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Old High German and Gothic Breaking: A Comparative Study

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OLD HIGH GERMAN AND GOTHIC BREAKING: A COMPARATIVE STUDY

by

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ABSTRACT

This thesis is intended to be a comparative study of Old High German and Gothic breaking. The process of breaking is unique in both Old High German and Gothic compared to the other Germanic languages in that it does not result in diphthongization, but rather the raising and lowering of accented vowels. The intent is to integrate research detailing the process of breaking in Old High German and Gothic in order to better understand how it may be related in both languages. The issue of the Gothic digraphs and the debate over their phonemic values will also be explored, namely whether they represent monophthongs or diphthongs, an issue which is directly connected to our understanding of Gothic breaking. This will be followed by a look at the development of Germanic *e*, *i* *u*, the main vowels involved in breaking. Lastly, this paper will examine the role of consonants, particularly *r*, *h*, *hw*, and how they behave differently in Old High German vs. Gothic breaking.

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CHAPTER 1

INTRODUCTION

This paper is intended to be a comparative study of Old High German and Gothic breaking. Both Old High German and Gothic share similarities in the process of breaking that set them apart from the other Germanic Languages, namely the raising and lowering of vowels in lieu of diphthongization. Despite these similarities, there is, to the best of my knowledge, no literature that has sought to connect the two. One must be aware when researching this topic that it is difficult to develop a clear picture of the process and provide definitive answers. This is largely due to problems with dating, the unreliability of reconstructed proto-languages, and the fact that breaking has been confused with, and/or obscured by, other sound changes. There is also the issue of phonological changes not necessarily being reflected in the orthography of a language, a problem that is most obvious in regard to the Gothic digraphs. As such, the goal here is to wade through the deep and murky waters of Old High German and Gothic breaking and provide a side by side look at the two in order to gain a better understanding of both, as well as facilitate further research on the topic.

The term breaking (NHG *Brechung*) was coined by Jakob Grimm (Braune-Eggers 1987: 56) and is a process of diphthongization in which a monophthong breaks into ‘two parts,’ thus becoming a diphthong. In Old English, breaking resulted in the diphthongization of the short front vowels, *i, e, æ* > *iu, eo, ea*, before certain consonants,

while in Old Norse, Germanic short *e* became *ja* or *jǫ* before *au*. However, the phenomenon of ‘breaking’ in Old High German and Gothic rather mysteriously refers to a seemingly different process, one of raising and lowering as opposed to diphthongization. In both cases, there is what appears to be a conditioned sound change in which the vowel in the accented syllable mutates under the influence of either a vowel in the following unaccented syllable or a consonant directly following the accented vowel. In Old High German, accented high vowels are lowered before unaccented low vowels and accented low vowels are raised before unaccented high vowels, whereas in Gothic, accented high vowels are lowered before certain consonants. Although Old High German and Gothic shared some similarities with Old English and Old Norse in regard to the environment in which the process took place, the end results were quite different.

CHAPTER 2

OLD HIGH GERMAN BREAKING

During the Old High German period (500 C.E. – 1050 C.E.) vowels in accented syllables were ‘broken’, whereby they assimilated to the height of the vowel in the following unaccented syllable by either lowering or, in some cases, raising. Adolf Holtzmann called this change *a*-umlaut (Braune—Eggers 1987: 56), which specifically refers to the lowering of *i* and *u* before *a*, and believed it was older than both *i*- and *u*-umlaut (Collitz 1905: 66). Umlaut is generally considered to be an issue of fronting and not an issue of height. In German, umlaut specifically refers to *i*-umlaut which is a conditioned sound change in which the vowels *a*, *o*, *u* become fronted to *e*, *ø*, *y* before *i*. However, during Old High German Primary Umlaut of *a*, the vowel not only fronted but also raised slightly in the process of becoming *ä*. As such, it is understandable that Holtzman would prefer the term umlaut over breaking, especially considering the absence of diphthongization.

One of the difficulties with researching Old High German breaking is that the process is highly inconsistent and irregular. Breaking does not always occur where expected, and it is seemingly unstable, with a tendency for the resulting vowel to switch back and forth or the change to reverse entirely. For this reason, some scholars posit that breaking only occurred in certain dialects (Lloyd 1966: 738). Dialect variation, as well as

analogy, may certainly play a part in the confusion which has obscured many of the changes that occurred during Old High German breaking. There is a possibility that multiple changes or unrelated phenomena have been conflated and erroneously grouped together under the label of a single sound change. A number of scholars believe that either part (generally the raising of $e > i$) or all of the process actually occurred during the Common Germanic period. The argument of periodization will be addressed further in section 6, along with a more in depth look at the development of the Germanic vowels i , u , e , and the various arguments surrounding their development.

2.1. Breaking Before Vowels

The process of breaking before vowels is, at this point, fairly straight forward. The most common change in Old High German breaking is the assimilation of the high vowels i and u to the height of the low and mid vowels a , e , and o : OHG *behhari* < Lat. *bicarium* (NHG *Becher*, Eng. *cup*) and OHG *joh* < Gmc. **iukam* (NHG *und*, Eng. *and*). This same sound change, the lowering of i and u , is also found in Gothic but under different circumstances. Braune (1987: 56) noted that there also appears to have been lowering of Gmc. /eu/ to OHG /eo/ before a , e , o . According to Hirt (1931: 47) breaking also occurs in three syllable words such as OHG *biris* < Gmc *beresi* and OHG *birrt* < Gmc. *bereti*, in which the vowel in the middle syllable presumably broke first and influenced the vowel in the first syllable.

The situation becomes slightly less straight forward with the addition of raising, which does not take place in Gothic. It was originally thought that only lowering of the high vowels occurred during Old High German breaking; however, evidence of the raising of Gmc. $e > i$ was discovered at a later date (Braune—Eggers 1987: 56). In these

cases, the resulting *i* is believed to have eventually merged with original Germanic *i*. The following Old High German verb forms show the raising of $e > i$ in the 2nd and 3rd person singular: *neman*, *nimis*, *nimit* (NHG *nehmen*, Eng. *take*) and *geban*, *gibis*, *gibit* (NHG *geben*, Eng. *give*). The conditioning factor has since been lost in the modern forms, *nimmst*, *nimmt* and *gibst*, *gibt*, yet the mutation remains. It is the raising of $e > i$ that is most commonly believed to have taken place in Common Germanic and was either inactive or no longer entirely active during the Old High German period, hence its late discovery.

Raising complicates the situation due to uncertainty concerning whether the original unaccented vowel, as inherited from Common Germanic, was *i* or *e*. The *e* in *neman* and *geban* is often presented as having raised to *i* as shown above; however, the Gothic forms *niman* and *giban* both show *i* in the infinitive forms (see section 4.1). This leads to the question of whether or not raising took place in the Old High German forms or if *i* actually lowered before *a* in the infinitive. The situation is further complicated by analogy and the weakening and/or loss of the unaccented vowel. According to Baesecke (1918: 32), the *i* in the 1st person singular *giba* exists via analogy from the 3rd person singular *gibit*. However, Old High German also has the 1st person singular form *gibu*, and the *a* in *giba* is likely due to weakening of the vowel in the unaccented syllable which eventually became a schwa, note the modern form *gebe*. The *i* in *gibu/giba* is either a raising of *e* before the high vowel *u* or it is the original preserved vowel that eventually lowered as the unaccented vowel weakened. Bach (1965: 53) provided support for the raising of *e* with Lat. *neptis* > OHG *nift* (from the diminutive form *niftila*, NHG *Nichte*), and states the same forms showing $e > i$ can be found in Old Frisian and Anglo-Saxon.

