture that the process of k-assibilation must have been the same across all Old English dialects. But it seems equally possible that, like in Frisian, *k was only assibilated before front vowels in northern dialects of English.

Basing his arguments on place-name evidence, and apparently without knowledge of the Frisian parallels, John Watson also came to similar conclusions with regard to the lack of assibilation of *k in Northumbrian English in absolute final position after front vowels:

In Northumbrian Old English, the phoneme ṣ did not, in general, occur [in final position] at all. However, [...] the disappearance of final -i after a long syllable caused an originally medial ṣ to stand in final position. Cf. the Lindisfarne form bēc ‘book’ dat.sg. < *bōki (John 20.30).

Watson’s article is sometimes mentioned briefly in reference grammars, but is brushed aside with passing reference to Olga Gevenich’s monograph on the palatalization of *k in English place-names. Gevenich argued, namely, that palatalization was a general Old English change, and that the lack palatalization in the North is due almost exclusively to Scandinavian influence. What the grammars do not seem to appreciate is that Watson never questioned the fact that velar palatalization occurred in all Old English dialects, but argued that the outcomes of it were not always the same.

The only paper which does attempt to reject Watsons thesis on the basis of actual data is that of Tae-Yong Pak. In this paper, Pak is able to cite a few place-names which do in fact display palatalization of absolute final *k: Prestwich, Horwich, Reddish. But all of these toponyms are located in Southern Lancashire, and thus out of the Northumbrian region proper, which ought to be located approximately to the north of the River Lune (or, perhaps, the Ribble) in the west. The one other apparent example cited by Pak

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49 See Hogg, A Grammar of Old English, 7.52, 7.41, 7.42, with references.
52 Some aspects of this one-sided approach have been criticized in a review by E. Ekwall, Anglia Beiblatt 30 (1919), 221–28, and by George van Langenhove, ‘The Assibilation of Palatal Stops in Old English’, A Grammatical Miscellany Offered to Otto Jespersen on his 70th Birthday, ed. N. Børgholm, A. Brusendorff and C. A. Bodelsen (Copenhagen, 1930), 69–75.
54 Ibid. 56, 58.
is Lintz in County Durham, which is thought to derive from OE hlinc ‘a rising ground, ridge’. But this isolated example is quite dubious on account of its usual interpretation as a Normanized spelling pronunciation /ts/, which continues to this day. In other words, the one suspect Northumbrian example of suggested progressive palatalization of *k unearthed by Pak only serves to bolster Watson’s analysis.

The second locus of variation between Old English and Old Frisian is in medial position. Medial position includes, however, a large number of Old English etyma which seemingly display palatalization in final position too, due to syncopation of a following *i or *j (i.e. different from ič ‘I’, dīċ ‘ditch’, piċ ‘pitch’ etc., where *k was never followed by *i or *j). Typical examples are from the ja(n)-stems (e.g. lāċe ‘physician’, mēċe ‘sword’, rīċe ‘kingdom’, gefylēc ‘troop’, flīċeō ‘flitch’, styēcē ‘piece’, mērēcē ‘smalage’, wrecēc ‘wretch’; weċōg ‘wedge’, hryēcō ‘ridge’) and jō(n)-stems (e.g. wičēc ‘witch’, biercē ‘birch’, sācēc ‘strife’, spēcēc ‘speech’, cryēcō ‘crutch’; brucēc ‘bridge’, eċōg ‘edge’, hecēg ‘hedge’, mycēg ‘midge’, seċōg ‘sedge’). Such words – in particular those with geminate consonants resulting from West Germanic Gemination after a short root vowel – have reflexes with and without assimilation in the English dialects. The variation is often accounted for by Scandinavian influence. But a problem with appealing solely to Scandinavian influence is that the non-palatalized forms occur in English dialects outside the main sphere of Scandinavian influence, such as in Rutland, Bedfordshire, Warwickshire, Worcestershire, Gloucestershire, Buckinghamshire, Herefordshire, Oxfordshire, Wiltshire, Somerset and Dorset.

