Palatalization in West Germanic

A DISSERTATION
SUBMITTED TO THE FACULTY OF THE GRADUATE SCHOOL
OF THE UNIVERSITY OF MINNESOTA
BY

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IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

Anatoly Liberman, Adviser

August 2010

Acknowledgments

This dissertation was made possible by the kind support and help of several people and institutions. First and foremost I am thankful for the constant advice, helpful feedback, and the steady supply of bibliographical leads and photocopied articles on my topic which I received from my supervisor, Prof. Anatoly Liberman. He first steered me in the direction of this topic and I have not regretted it. I am greatly indebted to him for instilling in me an understanding of historical phonology, for humbling me by his erudition, and for his never-ending store of puns, stories, and fairy tales, including that of the Emperor's New Clothes. I also thank Prof. Evelyn Firchow who has been a good teacher and a friend. She taught me the importance of primary sources and critical analysis. I am also thankful for the fact that she provided me with the opportunity to work with her on her edition of the Vienna Notker manuscript and for the income I derived from the assistantships she kindly offered me. I thank Prof. Ray Wakefield of the Dept. of German, Scandinavian, and Dutch and Profs. George Sheets and Oliver Nicholson of the Dept. of Classical and Near-Eastern Studies for their willingness to serve on my committee and for being patient with me.

I am indebted to Dr. Margit Rem of the Radbouduniversiteit in Nijmegen, the Netherlands for allowing me to use the digital Corpus Van Reenen-Mulder (CVRM) of fourteenth-century Dutch charters. I also thank my father, Leo van der Hoek, for creating a software application that helped make the CVRM easier to use. I thank Stephen Laker for sharing with me an early version of his article on the palatalization of velars (Laker 2008). I gratefully acknowledge the Nederlandse Taalunie (NTU) and the Instituut voor Nederlandse Lexicologie (INL) for

the use I made of the digital versions of the *Woordenboek der Nederlandsche Taal* (WNT) and the *Vroegmiddelnederlands Woordenboek* (VMNW) at their website http://gtb.inl.nl.

Work on the dissertation was also furthered by participation in the Germanic Linguistics Roundtable at the University of California, Berkeley in 2006, where I presented part of my research on the Dutch diminutive, and the Germanic Linguistics Annual Conference at Pennsylvania State University in 2007, where I shared research related to the orthography of palatalized velars in medieval sources. These two papers have each been reworked for publication in the *Zeitschrift für Dialektologie und Linguistik* and *Beiträge zur Geschichte der deutschen Sprache und Literatur*, respectively.

This dissertation was partially supported through the Dissertation Fellowship from the University of Minnesota 2008-2009.

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1.1 Introduction

THIS DISSERTATION IS A LINGUISTIC AND PHILOLOGICAL DESCRIPTION and analysis of several phonological processes, together known under the general term palatalization, in several modern and historical West-Germanic languages and dialects, namely Dutch, German, and Frisian. It combines a historical and a dialectological approach to evaluate the status of palatalization and its development, in the phonology of these languages. Although there is a considerable body of research into all aspects of palatalization in Germanic, the scholarship suffers from two major drawbacks. First, the majority of studies do not take larger questions of linguistic geography, diachronic development, or phonological status of the described phenomena into consideration. This creates the false impression that the manifestations of palatalization in the various dialects are local peculiarities without relevance for the further outside world. There are notable exceptions to this trend, however. The analysis of the Brabantic dialect of Aalst in Dutch-speaking Belgium accompanied by a thorough comparison with surrounding dialects by Lut Keymeulen (1991) deserves mention in this regard. This study supports the notion that what some may call "marginal phenomena," i.e. linguistic features that manifest themselves in dialects on the "margin," can and do sometimes reflect a state of affairs that once obtained over a wider area, in this case the presence of consonantal palatalization in the Germanic dialects and languages. The second problem one

encounters in this area is the natural consequence of the first, namely that the handbooks have apparently taken little notice of the literature on Germanic palatalization. In many cases they either do not mention it at all or retain incomplete, inadequate and often outdated descriptions of the subject and the research on it. This dissertation is, therefore, a first attempt to provide a synthetic overview of the problem.

1.1.1 Thesis and Outline of the Dissertation

The main thesis of this dissertation is that palatalization has been widespread in the Germanic languages and dialects in the past and remains so in the present. It is also my contention that phonemic palatalization of consonants played an important role in the development of both the consonantal and the vocalic systems of the West-Germanic languages. As we will see, it is a widespread phenomenon in the Germanic languages, but so far, the topic has never been studied from a diachronic or phonological point of view. I am aware of only one synthetic study of palatalization from a pan-Germanic stance, but this study (Goetchius 1949) is no more than a digest of the received opinions of the handbooks available at the time. The analysis of the data shows that palatalization is not a collective term for several separate and unconnected phenomena that happen to appear in West Germanic, but rather that all of them are an organic part of the various phonological systems of the constituent languages as they developed from Germanic. Exactly how old the process is and to what extent the several phenomena that have manifested themselves in Germanic resulted from inherited phonological properties of the Germanic ancestor language can not be answered without a further examination of the North-Germanic branch and a more detailed discussion of English and the Anglo-Frisian hypothesis. That palatalization exists in North Germanic and in English is well known, and Rooth (1935) even made it probable that the palatalization phenomena to be found in the Scandinavian languages are old and related to those in West Germanic. Despite the limits of this study, the data for West Germanic shows that the various manifestations of

palatalization in West Germanic cannot be ascribed to external influence, as has been claimed by some scholars (most recently by Lange 1998). That palatalization was common to all the continental dialects of West Germanic, possibly with the single exception of Old High German, will be demonstrated in this dissertation.

I reexamine the consonantal feature of palatalization in the past and present stages of the West-Germanic languages in light of three aspects. The first is phonology. Palatalization can be studied from several perspectives, including acoustic, articulatory, and perceptual perspectives. Most scholars have focused on the articulatory factors, although more recently, there has been a growing interest in the acoustic and perceptual properties of palatalization (e.g. Peet 1988; Recasens et al. 1995; Guion 1996, 1998). Phonology takes the function of language sounds as its point of departure. In order not to become entangled in current discussions in theoretical linguistics about formalizations of language change, I have chosen to follow the framework of phonology known as Structuralism, in particular as it was developed by the Prague School (Trubetzkoy 1939). The implications of morphonological functions should not be ignored; palatalization—and language change in general—is not just a chance mechanism. It has been argued, for instance by André Martinet in his *Économie des changements phonétiques* (first published 1955, 3rd edition 1970), that language change and variation is subject to several basic principles. The two most important of these are (1) language economy, which is the tendency of language to rid itself of redundant material, that is, to abbreviate spoken language (and secondarily, written language), and (2) comprehensibility, which checks the former principle to ensure that language does not shed too much information and so remains comprehensible. On the other hand, a persuasive argument has been made (e.g. by Labov 1994: 604) that the driving force behind phonological change are mechanical shifts arising from phonetic and phonological principles, rather than morphological factors.

The second aspect I consider in this dissertation is the interpretation of medieval manuscript evidence, that is, the relationship between phonology and graphonomy. As linguists we

depend upon the data we gather. For *historical* linguists, and particularly phonologists, this is doubly true, since we are dependent on the written records made by speakers who have long since passed away. Without any recourse to acoustic, articulatory, or perceptual data, the phonological approach, with its emphasis on the function of sounds in a linguistic system, provides a useful tool in the interpretation of written records. Yet phonology can say very little about the way the historical stages of language *sounded*, since the phonetic niceties are not accessible through written records. Phonology holds that all the European writing systems are essentially phonological. That is to say, throughout the literary period, authors of written records were attempting to record functional distinctions between sounds, or phonemes. It is doubtful (though not entirely impossible) that phonetic details were ever recorded. There are examples of medieval authors commenting on distinctions in pronunciations, such as the Icelandic First Grammarian or Notker III Labeo of St. Gall, but there are no unambiguous examples for authors discriminating between allophones. The closest one can get is when authors accidentally mistake phonemes whose allophones overlap, e.g. in Notker's Law (*Anlautgesetz*) where the distinction between voiced and unvoiced *b – p, d – t, g – k* is neutralized in syllable-initial position. But even here one is properly speaking of a confusion of phonemes, not allophones.