Hirt (1931: 48) also cited OHG *juchīdi* vs. Go *awēpi* stating that $e > i$ due to following *i* was probable. Less complicated is the question of the raising of /o/ > /u/, which does not appear to have taken place at all (Baesecke 1918: 32).

2.2 Breaking Before Consonants

Consonants also played a part in Old High German breaking. In most cases, the process is either hindered to varying degrees or blocked completely. As a result, examples of breaking before consonants tend to be sporadic. The following are examples of $i > e$ and $e > i$ before a low and high vowel, despite an intervening *r*: OHG *wer* < Gmc. **uiraz* (NHG *wir*, Eng. *we*), OHG *widarbergi* – *widarbirgi* (NHG *steil*, Eng. *steep*). Breaking before *r* and *h* is often compared to Old High German Primary Umlaut in which the fronting (and slight raising) of *a* was blocked by those same consonants. Baesecke (1918: 29) believed that breaking was a more ‘durable’ (what he refers to as *a*-Haltigkeit) sound change than *i*-umlaut, implying that *a* exerted greater influence on the accented vowel than *i*. Breaking is also hindered before weak consonants and the sonorants *n*, *m*, and *l*. According to Baesecke (1918: 29), the majority of Old High German breaking takes place primarily before voiceless and geminate consonants. Lowering is completely blocked before a nasal + consonant as shown in the oft-cited example OHG *bundum* - *gibundan* (NHG *binden*; Eng. *bind*), although, as mentioned below, there is not complete consensus.

Raising once again complicates the matter as *e* could apparently raise to *i* even before a nasal + consonant. Hirt (1931: 49) argued that OHG *bintan* and its inflected forms, *bundum* (3rd person plural) and *gibundan* (past participle), are actually proof of raising before a nasal + consonant. It should, however, be noted that the accented vowel

in OHG *bintan* is also in agreement with Gothic and Old English which share the same form, *bindan*. In this case, *i* appears to have been the original vowel. Although, this does not rule out raising if it were to have taken place in Common Germanic. In addition to the argument of raising and lowering before certain consonants, there are examples of what appear to be breaking triggered by *r* and *h*, i.e., consonantism instead of vocalism.

Examples such as OHG *truhtin* - *trohtin* (NHG *Herr*, *Gott*; Eng. *lord*, *God*) appear to show the lowering of *u* before *h*, similar to Gothic, despite the high vowel in the unaccented syllable. Baesecke (1918: 29) noted that there are also signs of influence from *r* and *h* in Anglo-Saxon breaking.

2.3 Orthographic Evidence

Breaking is generally considered to have been an active sound change during the Old High German period due to various attestations which seem to show breaking in progress. It is not uncommon in older German manuscripts to find alternate spellings in which the same words sometimes appear with <e> and sometimes with <i>. This has also led some scholars to posit that the change was unstable and *e* - *i*, *u* - *o* had a tendency to switch back forth and even reverse in some cases: OHG *eʒʒan* > MHG *iʒʒe* > NHG *esse* (1st person singular of NHG *essen*, Eng. *eat*) (Moser 1965: 179). There are also some instances where we find *i* in the same environment where we would expect to find *e*. However, the possibility that these inconsistencies are due to analogy, which commonly takes place in verb paradigms, cannot be ruled out. However, as was mentioned in section 2.1 with the example *gibu/giba*, there are difficulties with separating analogy from breaking, especially when there is uncertainty surrounding the original vowel.

The main issue here is that the sound change cannot be dated much further back than the 9th century (around time of Charlemagne) and no earlier than the mid to late 8th century (Baesecke 1918: 30). Therefore, it is not possible to discern exactly when the process began, what changes had already taken place prior to the Old High German period, and what has since been obscured by analogy. Some variations in spelling may also be due to dialect variation. Baesecke (1918: 31) theorized that *i* and *e* may have been pronounced closer together in Low German while *i* was pronounced lower in Middle and South German. He believed this could explain some variant forms, such as, *Segi-* and *Sigi-*, *Fredu-* and *Fridu* (Baesecke 1918: 31). Essentially, /i/, and possibly both /i/ and /e/ in the case of Low German, deviated enough from its center of gravity encroaching on /e/ and resulting in confusion between the two phonemes.

CHAPTER 3

THE ISSUE OF ORTHOGRAPHY AND GOTHIC BREAKING

In contrast to Gothic, there tends to be, in general, more to say regarding Old High German breaking due to the controversies surrounding its erratic nature. However, while the actual process of breaking may appear more stable in Gothic, one can hardly discuss Gothic breaking in depth without also discussing the Gothic digraphs *ai* and *au*. In his translation of the Bible from Greek into Gothic, Wulfila's use of the digraphs has drawn much debate concerning their intended phonemic values. Using comparisons between Gothic and other Indo-European languages as well as the Gothic spellings of Greek loanwords (Wright 1954: 7), 19th century linguistics determined that the digraphs were meant to represent three different sounds, long and short monophthongs on the one hand and diphthongs on the other. Wulfila himself, however, never made any distinction between these sounds in his translation, and it was only in the 19th century that Jakob Grimm began the practice of distinguishing between the two sets (Prokosch 1939: 105). A breakdown of the digraphs and the manner in which they are marked for distinction is given below and taken from Wright's *Grammar of the Gothic Language* (1954: 8).

1. *ai* was a long monophthong similar to a long open *e*. It appeared in only a few words in which it preceded a vowel, such as, *saian*.
2. *ai* was a short monophthong similar to an open *e*. It appeared before the consonants *r*, *h*, and *hw*: *airþa* and *baíran*. There were a few exceptions where it appeared in other environments, such as, *aiþþáu*, and possibly *waila*.

3. *ái* was a diphthong similar to New High German /ai/.
4. *au* was a long monophthong similar to a long open *o*. It appeared only in a few words in which it preceded a vowel: *trauan* and *bauan*.
5. *aú* was a short monophthong similar to an open *o*. It only appeared before the consonants *r* and *h*: *haúrn* and *dauhtar*.
6. *áu* was a diphthong similar to New High German /au/.

The debate concerning the Gothic digraphs is of some importance in regard to Gothic breaking, as whether or not the digraphs are viewed as monophthongs, diphthongs, or both, affects our understanding of the entire process. The belief that *r*, *h*, and *hw* caused monophthongization or prevented diphthongization is inextricably linked to the commonly held view that these consonants caused *i* and *u* to lower (Prokosch 1939: 114). The following are examples of Gothic breaking in words featuring the digraphs *ái* and *aú*.

Gmc. **biran-* > Go. *baíran* Gmc. **wurd-* > Go. *waúrd*
 Gmc. **sihwan-* > Go. *saihwan* Gmc. **duht-* > Go. *dauhtar*
 Gmc. **tihun-* > Go. *taihun*

The above distinctions were widely accepted throughout the 19th century, not receiving more critical treatment until the 20th century (d'Alquen 1974: 19). The fact that the digraphs were unmarked in the original text would become one of the leading arguments amongst scholars as to the true phonemic nature *ai* and *au* and whether or not Wulfila used the digraphs to represent both monophthongs and diphthongs or monophthongs only.