In light of the above facts, Karl Luick’s proposal which focuses on the alternations of palatalized and non-palatalized forms in the paradigms of nouns offers the best solution. Once *j was lost, the palatalized consonant would have fallen in contact with either a following front or back vowel, depending on number and case. The general tendency is that front vowels are found in the singular and back vowels, the plural. It is possible, then, that either palatalized (later assibilated) consonants were generalized throughout the paradigm, or that non-palatalized velars were generalized. Luick points out that some nouns were especially prone to appear in the plural and are
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Stiles attaches special attention to the bird-name ‘lark’, which displays no palatalization in English but does in Frisian. However, most Old English scholars would assume that this ēn-stem noun did have palatalization in two out of its eight case forms in Old English, and that the palatalized forms were levelled out in early Middle English. Among the numerous spellings of this etymologically obscure word, three examples apparently showing palatalization are attested in early Middle English, namely lauerche, Lauerchfeld, Liurochebere. See The Middle English Dictionary, ed. H. Kurath, S. Kuhn and R. Lewis (Ann Arbor, MI, 1952–2001), s.v. larke. In Stiles’ defence, however, it must be admitted that (ch)-spellings for k are quite common in early medieval documents. Indeed (ch) is the rule before e and i in the Domesday Book (though the attestations given here do not stem from this source). For a discussion of the Frisian forms see N. R. Århammar, ‘Die Lerche (Alauda) im Friesischen: ein Beitrag zum Atlas Linguarum Europae. Über Inlautassibilierung, unregelmäßige Lautentwicklung und “Lehnlautungen”’, Miscellanea Frisica: A New Collection of Frisian Studies [= Festschrift Miedema], ed. N. R. Århammar et al. (Assen, 1984), 137–52.

Such an explanation would account not only for the variation in English but also, sporadically, in Old Frisian too, e.g.wigge vs. widze ‘horse’ (< Gmc *wegja-), riče vs. rīze ‘rich(es)’ (< Gmc *rīkjja-), wreke vs. wretse ‘revenge’ (<Gmc *wrakja-), breke vs. bretse ‘breach, infringement’ (<Gmc *brukja-), egge vs. edze ‘edge’ (<Gmc *egjō>).

Thus, the conditioning factors for palatalization in Old Frisian and Old English are very similar, one difference being that in West Saxon dialects assimilation of *k occurred not only before front vowels but also after them.

5. CONCLUSION

Palatalization of velars is probably the most striking phonological parallel of Old English and Old Frisian. Some scholars have argued that palatalization had shared Anglo-Frisian origins, others think it arose in both languages independently. In order to make headway in the debate, the absolute and relative chronology of palatalization must be worked out in more detail. Based on our present understanding of the chronology of the Anglo-Saxon settlement of England, and the evidence for palatalization in British Celtic place-name elements, palatalization of velars must have been active as a sound change at least until the early seventh century, i.e. later than the date of i-umlaut which, according to current estimations, took place no later than the sixth century. However, I have argued that palatalization started before i-umlaut and continued after it, too, namely by a form of sound-substitution. Significantly, my conclusions support those of earlier scholars who asserted that palatalization had initiated before the Anglo-Saxon settlement of Britain. In testing whether palatalization was a shared Anglo-Frisian development, further attention must be placed on the relative chronology of the change. If a shared coherent relative chronology cannot be developed for Old English
and Old Frisian up to palatalization of velars, then, it is argued, palatalization must have arisen independently in both languages. Four arguments have been used to demonstrate that palatalization was, genealogically speaking, an independent development of Pre-Old English and Pre-Old Frisian. Upon a closer analysis of the facts, three out of four of these arguments do not stand up to scrutiny. Arguments based on palatal diphthongization (4.1) are weak, as it was a later development of certain Old English dialects and thus must be differentiated from an earlier process of velar palatalization which is found in all Old English dialects. The idea that the voiceless velar fricative ought to have undergone the same process of palatalization as *-k(k)- and *-g(g)- is contradicted by the Frisian evidence (4.2). Stiles’ grounds for supposing that there were different conditioning factors for palatalization in Old English and Old Frisian are without foundation. Rather there are different later outcomes of palatalization in specific dialects (4.4). Further, Luick’s idea that there were different outcomes of palatalization due to paradigmatic levelling is essentially proved by the Frisian data which, in turn, are confirmed by the English. However, one argument – the development of Gmc *au, which allowed for palatalization in Old English but not in Old Frisian (4.3) – remains open to different interpretations, and thus leaves some room open for future debate. Above all, my discussion has shown that after so many decades the findings of Siebs, Luick and Campbell still can stand a critical test.