Apparent intrusions of phonetic details are rare and usually the result of confusion or uncertainty on the part of the writer which orthographic rendering would be a better representation of his language. The Germanic peoples, converted to the faith of the Romans and their successors and instructed in the faith's holy book, were using a model not designed for the phonological system of Germanic. For instance, Latin had no equivalent of /ð/ or /ɵ/ and therefore had no symbols to represent them—so the Anglo-Saxons introduced <ð> and <þ>. Continental tribes used <th> and <dh> for the same, though not necessarily uniformly and consistently. On the other hand, Latin also had several distinctions that were meaningless or not directly paralleled in the Germanic languages. And not only that, by the time the Teutons

were busy adapting the Roman writing system, the speakers of Latin had developed their own innovative deviations from the Classical Latin which formed the basis for their writing system. This problem will come to play a small part in this study, e.g. when we look at how Franks in Gaul struggled to interpret the phonemic split of Classical Latin **k* into Late and Medieval Latin */k ~ ʧ/ and the way this should be represented in Latin or in their Germanic dialect. All of this means that we should be very careful in our interpretation of medieval orthography.

A third problem, which may be small in its methodological importance, but which can have a far-reaching impact on our deliberations, concerns the reliability of the text editions of medieval sources, handbooks of medieval dialects, and studies of modern dialects. It is clear that for a linguistic study it would be inappropriate to use critical editions of sources, as they include so-called philological conjectures. That is, the texts of these editions usually, if not always, involve a reconstruction of a non-extant version of the text in question by selecting and altering from among the different surviving versions, in the attempt to arrive at a text that is purer from either a literary or philological point of view. Historical phonology is not interested in such pursuits. Linguistic research needs the raw data, not pre-interpreted or altered materials. The same problem affects handbooks, especially the older ones, since they often rely, sometimes without the requisite skepticism, on such critical editions. A particularly egregious example of philological confusion is represented by the Old Dutch material. In order to secure an accurate text of the *Wachtendonck Psalms and Glosses*, I have had to compare various editions and consult the secondary literature, in particular reviews of the editions. Van Helten's edition (Van Helten 1902) is no longer acceptable, but even Kyes' diplomatic edition (Kyes 1969) contains avoidable misreadings (see the review by Minis 1971; cf. also section 2.2. below).

Finally, dialect studies present their own problems, partly caused by the use of different theoretical frameworks by different scholars. This makes it hard to reconcile data between

studies, even of the same dialect area. For instance, Keymeulen (1991) reported discrepancies between two studies of consonant phonemes in Brabantic dialects in Dutch-speaking Belgium that took place almost simultaneously. One publication reported the presence of palatalized consonants, while the other reported no trace of them. Keymeulen suggested that this difference may have been due to one researcher's lack of knowledge about the phonological status of palatalized consonants in those dialects, so that he ignored or overlooked their presence. In addition, there is a separate challenge in interpreting the phonological values of dialect data from older studies.

1.1.2 Background

The idea of palatalization in Germanic dialects has a history dating back to the nineteenth century. The work of older linguists produced a storehouse of valuable data. For Dutch the pattern was set by Colinet's investigation of the Aalst dialect (1896). For German the series of *Deutsche Dialektgeographie* especially the study by Frings (1913), was an example followed by many. The preponderance of research on palatalization of *k* and *g* has been done in relation with Old English. Palatalization of *k* and *g* in all of Germanic has been treated only in a brief study by Goetchius (1949). It has never been studied in a systematized manner. Typically, the scholarly literature consists of catalogs of sporadic instances.

In phonetics the approach that regards sounds primarily as physiological products of the speech organs still dominates. Phonology, developed in the 1930s, which adds the dimension of sounds as part of a functional system of language, has never been fully assimilated into our theories of language, resulting in unnecessary competition between schools of thought adhering to one or the other approach. In the field of palatalization disproportionate attention has come from the physiological school (phonetics proper) at the expense of functional analyses of languages (known as phonology). The theories known as Generative Linguistics, developed primarily by Noam Chomsky, and, more recently, Optimality Theory, attempt to com-

bine the two approaches. However, both frameworks are in a state of constant development as the debate among theoretical linguists about the way language and linguistic change operate continues.

Notable achievements in the field are the recent linguistic atlases of Dutch dialects (*Fonologische Atlas van de Nederlandse Dialecten* = FAND 1998-2005, and *Morfologische Atlas van de Nederlandse Dialecten* = MAND 2005), which provide recent data from the entire Dutch-speaking language area. They are valuable because of their scope, but their materials need interpretation. At the same time, there have been important shifts in the academic approach to medieval philology. The New Philology movement, which started in the late 1980s, has rejected the arbitrary practices of older editors. In a concern to produce scientifically accurate texts, more reliable editions have been appearing. Whenever possible, these editions have yielded the data for my dissertation.

1.1.3 Design and Methodology

We will look at the most important instances of palatalization in both the living languages and their historical stages. The hypothesis ascribing a decisive role to palatalization in the history of Germanic is justified and it is true even with regard to places where palatal sounds no longer exist. More remnants of palatal sounds survive to the present day than is generally admitted. The connection between palatalization and several important vocalic and consonantal changes, in particular *i*-umlaut and velarization will also be given due attention.

Since this study aims to uncover the role of palatalization as a feature of Germanic phonology, rather than record phonetic phenomena in the various Germanic languages and dialects, field research was not included in the preparation of the dissertation. Instead it provides an overview of the existing literature from all relevant areas, including dialectology, philology, and historical phonology. For the historical evidence I depend largely on the standard editions of medieval texts, though some facsimile editions (e.g. Hench's facsimile edition of

the Old High German *Isidor*, Hench 1893), which provide direct access to the source manuscripts, have been included. However, much of the older historical material comes from deeds and charters which are reliably cited in the secondary literature. I include a discussion of the problems of comparing different linguistic studies with one another, interpreting manuscript evidence and discovering functionally meaningful differences in both dialectal and manuscript data. The argument is based on the analysis of the facts in the context of the current theories of language.

This first chapter presents the prolegomena of the study. In the following chapters I examine several examples of palatalization in the different languages: first in Dutch, then in German, and finally in Frisian. This discussion will begin with the earliest stages of these languages and move chronologically forward into the modern period. It is true that this division is somewhat arbitrary and even anachronistic, since the division derives from the modern political borders. It is not easy to determine in all instances whether a medieval text should be considered Dutch or German. The distinctions between High, Middle, and Low Franconian dialects are not always clear-cut, especially when we realize that medieval texts often contain a mix of various dialect features. The so-called *Leiden Willeram* is a classic example of such dialect mixture.

The fact that the functions of palatalized sounds have been ignored by the great majority of studies has had two unfortunate consequences. First, it has contributed to misunderstandings of the way language change works. Second, it has led to an underestimation of the role palatalization has played in the history and the present stages of the Germanic languages. My dissertation addresses both the past and the present of the languages under investigation. A combination of the physiological (that is, phonetic) and functional (that is, phonological) features of speech sounds is essential for our understanding of the way language and language change works.