3.1 The Digraph Debate: Monophthongs vs. Diphthongs

If considered diphthongs, *ai* and *au* were falling diphthongs with stress being on the first element. Hirt (1931: 39) was of the opinion that *ai* and *au* have always represented monophthongs in all environments. Prokosch (1939: 105) disagreed, believing it to be a matter of chronology, an opinion that seems to be widely held. The idea that the diphthongs never existed in Gothic seems unlikely based on Indo-European reconstructions showing that diphthongs were most likely inherited into Gothic from Common Germanic. According to Prokosch (1939: 96), the Indo-European long vowels *ā*, *ē*, *ō* and schwa *a* combined with glides, either *i* or *u* in semi-vocalic function, to form diphthongs. Krahe (1967: 33-34) provided the below examples supporting *ái* and *áu* as diphthongs inherited from the original Indo-European diphthongs.

IE **ai* = Gmc. and Go. *ai* (OHG *ei*), Gmc. **qaiqos* > Go. *haihs*

IE **au* = Gmc. and Go. *au* (OHG *ou*), Gmc. **aug-* > Go. *aukan*

IE **ou* = Go. *au* (OHG *ou*), Gmc. **roudhos* > Go. *rauþs*

Krahe (1967: 34) theorized that (during the Gothic period, presumably) the long diphthongs collapsed with short diphthongs upon shortening of the first element or became long monophthongs upon weakening of the second element. Prokosch (1939: 105) believed that *ai* and *au* had already become monophthongs by Wulfila's time with only traces of the original diphthongs being reflected in the quantity of the vowels, long for original diphthongs and short for original monophthongs. While many agree with Prokosch that it is a matter of chronology, there is less agreement as to exactly when monophthongization took place, whether it occurred before, during, or after Wulfila's time.

A substantial portion of the evidence used to support Wulfila's use of *ai* and *au* as diphthongs in certain environments is based on the comparative method. According to d'Alquen (1974: 21), looking at the comparisons between Gothic and the other Germanic languages [ɑi] and [ɑu] are what we would expect to find as only Old Saxon consistently shows monophthongs. The problem seems to be that the comparative method in this case does not hold up to scrutiny. While on the surface the below examples seem to point favorably towards diphthongs, if the phonemic values of the digraphs *ai* and *au* are called into question then the scales are tipped in favor of monophthongs. At the very least, the comparative method only points to the existence of diphthongs in Proto-Germanic and their preservation in Old Norse and Old High German, but not necessarily in Gothic (Marchand 1973: 83).

Go. <i>ains</i> 'one'	ON <i>einn</i>	Gmc. * <i>ain-</i>
	OE <i>ān</i>	
	OS <i>ēn</i>	
	OHG <i>ein</i>	
Go. <i>augo</i> 'eye'	ON <i>auga</i>	Gmc. * <i>aug-</i>
	OE <i>eage</i>	
	OS <i>ōga</i>	
	OHG <i>ouga</i>	

Some of the main arguments in favor of diphthongs have been compiled by d'Alquen:

1. Some Latin spellings for Gothic names show diphthongs, such as, *Gaisericus* (d'Alquen 1974: 22). However, this is somewhat contested as alternative spellings with *e* have also been found.
2. The Latin poem “*de conviviiis barbaris*” from the 6th century contains some Gothic. Apparently, the *eils* being based on *hails* must be a diphthong in order for the meter to work. Although the possibility of it simply being bad poetry cannot be dismissed (d'Alquen 1974: 22).
3. Some scholars find the Greek model of *ai* as [ɛ:] to be questionable. According to d'Alquen (1974: 25), it is unnecessarily complex to represent a monophthong using the digraph *ai*.
4. There are discrepancies between the original source of *ai* and *au* as used by Wulfila. The Greek digraph *ai* was already known to represent the monophthong [ɛ:] in the 4th century, but there was no parallel with *au*, as Greek *av* was not used for [ɔ] (d'Alquen 1974: 25). Wulfila borrowing *au* from Latin where it did alternate with *o* simply for the sake of parallelism is questionable, and *au* is most likely related to Greek *aov* or *ao* which was a diphthong as seen in Gothic *Laudikaia* < Greek *Λαοδικία*. (d'Alquen 1974: 26). Bennett (1949: 17), however, questioned whether or not Greek *ai* as [ɛ:] was even known to Wulfila at the time he began his translation, stating the possibility that the alternations or substitutions of *ai* and *au* for *e* and *o* are due to East Gothic scribes translating at a later date.
5. Other Germanic languages may show a trend towards monophthongization, but Gothic is more archaic, and the preservation of diphthongs should not be that surprising (d'Alquen 1974: 25).

There is also some debate over the appearance of *ai* and *au* before vowels in words such as *saian* (Eng. *to sow*), which has the alternate form *saijan*, and *taujan* (Eng. *to do, make*). Here, the digraphs have been traditionally viewed as representing monophthongs (unmarked long monophthongs per Grimm's system). d'Alquen (1974: 20) noted that this agrees with the orthographic evidence; however, the following *j* may only be possible after a diphthong. In regard to *taujan*, van Helten (1903: 62) stated that had the *au* been a monophthong, it likely would have been written as an *o* in such forms. Marchand (1973: 83), however, did not believe these arguments are enough, and that such correspondences as Gothic *ai/au* and Old High German *ai (ei)/au (ou)* are insufficient, since the evidence for monophthongs is simply too great.

Beginning in the 20th century more scholars began to question the traditional view of the digraphs *ai* and *au* as representing both monophthong and diphthongs, and many began to argue for monophthongs in all environments. Criticism against the traditional view was largely owing to the lack of distinction in the original texts. If Wulfila did not mark the digraphs himself, how can anyone be sure that he intended them to represent three different sounds? Bennett questioned why Wulfila would even use *ai* and *au* to represent three different vowel sounds. Wulfila regularly alternated between *ai*, *au* and *e*, *o* and often used the digraphs in place of *e* and *o* when transcribing Greek words as in the case of *Neikaúdaimáu* or used *ai* to represent Greek *ai* which had become a long open [ɛ:] in words like *Naiman* (Bennett 1949: 17). Setting aside the theory that these alternations were later introduced by East Gothic scribes, if it is assumed that Wulfila used them himself, the question remains as to why. According to Marchand (1973: 64), this only makes sense if Wulfila had no other means of representing these sounds and

simply used what was available. This, however, does not seem to be the case, as other graphemes were available and used by Wulfila. In fact, Wulfila did use *ai* or sometimes *aei* to represent the diphthong [ai] when spelling Biblical names (Marchand 1954: 64). The argument here being that if Wulfila had intended diphthongs, he would have used *ai* or *aei* instead of *ai*.

There is also the issue of diphthongs appearing in stressed vs. unstressed syllables. One of the triggers of diphthongization in the Germanic languages is a strong stress accent in which long vowels tended to increase their energy of articulation (Prokosch 1939: 107). In the Gothic words *habáis* and *sunáu* the digraphs *ai* and *au* are both marked as diphthongs; however, this is apparently problematic due to the fact that they appear in the unstressed syllable. Bennett (1949: 16) was of the opinion that it makes no sense for diphthongs to be maintained in unstressed syllables, and such a phenomenon, apparently lacking in other Germanic languages, would require a separate phonological explanation unique to Gothic.

Other evidence for monophthongs includes spellings, such as *Austrogothi*, which appeared before Wulfila's time and the later spelling, *Ostrogothi*, which appeared after Wulfila (Prokosch 1939: 106). Prokosch, however, provided no suggestion as to when he believed this change from *au* to *o* might have taken place. Vandalic, which is closely related to Gothic, shows strong evidence for *ai* and *au* having become [ɛ:] and [ɔ:] in the following examples: Vandalic *armes* = Gothic *armáis* and Vandalic *froja* = Gothic *fráuja* (Prokosch 1939: 106). This seems to point towards *ai* and *au* as monophthongs here despite being marked as diphthongs. There also appears to be alternation between *sunus* and *sunáu* with the *áu* in *sunáu* representing *o* in this case. Bennett (1967: 10) stated

that the “phonetic interval between weakly stressed *u* and weakly stressed *o* is slight,” which causes the line between the two to become blurred as with Old High German *tagu/tago*.

Lastly, there is the issue of syllable division. As previously mentioned, Wulfila used *aei* to represent diphthongs in Biblical names. The compound *aei* could be broken, split between syllables, in words such as *sa/ei* (*saei*); however, the digraphs *ai* and *au* cannot be subjected to syllabification in the manner of *a/i* or *a/u* (Marchand 1973: 56). This could indicate that *ai* and *au* are not diphthongs, but rather represent a single sound that cannot be divided between syllables. It is possible that the alternation of <*ai*> and <*au*> with <*e*> and <*o*> which appears in the Gothic Bible is owing to East Gothic scribes copying the Gothic Bible at a later date and post monophthongization (around the 6th century according to Wrede) (Wrede 1891: 165-6). It could also be a matter of differences in the dialects of Wulfila, a Visigoth, and the Ostrogothic scribes for whom monophthongization had taken place (d’Alquen 1974: 31).

As one can see, the controversy over the Gothic digraphs is complex and unlikely to ever reach a satisfactory conclusion. Limited attestations aside, Gothic is archaic and does not have the same evolutionary history as the other Germanic languages. If *ai* and *au* had already become monophthongs prior to Wulfila’s time, as Prokosch surmised, then they would have undergone the process of monophthongization fairly early, much earlier than in other Germanic languages where the same process occurred. Going forward with the assumption that *ai* and *au* were at least monophthongs in certain environments and that they monophthongized early (possibly as early as the Common

Germanic period), the process likely began with the lowering, or breaking, of *ai* and *au* before the consonants *r*, *h*, and *hw* (Prokosch 1939: 116).

3.2 Gothic Breaking

Gothic breaking was a fairly straightforward process, and while it is not free of its own complications, it lacks many of the complexities found in Old High German. As with Old High German, Gothic breaking is also an issue of height in which no diphthongization occurs. In Gothic, *i* and *u* lower to *e* and *o* in certain environments, mainly before *r*, *h*, *hw*. Unlike Old High German $e > i$, it is generally believed that no raising took place in Gothic. According to Bach (1965: 53) the raising of $e > i$ is a feature of West Germanic and Scandinavian that does not happen in Gothic. Although, as will be discussed in section 4.1, not all agree with this stance. There is some uncertainty regarding the timeline of Gothic breaking. It was either its own separate process that began in the Gothic period and was complete (or largely complete) by the time of Wulfila's translation of the Bible, or it was a change that took place completely in Common Germanic and was simply reflected in Gothic orthography.

As with Old High German, there is some debate over the accuracy of the term 'breaking' to refer to the lowering of the high vowels in Gothic. Prokosch (1939: 111) considered the term as inaccurate because the process which takes place in Gothic is not true breaking. He argued that Grimm used the term erroneously to describe the lowering of *ai* and *au* to [ɛ] and [o, ɔ] due to confusion over the digraphs, having only taken the graphemes into account and not the actual phonemes they represent (Prokosch 1939: 111). D'Alquen (1974: 20) agreed that the term is inaccurate and outdated; however, he

still found it useful on the grounds that Grimm used it to describe the disruption of the “Proto-Germanic three-vowel-system.”

3.3 Consonantism vs. Vocalism

Despite the similarities between Old High German and Gothic breaking, the biggest difference between the two is the mechanism which triggered the process. As mentioned in the previous section, unlike Old High German, Gothic breaking was not triggered by the following unaccented vowel but rather by the following consonant, namely *r*, *h*, and *hw*. In all other environments *i* and *u* were preserved as is shown with the example Go. *itan* vs. OHG *ezzan* (NHG *essen*, Eng. *to eat*). The following example shows the lowering of *u* > *o* before *r* in Gothic, whereas the *u* is preserved before *r* in Old High German: Go. *baúrgs* (later *borgs*) vs. OHG *burg* (NHG *Burg*, Eng. *town*). Much of the literature on Gothic breaking presents the *e* and *o* that resulted from the lowering of *i* and *u* as allophonic (something that is debated in regard to Old High German). Twaddell (1948: 1430) noted that, for some reason, *r*, *h*, *hw* overrode the Germanic rules of distribution governing these allophones.

Breaking before *r*:

Gmc. **biran* > Go. *baíran*

Gmc. **wurd* > Go. *waúrd*

Breaking before *h*, *hw*:

Gmc. **sihwan* > Go. *saihwan*

Gmc. **tihun* > Go. *taihun*

Gmc. **duht-* > Go. *daúhtar*

While breaking in Gothic is a largely stable change, particularly in comparison to Old High German, there are still some exceptions in which breaking is not found where expected on one hand and found where not expected on the other. An example of the former is *hiri*, an imperative form meaning *come here!*, in which *i* has been preserved

before *r*. Jelinek (1926: 83) theorized that this irregularity is (perhaps by nature of being a command) due to stronger than normal stress being placed on the accented vowel. In regard to the latter, one finds certain reduplicating verbs in which the accented vowel has lowered despite not being followed by *r*, *h*, *hw* as is the case with the 3rd preterit singular forms of *lētan* (Eng. *to let*) and *slēpan* (Eng. *to sleep*), *lailot* and *saislep*. It is possible that this is not true lowering but rather a preservation of *e*, as the vowel of the reduplicating syllable was the only “invariable element” whose preservation was necessary to prevent a “vocalic difference” within that same syllable (Cercignani 1984: 316).

CHAPTER 4

CONCERNING THE DEVELOPMENT OF GERMANIC *I, E, U*

Lloyd (1966: 738) stated that the alternation of *e* and *i* in all the Germanic languages, with the exception of Gothic, is an undisputed fact. This does, indeed, seem to be the case. However, the mystery behind these alternating vowels has given way to a series of perplexing questions. Which came first, raising or lowering, or did they happen concurrently? What series of events led up to this alternation? Were there two events, $e > i$ and $i > e$, or a single event, $e > i$, and the rest has been conflated with a later analogical process? Are they simply allophones of one or the other or distinct phonemes? Indeed, many of the disagreements concerning breaking in Old High German, and to a lesser extent Gothic, stem from the uncertainties surrounding the development of the vowels involved, mainly *e* and *i*.