There are also important ramifications for comparative studies. The results of the dissertation shed light on the way palatalization functions in all of the European languages. A question of central importance is whether certain symbols and letters used in medieval manuscripts may serve a double function, indicating a palatalized consonant-vowel combination. Yet few scholars have taken into account the history of Latin for their understanding of medieval Germanic spelling, even though the early Germans learned their writing from the Latin tradition. This dissertation lays the groundwork for a more in-depth analysis of such related phenomena.

1.2 A Definition of Palatalization

BEFORE WE TURN TO A PHONOLOGICAL DESCRIPTION OF PALATALIZATION, we have to consider the different types of palatalization that exist. There are essentially two ways of looking at palatalization: from a phonetic point of view and from the standpoint of the phonological system. In section 1.3, we will look at the different theories that have been proposed to explain the various types of palatalization. The emphasis there will be on phonology. In this section, the main focus is on identifying the different phonetic and phonological processes that have been subsumed under the term palatalization.

Most modern definitions of palatalization are phonetic definitions. That is to say, they describe the physiological process the speech organs undergo in the instant when a previously or otherwise non-palatalized consonant becomes palatalized. Inevitably, these definitions argue that an original consonant has been modified in pronunciation under the influence of a neighboring sound. Ladefoged (1982) calls palatalization a "secondary articulation," Katamba (1989) an "assimilation process." Seen from the perspective of what the early German linguists called "Lautphysiologie," palatalization is indeed often secondary, or the result of assimilation. Clark and Yallop (1990: 100) define palatalization as follows: "Palatalization in-

volves raising the tip and blade of the tongue to a high front position close to the anterior part of the hard palate region, as for an [i] vowel."

A more detailed, typological analysis of over 120 different instances of palatalization in languages worldwide can be found in Bhat (1974). He concluded that "there are at least three distinct processes, namely tongue-fronting, tongue-raising, and spirantization which, occurring either individually or in different combination, produce the effects that are generally denoted by the cover term, palatalization" (Bhat 1974: 47). Bhat's point that the term "palatalization" includes these three categories is an important one, as we will see. The strength of Bhat's approach lies in the fact that it is restricted neither by the limits of a small pool of languages nor by the constraints of theoretical linguistics. On the basis of his material Bhat proposed that a sound change must meet two requirements in order to be properly called "palatalization": first, the sound producing the change must be a front vowel, a palatal semivowel, or a palatal or palatalized consonant, and second, the resulting sound must be either a proper palatal sound itself or acquire a secondary palatal articulation. As a matter of definition, he applies the term only to consonants. In light of this he goes somewhat out of his way to criticize the way generative phonologists describe palatalization. He comments that their separation between the change of the velars to a [+ high, - back] on the one hand and of the dentals and labials to a [+ high] position on the other is only due to the generativists' view of the dentals and labials already being naturally [- back], so that this feature need not be represented separately. Thus, they view the change essentially as one process. Implied in Bhat's note is a degree of criticism about the language typological assumptions of generative phonology. His point highlights the fact that generative theory contains too many of such assumptions, making the framework rigid and biased. In addition, he also remarks that linguists, such as Jakobson, Allen, Chen, Lightner, and Campbell, have treated palatalization as "a single diachronic process." Instead, Bhat favors the idea of allowing equal and separate status to each of the three processes he has identified as palatalization (tongue-fronting, tongue-raising, and spi-

rantization) and argues that in diachronic sound change palatalization might go through all three stages sequentially. He writes, "The change of k to ts has been regarded by some linguists ... as a case of depalatalization, i.e. a change of k> tš > ts. Such an assumption would be unnecessary if palatalization is analyzed as made up of three distinct constituent processes" (1974: 59). I do not believe we should accept this assertion. From both a phonetic and phonological point of view a change tš (= /tʃ/) > ts represents depalatalization under every interpretation. Nevertheless, his more general point is correct, and can be illustrated from the material included in this study. For instance, the change of /k/ > /ts/ occurs in Frisian, e.g. *tserke* 'church' (from Gmc. **ƙirika*). It moved through the intermediate steps of /k/ > /k'/ > /tʃ/ > /ts/, thus first, palatalization proper (tongue-raising and tongue-fronting), then spirantization (Bhat's third form of palatalization), and finally depalatalization. This final stage is not reached in all dialects of Frisian, since many dialects (including Standard West Frisian) retain the older form *tsjerke*, while others (particularly in North Frisian) have further simplified the cluster to *serke* (cf. Van Ginneken 1935: 127; Parker 1985). In other instances, after palatalization, the stage of spirantization is never reached and depalatalization can then occur with the result that the sound reverts to its original unpalatalized state. It seems that early Middle Low German went even one step further and depalatalized as well as despirantized its */tʃ/ back to its original /k/ (see chapter 3).

In addition to this three-tiered system, some linguists distinguish between two main kinds or gradations of palatalization. Clark and Yallop distinguish between "simultaneous palatalization" and "transitional palatalization." In the former "the modification of the tongue position occurs at the same time as the other articulatory gestures of the segment," for the latter "the constriction of the basic articulation is released through a palatal approximation of the tongue tip and blade, as part of the transition to the next segment" (Clark and Yallop 1990: 100). In their phonetic transcription, they represent the former with a subscript [ʲ], the latter with a superscript [ʲ]: e.g. in [tʲ].

Other linguists distinguish between phonemic (distinctive) and phonetic (non-distinctive) palatalization (e.g. Weijnen 1991; Keymeulen 1991). This differentiation is well established in historical linguistics, and it is necessary to be aware of it because the influence of traditional views has led to some terminological confusion. European historical linguists of the nineteenth and early twentieth century generally considered all forms of palatalization to be the same phenomenon. Before the development of phonology in the late 1920s, there was no distinction between phonetics and phonology. Reasoning from the assumption that sound assimilations and sound changes were all the result of phonetic environments, they argued for what might be termed 'degrees' of palatalization. Among the first scholars to propose a theory of palatalization along these lines was Wilhelm Scherer. In his *Zur Geschichte der deutschen Sprache* (1868) he distiguished between *Mouillierung* as the overarching term for the process and its phonetic effects, which could be one of two things: first, *Palatalisierung*, which he equated with *Zetacismus* (what we would call "assibilation" or, with Bhat, "spirantization"), and second, epenthesis. Scherer understood that assibilation and palatalization were related, but his terminology could confuse the modern reader. The term *Mouillierung*, which derives from the French *mouillir* 'to soften,' was used widely by the early European linguists and philologists. In the nineteenth century, it was the general term for any kind of palatalization. We find the term in Brücke's physiological handbook on speech sounds (1856) and in many handbooks on phonetics and philology. Siebs (1901) uses the term "Palatalisierung" for Old English and Frisian in this way, as does Van Ginneken (1935) ("palataliseering") for Old, Middle and Modern Dutch, that is, for assibilation of the velars **k* and **g* to voiceless and voiced affricates or fricatives (e.g. */tʃ, ʧ, tʲ, dʒ, ʤ, dz, dʲ/ etc.).

Another influential work on linguistics from the later nineteenth century was Eduard Sievers's *Grundzüge der Lautphysiologie* (Sievers 1876), in subsequent editions renamed *Grundzüge der Phonetik*. He, too, considered both *Mouillierung* and *Palatalisierung* to be one and the same process but he preferred the latter as the overarching term and used it in the same

way American linguists today would use 'palatalization.' For Sievers palatalization was primarily the acquisition of a secondary articulation, just as for Ladefoged (1982). Hence his remark that true velars are incapable of palatalization, "weil bei ihnen die Hinterzunge so nach hinten und oben gezogen ist, dass die Vorderzunge die erforderliche Palatalstellung nicht mehr einnehmen kann" [because with velars the tongue root is pulled so far back and up that the tongue tip loses the ability to assume the necessary palatal position] (Sievers 1901: 186). Thus, he claimed that velars do not acquire a secondary palatal articulation but are replaced by a palatal consonant proper. In the same way Grammont (1933) reasoned that when velars or velo-palatals become palatalized, they cease to be velars because in order to become palatalized, they must give up their point of articulation on the soft palate. Grammont, who took *mouillir* and *palataliser* to be the same phenomenon, considered velars to be resistant to palatalization.