Unfortunately, we do not have the ability to travel back in time and interview native speakers of these languages. We have no way of knowing exactly how these vowels were pronounced in the various dialects and all their nuances. Common or Proto-Germanic is also a reconstructed language, and while reconstructions are certainly helpful, an educated guess is not equivalent to definitive proof. There is simply too much room for interpretation and, therefore, disagreements abound. This section will explore some of the theories concerning the development of *e*, *i*, and *u* (which is less heavily debated) in an attempt to create a clearer picture of what is most likely to have taken

place. For reference purposes, the below tables depicting the vowel systems for Common Germanic, Old High German, and Gothic have been provided. These are the most common representations of the system of short vowels in these languages. Tables 1 and 2 were created using information from Keller (1978: 79, 155), and Table 3 using information from Twaddell (1948: 143).

Common Germanic (Table 7.1) had a four-vowel system consisting of *i*, *u*, *e*, *a* in which *a* and *o* had previously merged. During the late Germanic period, /u/ had developed the allophone [o], which only appeared before low vowels (Twaddell 1948: 143) and was probably the onset of breaking. By the time of Old High German (Table 7.2), *o* had become a distinct phoneme, once again creating a five-vowel system. On the other hand, Gothic (Table 7.3) consisted of a three-vowel system, *i*, *u*, and *a*, with two allophones, [e] and [o].

Table 4.1 Common Germanic

/i/		/u/
/e/		[o]
	/a/	

Table 4.2 Old High German

/i/		/u/
/e/		/o/
	/a/	

Table 4.3 Gothic

/i/		/u/
[e]		[o]
	/a/	

4.1 Gothic *i* vs. Old High German *e*

Most Old High German grammars treat *e* as the original accented vowel inherited from Common Germanic, providing the usual examples of OHG *ezzan*, *neman*, and *geban* vs. Go. *itan*, *niman*, and *giban*. The vowel in the Old High German forms was then raised in the 2nd and 3rd present singular forms under the influence of the unaccented vowel in the inflectional ending. The problem is, as Collitz (1905: 65) noted, Gothic *i* and *u* are often in opposition with West Germanic *e* and *o*. As can be seen in the examples below, the Gothic forms, which show *i* and *u* in the infinitive, seem to contradict the raising of *e* in Old High German. This has led to some controversy concerning which was the original vowel.

Go. *niman*, *nimiþ*, *nimam* OHG *neman*, *nimit*, *nemam*

Go. *hulpum*, *hulpans* OHG *hulfun*, *giholfan*

If the *i* in the Gothic forms is considered to be the original accented vowel, then one could argue that the *e* in *neman* and *geban* actually lowered due to the following *a*. Indeed, Holtzmann appears to have coined the term ‘*a*-Umlaut’ based on the belief that lowering of the high vowels before *a* (and other low vowels) was the only change which took place in Old High German breaking (Collitz 1905: 65-66). Were this to be the case, then Gothic *i* and *u* would be the original vowels inherited from Common Germanic and preserved in the West Germanic languages, except when followed by *a*, or another low vowel.

Collitz (1905: 66) believed the *i* in such Gothic forms as *niman* is the original vowel while the *e* in OHG *neman* is the result of *i* > *e* via *a*-umlaut, which he dated back to “Pre-Old High German.” Krahe (1967: 29), who dated the raising of *e* to *i* to the Common Germanic period, uses the reflexes of IE **esti* as proof: OHG *ist*, AS and OS *is*.

If the *i* in the 3rd person singular forms *ist* and *is* is the result of raising in Common Germanic which affected all the Germanic languages, including Gothic *itan*, then *e* in the Old High infinitive *ezzan* is once again the result of lowering before *a*. Grimm (1840: 85) also theorized that *i* was the original vowel and believed instances where it remained in Old High German verb forms, where *e* is expected, is due to a following *i*, which had been lost by the Old High German period: *ligan* < *ligian* (OHG *liogan*).

4.2 Scenario One: The Traditional View

This first scenario will be familiar from chapter 2 and is what can be referred to as the ‘traditional’ view. It is the version of breaking that is most commonly described in the handbooks (e.g., Baesecke 1918: 21-32, Moser 1965: 81, and Braune/Eggers 1987: 54-56). In this scenario breaking took place as an independent sound change in Old High German and Gothic. In Old High German, *i* became *e* before low vowels, and *e* rose to *i* before high vowels and a nasal + consonant. There are disputes concerning the phonemic status of *i* and *e* and (at least) two possible paths for their development.

1. /i/ and /e/ were separate phonemes inherited from Germanic. They developed parallel to each other and raised and lowered independently based on environment. /i/ ‘broke’ and became /e/ before *a*, *e*, *o* while /e/ did the same, becoming /i/ before *i*, *u*, *j*, and a nasal + consonant. The new *i* which resulted from the raising of *e* eventually merged with original Germanic *i*.
2. There was no raising of Germanic /e/. Instead /i/ developed two allophones, [i] and [e]. They were in complimentary distribution with [i] appearing before high vowels and [e] before low vowels.

Number two is less likely from the standpoint of the traditional view since the split would have taken place in Old High German. As such, the allophones would have had to phonologize fairly quickly. A case can perhaps be made for them having been allophonic even by the time of the earliest attestations as a way of explaining variations in spelling. The allophones may have been written due to a lack of standardized spelling. However, even for Gothic, where there is consensus that *e* and *o* < *i* and *u* were allophonic, phonologization had been gradually taking place by the 4th century. Twaddell (1948: 141) believed that, in West Germanic, *i* and *e* were phonemic but were “distributionally defective” being in partial opposition and partially in complementary distribution. As an explanation for why *i* and *e* were partially in complementary distribution despite not being allophonic, Twaddell (1948: 141) stated that the two were only separated by height, a contrast of high vs. mid, which made them prone to diverging into each other’s territory. Therefore, *i* and *e* tended to occur in certain environments with only occasional opposition. However, he asserted that even occasional opposition was enough for them to have been phonemic (Twaddell 1948: 146-147). Analogy is perhaps a better explanation for many of the discrepancies in the Old High German spellings.

In Gothic, Germanic *i* and *u* lowered to *e* and *o*. It is generally believed that no raising occurred as [e] was only an allophone of /i/, so there was no separate /e/ phoneme to raise (Twaddell 1948: 146-147). Gothic breaking was also triggered by consonantism, so it is uncertain as to whether or not *e* would have raised even if it were phonemic. Twaddell (1948: 146-147) stated that [e] and [o] were governed by *r*, *h*, *hw* which overrode other factors and caused them to remain allophones. Keller (1978: 78) noted that this began to breakdown by the time of Wulfila’s Bible in the 4th century with *i*

occasionally appearing before *r, h, hw*. There is not, however, complete consensus where raising is concerned. Krahe (1967: 29) believed that in Go. *e* was completely replaced by *i*: *itan* vs. *etan* (this would have taken place at an early stage in the development of Gothic), and then later lowered to *e* and *o* before *r, h, hw*.

4.3 Scenario Two: In Which no Breaking Occurs

There are those, such as Bremer and Lloyd (who used the term *a*-umlaut), who did not believe breaking occurred at all, or at least not in the strictest sense. Bremer (1909: 171) theorized that Germanic *e* and *o* became *i* and *u* unless they were preserved by a following low vowel, which would mean that raising of both *e* and *o* took place in Germanic and affected all the Germanic languages with no lowering occurring afterwards. Lloyd (1966: 742) agreed with Bremer, for the most part, stating that what appears to be raising and lowering based on environment (before *i, j, u* vs. *a, e, o*) is actually the result of Indo-European *e* having split (in Germanic) into the two allophones [e] and [i]. Lloyd (1966: 742) argued that if a genuine sound change did take place, it occurred in Germanic with *e* > *i* before *i, j*, and *u*, and the resulting allophonic [i] then overlapped and merged with original Indo-European /i/. As with Bremer's theory, no lowering of *i* took place. Instead, what appears to be lowering is actually the result of the phonemic overlap between [i] and /i/ in conjunction with analogy to those forms that were not followed by *i, j, u*: Gmc. **nesta-* < **nista-* (infinitive **nistjan*) via analogy to **fella-* / **filljan* (Lloyd 1966: 742).

The basis of Lloyd's argument relies on the irregularities found in Old High German breaking being an indication that no sound change took place, since one generally expects a certain amount of regularity from sound changes. Instead, Lloyd

(1966 742-745) believed that overlapping phonemes and analogy, the bulk of which may have already occurred in Germanic but continued to a limited extent and with varying degrees of success in Old High German, have been conflated with the raising of *e*. This has resulted in the illusion of a further sound change, that is, the lowering of *i*. Thus, in Old High German manuscripts we find what appears to be orthographic evidence of an ongoing sound change. It should be noted, perhaps with the exception of Connolly's laryngeal theory, that most of these theories result in Gothic being the odd-language-out. In these scenarios, Gothic breaking would have been its own separate sound change that took place at a later date (Bremer 1909: 172-173).

Twaddell (1948: 148) proposed that the alternation between *e* and *i* could have been the result of dialect borrowing between two groups of dialects, one which had an [i] allophone, and the other an [e] allophone (Twaddell 1948: 148). The following is a brief summary of Twaddell's (1948: 148) highly speculative theory explaining how such dialect borrowing might have led to the appearance of breaking.

1. Dialect 1 borrowed from Dialect 2 which had an [i] allophone. However, Dialect 1 not possessing such an allophone reassigned it the closest allophone they did have, [e].
2. Dialect 1 had the allophones [i] and [e] which were in complimentary distribution.

They borrowed words from Dialect 2 which had a schwa [ə] in the unaccented syllable. Dialect 1 not having a schwa reassigned it to a low vowel and /i/ became [e] in accordance with their phonological rules: [rimə] > /rima/ > [rema]. This first scenario is somewhat similar to Baesecke's theory on dialects mentioned in section 2.3, however, while interesting, dialect variation and/or borrowing seems insufficient

as an alternative to breaking. Twaddell also did not mention any specific regions, rather the dialects to which he referred are completely theoretical.

Connolly, on the other hand, took a completely different approach and sought to circumvent the issue of vocalism vs. consonantism by proposing the laryngeal theory. While he believed that breaking did take place, he stated that there are too many exceptions where lowering does not occur as expected for the change to be attributed to vocalism or consonantism (Connolly 1977: 174). He supported this argument citing the effect of laryngeals on Indo-European *i*. In Indo-European, *i* > *e*, in most cases, when followed by a laryngeal (Connolly 1977: 178). No lowering took place in any of the North or West Germanic languages if a laryngeal was not present in Indo-European, regardless of the vowel in the unaccented syllable or intervening consonants (Connolly 1977: 174). Connolly believed that Indo-European laryngeals may have survived not only past the Indo-European period, but into Germanic as well where they became pharyngeals (Connolly 1977: 179). He admitted that there are some exceptions not explained by this theory, such as OHG *smid* (NHG *Schmied*, Eng. *smith*). However, he attempted to resolve this by connecting OHG *smid* with IE **smi-tu-*, stating that the *u* ending prevented *ai* from becoming *e* in Old High German.

4.4 Scenario Three: The Germanic View

The third and final scenario views breaking as a sound change that largely took place in the Common Germanic period. As with scenario one, the onset of breaking began with an allophonic split. While the raising of *e* may have been discovered at a later date, it was probably the first change to take place. According to Lloyd (1966: 742), if the process of breaking did occur, the raising of *e* > *i* likely took place first and was

completed during the Germanic period with $i > e$ taking place at a later date, late Germanic or just after, and still ongoing in the Old High German period, albeit sporadically. Twaddell (1948: 141) noted that, in Germanic, /i/ appeared largely before stops and spirants and very rarely before a resonant. On the other hand, /e/ occurred in both environments creating the opportunity for /e/ to develop [i]-like allophones. Therefore, the following can be proposed. In Germanic, Indo-European /e/ developed two allophones, [i] and [e]. The former occurred before high vowels and the latter before low vowels. As such, raising would have affected all the daughter languages, including Gothic.

From there, Indo-European /i/ and /u/ also underwent an allophonic split developing the allophones [i] – [e] and [u] – [o], respectively. The allophones were in complementary distribution. In Old High German, the first set appeared before high vowels and the second before low vowels. They began to phonologize in the very early Old High German period once the conditioning factor (the unaccented vowel) became lost or weakened (Marchand 1957: 347). Now phonemic, /i/ < /e/ and /e/ < /i/ merged with original Indo-European /i/ and /e/, respectively, while new /o/, having no other phoneme to merge with, gave Old High German its five-vowel system as seen in chapter 4, Table 2. In Gothic, neither [e] nor [o] had any phonemes with which they could overlap, since Gothic had a three-vowel system, chapter 4, Table 3. As a result, [e] and [o] remained allophonic as late as the 4th century.

In Old High German, the phonologization of [e] and [o] was followed by analogy. While analogy is of little consequence in Gothic since [e] and [o] did not begin to phonologize until around the same time as Wulfila's Bible translation, in Old High

German it is responsible for obscuring breaking and creating many of the inconsistencies documented in Old High German manuscripts. Marchand (1957: 347-348) surmised that once *e* and *o* became phonemic the previous restrictions no longer applied, and these new phonemes were now free to appear in any environment resulting in the introduction of *e* and *o* into environments that were previously off limits. The paradigm of Old High German *magan* nicely demonstrates the alternation between high (*i* and *u*) and low (*e* and *o*), now appearing where they seemingly should not: OHG *magan*, (preterit singular subjunctive) *mohti* possibly via analogy from (preterit singular indicative) *mahta/mohta* (NHG *mögen*, Eng. *may*). The present tense forms of the verb show the same alternations: OHG (present plural) *magun/mugun* and (present singular subjunctive) *megi/mugi*.