This conclusion is incorrect or at least misleading, if by "palatalization" one means only the acquisition of a secondary palatal articulation. After all, in both Germanic and Romance, velars were the chief consonants to be affected by palatalization. It may perhaps be suggested that velars are not so much the first consonants or the only consonants to be affected by palatalization but rather the ones that are most noticeably and thoroughly affected by it, because of their very nature they must adopt features that differ more sharply from their unaffected, unpalatalized counterparts.

In the second half of the twentieth century, the term "palatalization" gained in popularity, but European scholars continued to use *Mouillierung*. Dieth uses "Palatalisierung" throughout as the scientific term for the modifying process, but also calls the influence of palatal sounds "mouillierend", apparently using this term as a lay person's term for the same thing (1950: 268; cf. "Palatalisirung [vulgo Mouillirung]" in Sievers 1901: 185).

A slightly different use of the two terms can be observed in Wilhelm Braune's *Althochdeutsche Grammatik*. In the earlier editions, Braune distinguished between the two terms de-

pending on what kind of phones were affected: "Palatalisierung" was used for vowels (what we would call *i*-umlaut or, in Britain, *i*-mutation), "Mouillierung" for consonants (cf. his discussion of *i*-umlaut, Braune 1891: §51). It is unclear how this distinction arose, but it persisted for a long time, and this use was extremely common in linguistic and philological studies up to the 1930s. It continued simultaneously with the older two-tiered 'gradational' distinction between the two terms, which can be illustrated by the text of the same article on *i*-umlaut in the fifth edition of Braune's grammar, as edited by Karl Helm (Braune-Helm 1936: § 51). Helm introduced a tone of distant skepticism into what is essentially the same text and offered an alternative theory of *i*-umlaut, rejecting the so-called "Mouillierungstheorie" that Wilhelm Scherer had advocated and which Braune had accepted. Instead, Helm noted that *i*-umlaut could be effected by "Vokalunterströmung," a process that could work "through" the intervening consonants without effecting "eine eigentliche mouillierung" [actual palatalization]. It is clear that Helm understood the term "Mouillierung" as Braune did, but his remarks show that he considered there to be a difference in degree. He admitted the possibility of some intervening role for the consonants in the transmission of a palatal quality in *i*-umlaut to the root vowel, but he stresses that the effect on the consonant was superficial and ephemeral—at any rate, not rising to the level of 'true' "Mouillierung." This use of the term "Mouillierung" is analogous to what we would call phonological processes in contradistinction to phonetic processes. Helm's note of skepticism regarding the "Mouillierungstheorie" was undone by Mitzka in subsequent editions of Braune's grammar (e.g. Braune-Mitzka 1959), but it returned in the latest edition (Braune-Reiffenstein 2004:§ 51 Anm. 1b). Throughout the history of Braune's *Althochdeutsche Grammatik*, from the first edition to the present one, the term "Mouillierung" has always been used in quotation marks. In Braune-Reiffenstein it is printed as follows:

> „Mouillierung" (Palatalisierung).

with double quotation marks as opposed to the conventional *single* quotation marks used in this edition for well-known linguistic processes and theories. This sets the term apart from all others. What exactly it is supposed to signify is unclear, although the bracketed clarification "Palatalisierung" that follows seems to indicate that Reiffenstein considers it an alternate, less acceptable (but widely known) term for the same phenomenon.

However, the term "Mouillierung" is not dead. For instance, the Dutch dialectologist Antonius Weijnen used its Dutch equivalent ("mouillering") in his comparative phonology of Dutch dialects (*Vergelijkende klankleer van de Nederlandse dialecten*; Weijnen 1991). He went so far as to comment that the terminology for the phenomenon is "onvast" (i.e. 'unstable, variable'). He adopted the term from Keymeulen (1983) for "een ver doorgedreven palatalisering waarbij het aanrakingsvlak breder wordt en de aanraking van het palatum minder krachtig" [an exaggerated form of palatalization in which the contact area broadens and the force of the contact with the palate decreases] (p. 182). Keymeulen also continued to use the term "mouillering" in her study of Western Brabantic dialects in Dutch-speaking Belgium (1991). Thus "palatalisering" is phonetic or allophonic palatalization and "mouillering" stands for phonemic palatalization. Ben Hermans uses both terms indiscriminately: in his 1994 article on palatalization in a Limburg dialect he employs the term "palatalisatie," while in his 2000 article, co-authored with Herman Crompvoets, the term "mouillering" is used for the same phenomenon, the latter term apparently being adopted for the dialect in question from Van Ginneken (1935). At the same time, Luc Draye (2000), in a response to Hermans and Crompvoets (2000) published in the same volume, uses the term "palatalisatie" for *i*-umlaut or vowel mutation. It is unfortunate that European linguists have developed this peculiar use of the terms.

In more recent linguistic publications, the term "coronalization" has become closely associated with palatalization. The term is used in generative frameworks for the process also known as assibilation.

1.3 The Phonology of Palatalization

BOTH THE PHONETICS AND THE PHONOLOGY OF PALATALIZATION HAVE been discussed widely. Even from a phonetic point of view, different theories exist as to the exact operation of palatalization, though in the most common understanding of the term—the acquisition by a sound of a secondary palatal articulation—palatalization is considered an instance of assimilation. It results from the contiguity of two sounds, one of which is a palatal consonant or a front vowel and which imparts its palatality to the adjacent consonant. There are, however, different phonological theories about the working of palatalization, especially in the phonological systems of living languages. In most modern theories palatalization is viewed as a rule of the phonological system that controls the alternation of palatalized allophones and their non-palatalized counterparts, or, in generative terms, as the production of a palatalized surface forms out of their non-palatalized underlying forms in the appropriate linguistic contexts. Generative models of this type dominate the research on palatalization. Palatalization is especially well known in the Slavic languages (cf. Rubach 1984 on Polish), as well as in Italian (e.g. Calabrese 2005, which includes many examples from Italian). Outside of Europe, palatalization has been studied in Chinese and Japanese (e.g. Coleman 1998, esp. pp. 252-58). Palatalization in modern European languages apart from Slavic has not received much attention, though there is a growing body of literature on several phonetic processes in Modern English dialects, such as the pronunciation of *t* in words like En. *nature* as [ʧ]< /t/ before /u/ (= [ju] e.g. Chomsky and Halle 1968; Bernhardt and Stemberger 1998; now also Liberman [forthcoming]).

1.3.1 Phonological Theories of Palatalization

A proper phonological understanding of palatalization did not arise until phonology as a linguistic field distinct from phonetics was established by the work of structuralist phonologists of the Prague School, especially Nikolaj Trubetzkoy. Until then, palatalization was explained as primarily a diachronic phenomenon, namely the gradual intensification of a phonetic or articulatory assimilation of the consonant to a neighboring palatal element. Baudouin de Courtenay, who published several articles on palatalization of consonants in Slavic, presented a typical description of palatalization:

> Psychologisch läßt sich die ‚Palatalisation' oder ‚Erweichung' der Konsonanten durch den Einfluß folgender palataler oder mittellingualer Vokale mit der Vorbereitung zum Aussprechen des folgenden Phonems erklären. Wenn man ein *te, ti*... aussprechen soll, ist man geneigt, schon während des ersten Moments an die dem folgende[n] Phoneme eigene Annäherung der mittleren Zunge an den Gaumen zu denken und diese Arbeit schon in den ersten Moment zu übertragen. So können sich *te, ti*... in *t'e, t'i*... verwandeln. (Baudouin de Courtenay 1908: 587)

Phonetically this is quite correct, but does not explain why such palatalized sounds could 'split off' from their unpalatalized counterparts. Yet Baudouin de Courtenay was already on the road to discovering phonological features, when he noted, in the same article, that what a German might consider "Weichheit" is not the same as what a speaker of a Slavic language would associate that term with. To rephrase this in phonological terms, "Weichheit", as a subjective label, would be interpreted differently as a result of the different oppositions in the respective phonological systems of German and the Slavic languages. He used the term "weich" in the Slavic sense of palatalized, equating it with "mouilliert," "mittellingualisiert," and "palatalisiert." He also commented that the consonant /j/ can be considered a "palatal", but never a "weich," that is, palatalized, consonant, since there can be no such thing as a palatalized palatal. Thirteen years earlier in 1895, Baudouin de Courtenay had already described a system of allophones and phonemes in his *Versuch einer Theorie phonetischer Alternationen*

(translated into English and reprinted as Baudouin de Courtenay 1972). He recognized the difference between allophonic and phonemic alternations which he called "neophonetic alternation" or "divergence" and "psychophonetic alternation" or "correlation" respectively (1972: 197).

Ever since the emergence of phonology in the modern sense, a major problem has been the question how new palatalized phonemes could arise. This put palatalization in the domain of historical phonology. Among the structuralist phonologists it was assumed that palatalized phonemes appeared out of a prior stage of allophonic alternation and for this process the term "phonologization" or "phonemicization" was coined, first proposed by Twaddell (1938). Penzl (1947) described the development of the palatalized reflex Gmc. **k* in Old English according to a similar model Twaddell had applied to Old High German *i*-umlaut. He argued that Old English developed an allophonic alternation of velar [k] before back vowels and palatalized [k'] before front vowels in words such as *corn* and *chin* respectively. A phonemic split happened, according to Penzl, when Old English *i*-umlaut, followed by apocopation of final vowels and the partial merger of the umlauted vowels with pre-existent front vowels, neutralized the linguistic environment of the different allophones. That is to say, *i*-umlaut caused the phonemic split: "But since the new palatal vowels merged with the old ones… both the velar and the palatal allophones [of Gmc. **k*] came to stand before identical palatal vowels: the sounds [k] and [k'], formerly mere variants f a single phoneme /k/, were now in contrast, and had thus become separate phonemes" (42). This theory was accepted as standard in structuralist phonology (see e.g. Kristensson 1976) and alternatives have not been proposed in recent frameworks.

Nevertheless, Twaddell's theory of phonologization of allophones has several fatal flaws that have, unfortunately, been largely ignored. The most straightforward and concise critique of phonologization is presented in Liberman (1991), reiterated in Liberman (2007), though he was by no means the first to remark upon the logical contradictions in Twaddell's theory. A

century before Twaddell proposed his solution, Jakob Grimm already remarked that there are philological problems with the chronology of such a scenario because there appears to be a middle period between primary and secondary umlaut in which primary umlaut seems not to have been properly marked while the final syllables had already been reduced (cf. Schweikle 1964; see Liberman 1991 for a short summary of the scholarship surrounding this topic). The more general criticism is that allophones ought to have no role in historical phonology to begin with. According to Liberman, in the Twaddellian model (used by practically all phonologists since 1938) "allophones are set up only in order to let them become phonemes at the right moment and are thus the product of circular reasoning" (Liberman 2007:15). After all, we do not have any record of historical allophones: they are *reconstructed* based on the theory's need to produce the right historical output. But even granted the notion of allophones, it is by definition impossible for an allophone to *become* a phoneme, because they are merely positional variants depending on the phonological trigger and without independent phonological or morphological value. Phonologization of allophones is not possible. The weakness in Penzl's description of palatalized Gmc. **k* in Old English is that no velar allophone could ever have existed before a front ("palatal") vowel: as allophone it would have adjusted to the distinctive features of the following vowel and become palatal. Hence Penzl's scenario never happened.

Current theoretical phonology is divided between two models. The first group of theories are all representations of second-generation generative or transformational phonology, such as linear, non-linear and cyclical phonology. The second theory that has gained followers is Optimality Theory (usually abbreviated as OT), though in essence, even OT is a form of transformational grammar. As far as I am aware, other theoretical approaches (such as Evolutionary Phonology) have not produced any significant research on palatalization.

Within the different versions of generative phonology increased attention has been given to linguistic features related to the three physiological articulators that produce constriction in

human language, namely the lips (labial consonants), front of the tongue (coronal consonants), and the tongue body (dorsal consonants). They are used as metacategories in the different frameworks of generative phonology (among which I include Optimality Theory) and subsume the traditional classification of consonants according to place of constriction in the oral cavity (labial, labiodental, dental, interdental, alveolar, postalveolar, palatoalveolar, alveolopalatal, palatal, velopalatal, velar, uvular). The reasoning behind adopting a framework based on articulators rather than point of constriction is that these larger groupings are assumed to encompass so-called "natural classes," that is, groups of phonemes that act together as a class in various phonological phenomena. For our purposes, the coronal and dorsal consonants are of particular interest since they, and especially the coronal consonants, include those most commonly affected by palatalization.

In modern theories of phonology, it is believed that coronality is the controlling feature in palatalization. Chomsky and Halle (1968) introduced the term "coronal" into modern linguistics, though they acknowledge that they adopted it from Sievers (1901). Dental, alveolar, retroflex, palatoalveolar and alveolopalatal consonants are considered coronal consonants because they are produced "with the blade of the tongue raised from its neutral position" (Chomsky and Halle 1968: 304). The inclusion of palatal consonants in the category of coronal consonants has been a matter of debate. In view of the fact that palatal consonants often pattern phonologically with alveolar consonants, many linguists have argued in favor of including palatals among coronal consonants and they have modified their definition of "coronal." For instance, Hall (1997) argues that palatal stops and the palatal nasal are not true palatals and that there is a strong link between coronal consonants and front vowels. The treatment of front vowels as "coronals" has not been widely accepted as there are phonetic or anatomic objections to this. Calabrese (2005: 304) also adds that it does not appear possible to apply the feature "coronal" to vowels within current versions of feature geometry.

Hall analyzed several different classes of consonants: labials, interdentals, dentals, alveolars, retroflex, palatoalveolars, alveolopalatals, palatals, velars, uvulars. Six of these, he claims, "are uncontroversially considered to be [+coronal]" (1997: 2). He asks whether palatals (/ɲ ç ʝ/) are [+coronal] and examines evidence from languages around the world. Based on the behavior of these consonants in the examples, Hall argues that only /ç ʝ/ are true palatals and that /c ɟ ɲ ɕ ʑ/ are alveolopalatals. The distinction is between continuants and noncontinuants, with the latter being disqualified as true palatals. Hall also holds that the palatal continuants /ç ʝ/ are not [+coronal] *phonologically*, while alveolopalatal fricatives and affricates pattern phonologically as [+coronal]. He argues, in contrast to most other phonologists, that no language can posses a grouping that includes both subcategories of consonants.