Though the least problematic of all three scenarios, the Germanic view is not without controversy. When changes in Old High German and Gothic are placed side by side, we seem to reach a sort of logical impasse. Most of the literature only takes Old High German into account while raising in Gothic is often considered to not have occurred. However, according to Moser (1965: 81), in Gothic *e* always became *i*, something that only took place in West and North Germanic before *i, j, u* and nasal + consonant. The main problem here is, if $e > i$ during Common German then it should have affected all the daughter languages equally, either becoming *i* in all environments or only before high vowels and nasal + consonant. Referring back to the argument of ‘original’ vowels in section 4.1, if both daughter languages were affected equally then *i* in the Gothic forms was not necessarily the original vowel, but rather an example of *e* raising in Germanic. This in turn lends further support to *i* having lowered in the Old

High German infinitive forms before *a* via *a*-umlaut except when prohibited, such as before a nasal + consonant. Periodization is also problematic for the development of *i* and *u* since their lowering in Old High German and Gothic was triggered by two different mechanisms, vocalism vs. consonantism. This can seemingly be reconciled by placing the onset of lowering early on in the development of Old High German and Gothic. However, as will be discussed in the following section, this is still problematic, particularly where the development of *u* is concerned.

4.5 The Development of *u*

The development of *u* was less erratic than that of *i* and *e*. The main controversy with *u > o* is whether or not the development of the low allophone happened in Common Germanic or Old High German. It appears to have taken place during Common Germanic; however, several scholars believe that the lowering of *u* was a later development. Collitz (1905: 67) believed *u > o* happened in Old High German after *a*-umlaut had already taken place. He cited Gothic *juk* < Latin *jugum* < Sanskrit *yugá-m*. The Gothic form has preserved the original vowel while Old High German has *joch*. He argued that in order for *u* to have lowered in Common Germanic, it would have had to change back for unexplainable reasons and then lowered again in Old High German (Collitz 1905: 67). It is uncertain what he meant by this. If *u > o* is the result of *a*-umlaut, it does not make sense for it to have taken place after *a*-umlaut. The *o* in OHG *joch* also appears to have lowered due to influence from the following fricative /x/, note that Latin *jugum* had a high vowel in the second syllable, and not as the result of *a*-umlaut. There is evidence that, in rare cases, breaking did happen in Old High German due to consonantism. It is possible that *u > o* was still an active sound change in early Old High

German, but that does not rule out the onset of the change having begun with the development of [o] in the late Common Germanic period. According to Twaddell (1948: 143-144), given that both North and West Germanic show a five-vowel system in which /o/ was a distinct phoneme, the onset of /u/ developing a low allophone had to have taken place in Common Germanic.

In Old High German it is possible that [o] remained allophonic for a slightly longer period than [i] or [e]. As previously mentioned, since Germanic *o* had merged with *a*, there was no longer a phonemic /o/ to interfere and overlap with allophonic [o]. Even so, it was most likely phonemic by the time of the earliest attestations: Gmc. *[wurpiz] > OHG /wurf/ (NHG *Wurf* Eng. *throw*) and Gmc. *[þorpa] > OHG /dorf/ (NHG *Dorf*, Eng. *village*) (Marchand 1957: 347). Hirt (1931: 48) believed that, like *e*, *o* also raised before *u*, OHG *tungūn* < Gmc. **tungōnum*, as well as before nasal + consonant, OHG *pfunt* < Latin *pondus*. Although the majority of the literature does not support the raising of *o* before *u*, this may be a rare case. *o* > *u* before nasal + consonant is less certain, and Hirt (1931: 49) did concede that Common Germanic may have simply had no *o* in that environment. Marchand (1957: 348) believed analogy is what reintroduced /o/ before /i/ where it had previously undergone *i*-umlaut and became /œ/.

CHAPTER 5

THE INCONSISTENCY OF CONSONANTS

Much has been written about the vowels involved in breaking, and it is highly unlikely that the discrepancies surrounding their development will ever be completely resolved. Setting the vowels aside, there is one area about which less has been written, that is, the influence of consonants. Consonants play a rather odd and inconsistent role in Old High German breaking. As discussed in section 2.2, breaking is either hindered or blocked before certain consonants such as the sonorants *n*, *m*, *l*, and, most notably, before nasal + consonant, at least where lowering is concerned. Other consonant clusters do not seem to have had the same effect. The determining factor here appears to have been the nasal, although, according to Prokosch (1939: 113), this is likely not due to any inherent quality of the nasal itself. When combined with another consonant, the nasal group seems to have simply created a strong syllable barrier, thus preventing influence from the unaccented vowel (Prokosch 1939: 113). However, in the case of raising, one of the conditioning factors is nasal + consonant, and *e* always became *i* in this environment. Prokosch (1939: 113) believed that *i* did lower in this same environment, since it was essentially another form of *e* and the two had always existed alongside each other, whereas *o*, being a newly developed vowel from *u*, did not. *o* instead followed the normal pattern of complimentary distribution, appearing before low vowels except when blocked by nasal + consonant (Prokosch 1939: 113).

Concerning the question of Old High German vocalism vs. Gothic consonantism, Hill (2017: 152-153) surmises that *i* did not break before low vowels (although he maintains that *u* did), but rather only occasionally became *e* due to the following consonant. He mainly discusses the consonant cluster *st* citing the same example as Lloyd (section 4.2): Gmc **nistan* > **nesta* (Hill 2017: 153). Note that Hill gives **nistan* as the Common Germanic infinitive instead of **nistjan* as Lloyd did in his example. Hill (2017: 156) also argues that the *e* < *i* in OHG *wer* < Gmc. **wiraz* is due to influence from inherited Common Germanic *r*. Both examples are, however, generally taken to be evidence of lowering before *a*, and Hill does not explain why he believes the consonants to be the conditioning factor as opposed to the vowels.

The majority of the literature that has been written about the influence of consonants on breaking has been written in regard to *r*, *h*, *hw*, with most paying particular attention to *r*. These are, of course, the consonants which triggered breaking in Gothic. Prokosch (1939: 110) noted that where Gothic is concerned, *r* and *h* counteracted vocalism. In Old High German, however, *r* and *h* appear to only hinder breaking, resulting in sporadic raising and lowering of the preceding vowel. Once again, it seems odd that the same set of consonants would have such varying effects on the same set of vowels, especially if both vowels and consonants were inherited into Old High German and Gothic directly from Common Germanic. In that case, it would seem that we should expect to see similar effects, not disparate ones.

In regard to Gothic, Kostakis (2019: 6) proposes that the lowering of *u* and *i*, which he also refers to as subtractive lowering, is due to *r*, *h*, and *hw* being marked by the same feature as the old preceding high vowels, in other words, they were +[high]. He

claims this violates the Obligatory Contour Principle (OCP) (Kostakis 2019: 6), which states that two +[high] segments cannot appear side by side. As a result of both the original vowels and the consonants *r*, *h*, and *hw* being marked as +[high], the vowels lowered to mid-vowels in response, essentially dissimilating from *r*, *h*, and *hw* (Kostakis 2019: 6). Kostakis supports his theory by citing the effect of *r* and *h* on Old High German primary umlaut. Because *r* and *h* were both inherited into Gothic and Old High German from Common Germanic, the Old High German consonants were likely phonologically identical and also marked +[high], thereby blocking umlaut and preventing /a/ from raising to short tense /e/ (<ä>) (Kostakis 2019: 8). This invoking of the Obligatory Contour Principle in relation to breaking seems a bit unusual as the OCP largely deals with prosodic features (e.g., accent and tone). Keller (1978: 157) seems to have made a similar connection stating *r*, *h*, and *hw* were “inimical to high tongue elements”; even so, it seems unlikely that height alone would be enough to trigger the lowering of *i* and *u*.