> To summarize, the strong cross-linguistic tendency to treat noncontinuants like [c ɟ ɲ] as [+coronal] correlates with the phonetic evidence that these segments are typically pronounced in the alveolopalatal region. In contrast, palatal fricatives like [ç ʝ] pattern phonologically as noncoronals, a generalization which correlates with the fact that these segments are more retracted than the corresponding "palatal" noncontinuants [c ɟ ɲ]. (1997: 22)

In recent versions of transformational phonological theory, especially those based on the notion of feature geometry, palatalization is viewed as "feature spreading." Based on the phonetic classifications of palatalization by Bhat (1978; see above), modern theoretical phonology distinguishes between acquisition of a secondary articulation (P1) and palatalization resulting in the shift of primary place of articulation (P2).

Phonologists continue to struggle with the difference between palatalization, coronalization, and affrication (or fricativization, or assibilation) (cf. Hume 1992: 178, 181ff; Calabrese 2005). Calabrese defines coronalization as a change in articulation in which the target consonants become coronal, while the term palatalization is employed as an umbrella term for all processes "triggered by front vowels" (2005: 301). Affrication and fricativization (assibilation)

are separate problems and phonologists have been unable to incorporate all three processes into one theoretical description of palatalization. The fact that assibilation (defined as a change in the manner of articulation) sometimes produces affricates and at other times results in fricatives also complicates recent theories. Yet the main question in theoretical phonology is whether palatalization (P1 according to Bhat's classification) and coronalization/assibilation (P2) are one process or two. Sagey (1986) describes the former kind of palatalization as the spreading of the feature [-back] from the front vowel to the consonant. This entails, according to Jacobs and Van de Weijer, the "creation of a Dorsal articulator node if the target consonant is coronal or labial" (1992: 126). They argue that this model cannot be applied to P2, which affects velars and coronals, because the feature geometry of velars lacks a node for Coronal.

An alternative model was proposed by Clements (1991). In his model, acquisition of secondary palatal articulation is achieved by spreading the Vocalic node of a front vowel to the neighboring consonant. For the shift of primary articulation Clements proposes that the feature [+coronal] spreads from the vowel to the neighboring consonant but this feature will have to acquire the status of primary articulation. This causes problems within feature geometry, which does not allow primary articulation to be shifted through spreading of features. Clements tries to circumvent this problem by proposing that this type of palatalization proceeds over two stages: first P1 (spreading of the feature, creating a secondary articulation), followed by a "promotion" of the feature from secondary to primary articulation, a solution supported in essence also by Calabrese (2005). Lahiri and Evers (1991:85) and Jacobs and Van de Weijer (1992) comment that this solution is impossible because the model necessarily requires that P1 always precede P2 "either historically or derivationally" (Jacobs and Van de Weijer 1992: 128). This is, apparently, contradicted by the evidence. Furthermore, both types of palatalization appear in the same language simultaneously.

Jacobs and Van de Weijer argue that there is phonetic evidence in support of viewing the palatal offglide /j/ and front high vowels as complex segments, i.e. that they are articulated

with both the tongue body and the front of the tongue. Hence they propose that in feature geometrical terms they be defined as having two place articulator nodes: one Dorsal and one Coronal. If that is done, Sagey's model can be rescued, because P1 can then be described as the spreading of the Dorsal articulator node (with the features [+high, -back] of the front vowel) and P2 as the spreading of the entire Place node (which includes both the Dorsal *and* the Coronal articulator node).

Hume (1992) also presents the change from /k/ > /ʧ/, recorded in many languages (cf. En. *chin* < OE *cinn* < WGmc. **kinni*), and which she classifies simply as coronalization, as a single change: "Coronalization … is characterized as a direct-change rule in which a dental or velar consonant changes into a postalveolar without passing through an intermediate stage of palatalization" (Hume 1992: 183). She cites evidence from Slovak where no intermediate stage of palatalization seems to exist. This proposal assumes that affrication happens directly from a nonpalatalized state.

An important objection to proposals like Hume's is that they do not separate diachronic and synchronic arguments properly. Hume views the linguistic system solely as a set of synchronic rules by which palatalized or coronalized consonants are derived by productive phonological rules from underlying nonpalatalized consonants. But this is a fallacious idea. If coronalization is considered a version of palatalization, the coronalized consonants are by definition classified as palatalized consonants in a language's phonological system (since coronalization is a form of palatalization). Thus, the distinction is between palatalized and nonpalatalized. Added affrication, especially if it later developed in the history of that language, represents only an additional feature or development, i.e. a change in the manner of articulation but not the place (unless a change in place happens later as well). Any reference to a once-nonpalatalized original consonant is lost in later stages of the language. Hume argues:

> Were Coronalization in Slovak accounted for by first palatalizing the velars and then changing these segments into postalveolars we might expect the output to bear secondary palatalization. Dvončová et al (1969) indicate that

> the tongue is sometimes raised slightly toward the hard palate in Slovak palato-alveolar affricates. Yet, this is not always the case nor is secondary palatalization contrastive for these segments. (Hume 1992: 185)

This is not convincing, because if palato-alveolar affricates and postalveolars are already classified as palatals, then secondary palatalization can do nothing to them. The minimal though measurable, nondistinctive palatalization that is reported by Dvončová et al. is completely expected.

The most recent linguistic theory that has gained any currency is that of Optimality Theory (OT). It developed within phonology in the early 1990s and is based on the assumption that produced language is the result of several language-inherent, often contradictory restraints interacting with one another in the phonological system. At its core it remains a two-tiered generative or transformational theory with what Chomsky would call an "underlying form" and a "surface representation." However, because OT takes a very strong view of the universality of linguistic constraints, phonological change can be internally motivated or 'spontaneous.' This notion is clearly illustrated in Hermans' (1994) treatment of alveolar cluster palatalization (ACP, see chapter 2) in the Dutch dialect of Maasbracht. He proposes that palatalization in this dialect is triggered by a universal phonological principle (constraint) called the Obligatory Contour Principle (or OCP) which forbids identical features from being adjacent to one another. Because he has formulated the features of the relevant alveolar clusters that undergo palatalization in Maasbracht as [-cont, + cor] [-cont, +cor], he claims that OCP forces a change in this violating cluster. Hermans solves this by suggesting that the feature [+cor] of the following phoneme is attached to the V-node of the second member of the cluster, creating a secondary place of articulation. As described in greater detail in chapter 2, this approach is not uncontroversial. Hinskens and Van Oostendorp (2004) criticized Hermans for ignoring both the philological data and phonetic universals and instead proposed that palatalization is in phonological terms a *velarization* process, since in their view palatal

consonants are pronounced further towards the velum. Hence they propose that it is the feature [+velar] that is attached to the V-node.

The problems with these approaches are manifold. Draye (2000) addresses a number of them, showing why Optimality Theory does not offer an attractive alternative to the much-vilified generative approach, his main objection being that they are blind to historical development. The specific OT descriptions of Dutch dialects contradict various known facts about the historical phonology of Dutch. To Draye's objections one might add others. For instance, it is unclear why assimilation cannot be the origin of palatalization in this dialect, though Hermans and Crompvoets explicitly deny this possibility (2000:35).

The solutions of Optimality Theory appear self-serving since many constraints are devised specifically to produce the correct output, as is the case with reconstructed allophones. This weakness is illustrated by Hermans' answer to an anticipated objection to his explanation of ACP in the Maasbracht dialect. It is not possible, he argues, to change the feature [-cont] of the obstruent into [+cont], changing *nt* and *lt* into *ns* and *ls* because it would violate another constraint, the Strict Cycle Condition, which forbids the insertion, deletion, or spreading of features that are present at the underlying level (Hermans 1994: 77). But the nature and even the existence of the Strict Cycle Condition are tenuous (as Hermans' own discussion makes clear), nor does accepting the existence of such a constraint necessitate Hermans' specific solution. Draye calls such explanations "een charmante vingeroefening binnen een theoretisch kader" ['a charming display of virtuosity within a theoretical framework'] but rejects them as devoid of any relationship to linguistic and philological reality (Draye 2000: 67).

1.3.2 Objections to Phonological Descriptions of Palatalization

Nearly all theoretical descriptions of palatalization have given attention to the living language and focused on the phonetics of palatalization. It is described as a case of assimilation, in recent frameworks through a phonological rule of feature-spreading from an adjacent front

vowel or other palatal consonant. These theories all imply that palatalization is a *phonetic* feature imposed upon non-palatalized underlying consonants through a phonological rule. There seems to be no place for underlying palatalized consonants. But this is a problematic position. It does not provide an explanation for the rise of palatalized consonant phonemes, which undoubtedly exist in living languages today, many of them reflexes of non-palatalized ancestors. Generative theory seems both to require the phonologization of allophones as an implication of its view of phonemic split and simultaneously to deny that it ever happens since *every* alternation remains part of the active phonological apparatus. This is self-contradictory and illustrates a serious inadequacy of current phonological theories; they are all static models of the living language. Operations such as rule reordering and changes in constraint ranking amount to manual tweaking of these synchronic models but they do not explain the question *why* rules reorder or constraints are reranked. At the root of the problem lies a misunderstanding of the definitions of allophones and phonemes.

A classic standard example of a generative account of supposed allophonic alternation is that of Italian where a singular *amico* with [k] alternates with plural *amici* with [ʧ], both from a supposed underlying /k/ and the latter being produced by a phonological rule of assibilation before following [i] (cf. Calabrese 2005). However, it is to be doubted that the voiceless alveolopalatal affricate [ʧ] is merely an allophone of the voiceless velar plosive /k/. The phones differ both in place and manner of articulation and can be perceived by native speakers as distinct sounds and though [ʧ] and [k] appear to stand in complementary distribution, the relationship in the phonological system of Italian is complicated by the additional presence of [kʲ] as in *parci* 'parks (plural)' (from *parco*). The different reflexes for *amici* and *parco* are especially embarrassing for the phonetically motivated theories of generative theory. Complementary distribution is apparently not the sole test to establish phoneme status (cf. Liberman 1987).

An enlightening example from the Germanic languages is the relationship between German *ich-* and *ach-Laut*. Ignoring some of the details, it is in general true that the former [ç] de-

rives from the latter [x] by palatalization, as part of West-Germanic velar palatalization (for details see chapter 3). Many phonologists have objected that the supposed minimal pairs distinguishing the two sounds are contrived and that therefore [ç] is simply an allophone of [x]. Moulton (1947) suggested the existence of an invisible "juncture" phoneme on the morpheme boundary, an idea that was ignored by most scholars. Alternative theories have prevailed which have been unwilling to accept /x/ and /ç/ as independent phonemes. This resistance stems largely from a bias inherent in transformational phonological theories, which attempt to include too much of the linguistic system within a phonological apparatus. Herrgen comments, "Die Laute [ç] und [x] werden bei Berücksichtigung der Morphemgrenzen als kombinatorische Varianten eines Phonemes klassifiziert, bei ihrer Nichtberücksichtigung als teilkomplementär distribuierte Phoneme" (Herrgen 1986: 29). This is instructive. It shows that in some theoretical frameworks the definitions of phoneme and allophone can be altered to suit the needs of scholars. Generative phonological theories prefer to treat variations among historically related entities as allophonic, despite clear evidence of phonemic splits in the history of all languages. This weakness has led to contradictory and inconsistent conclusions, such as the generativists' view of German *i*-umlaut as a synchronic phonetic rule (e.g. Wiese 1996). The possibility to use the distinction between /x/ and /ç/ for an admittedly limited morphological purpose may give us a clue to the factors at play in phonological change. Whether this particular opposition is one in recession or one likely to spread is of lesser importance. In view of the traceable history of the opposition and its demonstrable relationship to the wider tendency in earlier Germanic to palatalize velars it is possible that it has been a marginal opposition for many centuries.

There is one more objection to be made against the essentially phonetic view of palatalization as a form of feature assimilation: it cannot explain how alveolar cluster palatalization (ACP) came to be. ACP is quite clearly not a form of assimilation; a word like Du dial. *moɲtʲ* 'month' (Aalst) did not develop palatalization of the cluster under the influence of any front

vowel or *j*, since the word never had such an influence (Gmc. **mǣnoþs* is an *nd*-stem). There are no allophones available and nothing is phonologized. Yet the word undoubtedly has palatalization in Aalst (cf. FAND) and is commonly velarized in Limburg and Ripuaria. Clearly, palatalization arose by some other means, but it is not sufficient to set up an *ad hoc* rule for *hoŋdʲ* alone since ACP is a systematic reordering of the palatalization correlation.

1.3.3 The Rise and Fall of Palatalized Phonemes in Germanic

In order to formulate a phonological description of palatalization in the Germanic languages, it is important to take into account the diachronic development of the phenomenon. It is in connection with the rise of *i*-umlaut in the Germanic languages that we find the most important clue to the history of palatalized phonemes in Germanic. Yet the explanation of *i*-umlaut has been treated with little theoretical rigor. Those who have struggled with the phonological explanation of *i*-umlaut in Old High German have run into the conundrum that vowels became umlauted during a second wave of the phenomenon ("secondary umlaut") at a time when the phonetic trigger for it—a following *i* or *j* in a suffix—had long disappeared. Solutions for this problem have not been convincing since they invariably involved positing an allophonic stage for the umlauted vowels that became phonologized at a later stage. This theory we have already rejected as contrary to the definition of allophone. The alternative theory, the so-called *Mouillierungstheorie* or Palatalization Theory, has not enjoyed much popularity among theoretical phonologists since Twaddell, but this rejection has largely been based on the mistaken notion that Germanic has never had palatalized phonemes. Empirical evidence in support of the existence of such phonemes in the living languages as well as the historical dialects, and of the causal relationship between palatalized phonemes and vowel mutation (*i*-mutation) in Dutch has been supplied by Keymeulen (1991; 1993; cf. also Taeldeman 1993). Palatalized phonemes have been recorded in all corners of the West-Germanic dialect area.

The most convincing phonological account of the rise of palatalized phonemes in Germanic comes from Liberman (2007). He proposes that palatalization is the automatic byproduct of West-Germanic gemination. (The situation in Scandinavian is more complex, but is likely similar to West Germanic.) The doubling or lengthening of consonants before *j* resulted in palatalized clusters. Thus, OE *sellan* (< **saljan*) was in actual fact */sɛʃ:an/ with a palatalized geminate. This was the trigger for the development of palatalized consonant clusters, and eventually for palatalized simplex consonants. In particular, Liberman argues that once palatalized geminate phonemes arose, *all consonants* before /i/ automatically became phonologically reinterpreted as palatalized phonemes. The further evidence of *i*-umlaut elucidates the fact that palatality functioned as a suprasegmental feature. It can extend (but, as Keymeulen 1991 has shown, does not have to extend) to the entire syllabic nucleus.

This explanation is more attractive than any of the other solutions. It avoids allophones, which have no place in historical phonology because by definition phonetic niceties cannot be reconstructed. Palatalized phonemes arise *as phonemes* as a result of the reanalysis of phonemes to which the suprasegmental feature of palatality has extended. If palatality (which can include both consonant palatalization and vowel mutation) is a suprasegmental feature, this explains the diachronic and geographical variation. Palatalization of clusters, at least in the earliest stages of West-Germanic gemination may have been optional. Depending on prevailing prosodic factors, a palatalized geminate and the simplex consonant + *j* would have been equivalent—they would have been in competition for a long period of time. This situation is analogous to that of Modern English *got you* which has the optional pronunciation *gotcha* with [tʃ].