While Gothic consonantism tends to be viewed in isolation, it seems Germanic *r* and *h* had an overall tendency to cause lowering and backing of the preceding vowel (Prokosch 1939: 114). In contrast to the issue of raising and lowering, or lack thereof, before nasal + consonant, the lowering effect of *r*, *h* (and *hw*) seems to have been an inherent quality of the consonants themselves. Prokosch (1939: 114) believed they were pronounced with “a marked retraction,” while others (Marchand 1973 & Lass 1983) believed *r* and *h* possessed a velar quality. Marchand (1973: 70) also noted that Gothic *hw* seemed to have had the same feature of aspiration as *h*. Lass (1983: 88) stated that the quality of *h* at the time of Gothic breaking is uncertain, but prehistorically (before the Germanic consonant shift) it was a velar stop. However, in Gothic and Old High German,

h is generally considered to have been a velar fricative (/x/). As was shown with the aforementioned *trohtin* vs. *truhtin* in section 2.2, there seems to be clear evidence of breaking in Old High German before /x/, although it was apparently rare instead of the general rule, as it was in Gothic. According to Hill (2017: 139), *r* also caused lowering in the Gothic adverbs of place: Gmc *hī* > Go *hēr*. This appears to be a sound change separate from that of Gothic breaking, and one involving long vowels, but can still be considered an example of the lowering effect of *r*.

r is of particular interest here. In light of the inconsistencies between Gothic and Old High German where *r* is concerned, the answer may not lie solely in the quality of *r*, but in the type of *r* involved. Kostakis' comparison of Gothic and Old High German *r*, and the belief that it was "phonologically identical," raises an important question: Is it actually the same *r* in all cases or perhaps different "*r*-types"? It is well known that *r* tends to be highly variable in the Germanic languages. Is it, therefore, erroneous to assume that, even though Gothic and Old High German both inherited Germanic *r*, as the two languages split from Common Germanic and went their separate ways, *r* maintained the same exact quality in both? Lass asked a similar question in regard to the development of *r* and its effect on vowels throughout the history English. He posited that the *r* which exhibited a similar lowering effect in English was not only velar but a pharyngealized velar and believed it was this same type of *r* that was involved in Gothic breaking (Lass 1983: 69, 88). It is also possible that the *r* in question was not related to Germanic *r*. Prokosch (1939: 115) stated that inherited Germanic *r* did not affect preceding vowels, rather it was *R*, which developed from *z*, that was responsible for lowering. The seemingly inconsistent nature, in which *r* affects breaking in Old High

German could, therefore, be due to two different types of *r* being at play, inherited Germanic *r*, which did not affect preceding vowels, and $R < z$.

CHAPTER 6

CONCLUSION

It is worth taking a moment here to provide a brief summary of the data that has been presented. This is not a complete summary, but rather highlights of the more important points that have been discussed.

1. Old High German and Gothic manuscripts show what appears to be a conditioned sound change involving the lowering and raising of vowels in certain environments. In Old High German, *i* and *u* > *e* and *o* before low vowels and *e* > *i* before high vowels and a nasal + consonant. In Gothic, *i* and *u* > *e* and *o* before *r*, *h*, *hw*; no raising of *e* occurred.
2. Unlike traditional breaking in Old English, no diphthongization occurred. This has led to disagreements over the use of the term breaking to describe the sound change. For Old High German, the term *a*-Umlaut was put forth as a better alternative. No better term has been suggested for Gothic breaking which is triggered by consonantism.
3. The timeline of breaking is often called into question with many scholars proposing that the onset of breaking in Old High German and Gothic began at least partially during the Common Germanic period. The most plausible scenario is that Indo-European *e* > *i* in Common Germanic followed by the lowering of *i* and *u* during the very early stages in the development of Old High German and Gothic.

4. There is uncertainty concerning the development of IE and Gmc. *e, i, u*. We must rely heavily on reconstructions for those changes that may have occurred in Germanic, as well as the gaps in attestations of Old High German and Gothic. While helpful, reconstructed languages are unreliable as there is no way to prove for certain that the reconstructed forms existed.
5. Old High German can only be dated as far back as the mid to late 8th century, while our main source for Gothic is Wulfila's 4th century Bible. There is an approximate 400-year gap between Gothic and Old High German attestations. As such, there is no way to follow the development in a linear fashion in both languages.
6. Phonological changes are not always reflected in the orthography of a language. This is most obvious in Gothic where there is controversy concerning the digraphs *ai* and *au* and whether or not they were monophthongs or diphthongs. If diphthongs, then Gothic breaking would need to be re-evaluated. However, there is a fair amount of evidence for them having been monophthongs, at least in certain positions, or at least having monophthongized fairly early.
7. There are inconsistencies and irregularities. Breaking does not always occur where expected, and it is seemingly unstable, with a tendency to switch back and forth or reverse entirely. This has led some to believe there is a possibility that multiple changes or unrelated phenomena have been conflated, e.g., analogy and dialect variation. It is unlikely, however, that this is enough to completely refute a sound change having taken place. Analogy is also not a sound change in and of itself, but a levelling process that generally occurs after a sound change.

8. Consonants affect vowels differently in Old High German and Gothic. In Old High German, raising took place before nasal + consonant, while lowering was either hindered or blocked entirely in the same environment as well as before *r* and *h*. On the other hand, *r*, *h*, and *hw* are responsible for triggering Gothic breaking. There is, however, some evidence of breaking in Old High German before *h* (/x/). Some of the inconsistencies where *r* is concerned may be due to different *r*-types as opposed to a single *r* inherited from Common Germanic.

As mentioned in the introduction, the main goal of this paper has been to provide a comparative study of Old High German and Gothic breaking, which will allow for further exploration of the topic at a later date. The topic itself is a terribly tangled web, and much of the literature discussing breaking in Old High German and Gothic tends to be rather contradictory. An attempt has been made to analyze the data and to present the information as coherently as possible. This has required, at times, that a blind eye be turned to some of the contradictions. There exists over a century's worth of literature on breaking in Old High German and Gothic, yet despite their commonalities, they are often only discussed within their own separate spheres with few direct comparisons made. This paper has sought to make just such comparisons in the hopes of finding some common ground that might explain what makes breaking in these two languages so unique. The picture is admittedly incomplete without the addition of Old English and Old Norse, and they will need to be taken into account with any further research. Even so, it is possible to come to at least two tentative conclusions.

1. The label of breaking when applied to Old High German and Gothic may simply be outdated and incorrect. It is a term bestowed upon this particular sound change by

Jakob Grimm in the 19th century and, as Prokosch believed, may have been done in error. In the case of Old High German, it may be more accurate to consider it a type of umlaut, while Gothic may have had a completely separate sound change.

2. If the same process is taking place in both Old High German and Gothic, then a closer look needs to be taken at the consonants involved. On the surface, consonants appear to behave inconsistently. However, some of these same consonants were also involved in Old English breaking, namely /x/, /r/, /l/. Perhaps some of the answers to the mysteries surrounding breaking lie with the influence these consonants had on preceding vowels.

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