Another point in this theory's favor is that it does not get in the way of other sources of gemination. Other resonants are eligible to produce gemination, though *j* is by far the most popular trigger, not surprising in view of the fact that *j* (and *i*) were common in the onsets of inflectional syllables in Germanic. That only palatalized phonemes developed should not

surprise us; we do not have to posit nasalized phonemes because gemination before *n* was rare, while gemination before *l* may have strengthened palatalization.

Nor does this explanation of gemination and palatalization have to stand in the way of theories about the reorganization of syllable structure in West Germanic. Even if gemination as a trigger of palatalization rules out the view of palatalization as a case of phonetic assimilation, there is nothing that prevents cluster simplification or other prosodic restructuring from producing the same effect, namely the absorption of the palatal trigger into a simplex, that is, simplified consonant. This is, however, unlikely, at least until much later, because distinctive consonant length remained active into the literary period of the Germanic languages. Because the rise of suprasegmental palatality made the palatal trigger redundant, apocopation of the trigger in geminated (and palatalized) variants would have had consequences for syllable structure in mora counting Germanic. The chronology is important. Not the syncopation of the trigger leads to the phonologization of the palatalized consonants—this is Twaddell's theory, which dictates the vanishing of any palatalized allophones simultaneously with that of the trigger. Rather the phonologization of palatalized consonants, or better: the reanalysis of the phonological system to include palatalized consonants, created the prerequisite conditions for the demise of competing variants without palatalized geminates. Again, it is not so much that reorganization of syllable structure led to West-Germanic gemination, but rather the reverse. That Germanic was mora counting has not been taken into consideration, though it almost naturally accompanies the presence of distinctive consonant and vowel length, and it is crucial in Liberman's theory of gemination. Again, *phonological* palatalization (not merely superficial phonetic palatalization) is not a case of assimilation of the palatal trigger into the preceding consonant but the reanalysis of a sequence -Cj- into a sequence -C:-. The traditional view of gemination, which claims that -Cj- changed to -CCj- would add a phoneme to the cluster, is counterintuitive and would upset the moraic value of the word (syllable). Liberman's theory does not suffer from this weakness as the moraic value of the cluster is not af-

fected, though the syllable weight of both the preceding and the following syllable may have changed. This is illustrated by a verb like **satjan* with -C#j-. After gemination and palatalization, this became **satt*ʲ*an* (ignoring umlaut), probably to be analyzed as having the structure -C̆:#-. There are alternative views of Germanic syllabification, but in any of them the palatalization of the geminate precludes the possibility of separating *j* of the inflectional suffix from the preceding syllable. One syllable will gain in weight, the other will lose it. The process would, therefore, also push the phonological system further towards a state with weakened final syllables.

Also, if palatalized phonemes are causally linked to the rise of *i*-umlaut in the various Germanic languages, the conspicuous absence of these phonemes, for so long a stumbling block for structuralists against the *Mouillierungstheorie*, becomes less mystifying. Keymeulen (1991) describes the gradual shift from palatalized phonemes to mutated vowels (and, in many cases, ultimately to a disappearance of umlaut) in synchronic dialects of Dutch. As a suprasegmental feature, palatalization does not necessarily have to be present in the consonant; it can be present in the entire syllabic nucleus or only in part of it. This counters the objection that a word like OE *dry* < **drui* could not have developed umlaut through palatalization (and hence that the *Mouillierungstheorie* is fatally flawed). After all, palatalization of the consonants was only a catalyst, not a necessary prerequisite for the operation of suprasegmental palatality. This is not to say that OE *dry* does not present its complications—why should a vowel be interpreted as palatalized?—but this is not an insurmountable objection, as long as palatalization is not conceived of as a phonetic rule of assimilation and part of the active, synchronic phonological system.

Many questions remain. For instance: Why should we have no evidence for palatalized phonemes apart from velars in the earliest writings? It has been argued that this contradicts the notion of widespread palatalization in Germanic. This is not so. That palatalization in West Germanic was not restricted to velars is made clear by such examples as OE *feccian* <

**fetian* and the English word *witch*. In both cases, palatalization and assibilation are present in cases where there is an etymological *t*. The confusion of palatalized velars and alveolars is common and attested from many languages, including various dialects of Germanic. It would entail the presence of palatalized alveolars in Old English. In view of the widespread phenomenon of alveolar cluster palatalization (ACP), which is believed to have developed between AD 1000 and 1350, and the fact that some North-Frisian dialects retained palatalized phonemes up to the present day, there is at least reasonable circumstantial evidence in support of Liberman's palatalization theory. That velars alone have been recorded with any consistency in the early Germanic writings may have a very simple explanation. As Grammont (1933) pointed out, it is difficult for velars to acquire secondary palatalization and it has been suggested that to the ears of the early Germanic scribes, palatalized velars were more salient. While there may be some truth in that statement from a purely phonetic point of view, it is not convincing phonologically. More likely, it was the familiarity with the palatalization of velars in Merovingian Latin that guided them in recording palatalization only in velars in their native tongue. Not that scribes were deaf to other palatalizations but Latin provided no orthographic model.

The development of assibilation in velars remains another point of contention. In particular the time at which Old English developed the affricates [tʃ] and [dʒ] from previously palatalized **kʲ* and **gʲ* is unclear. Minkova (1998, 2003) has argued in favor of a late development of these affricates. This is ultimately a question of lesser importance because it leads us again into arguments about allophones. It is possible that affricates developed out of palatalized velars as a result of *Systemzwang* or dissimilation in order to keep them separate from palatalized alveolars, though this argument has as a major weakness that the affricates are alveolar affricates. And as Liberman (2009) points out, in later English it was palatalized *t* that produced affricates (the *gotcha* examples), though the fact that this is a phonetic rather than a

phonological phenomenon may be of importance. Nevertheless, manner of articulation (stop versus affricate) is sufficient to distinguish the two categories.

What is somewhat puzzling is the apparent reversal of assibilation (affrication) in Middle Low German in the thirteenth century, except in some placenames (Lasch 1939: 250). At first sight, this change seems impossible. But this is only true if one views palatalization (and assibilation etc.) as a *phonetic* process. In a phonological theory, it is possible for (alveolar) affricates to revert to simple velars if these affricates were classified as the palatalized counterparts of non-palatalized velars. The opposition and relationship between the velar and the palatalized affricates could have remained intact. The same happened to the velar and palatal fricative */ɣ/ and */ʝ/ which merged again in the later Middle Ages, though some dialects generalized the velar and other dialects the palatal fricative. Nevertheless, while not impossible, such a remerger is less likely for assibilated (affricated) alveolars. It seems more likely, therefore, to assume with Krogh (1996) that external influence is the main reason for the rapid disappearance of assibilated spellings in Middle Low German.

Finally, ACP remains a curious phenomenon, but it is so widespread—especially if one includes velarized clusters as a continuation of the same process—that lexical or phonetic borrowing of individual items or through substrate influence appears improbable. Phonetically, there is no explanation, as Keymeulen's (1991) attempt makes clear. In phonological terms it must be concluded that alveolar clusters came to be associated with palatalization, but only those clusters that were not preceded by certain vowels, namely vowels that are the result of *i*-umlaut (see chapter 2). This remains an unsatisfactory and even incorrect summary of the situation, because if Keymeulen's theory (1991, 1993) is correct, *i*-umlaut was *caused* by a process of depalatalization of formerly palatalized consonants. No umlauted vowel could ever precede a palatalized cluster; such a statement has chronology the wrong way around. Nevertheless, in view of the fact that words like Du dial. *mɔɲtʲ* 'month' (Aalst) are palatalized, while the word never had a phonetic trigger for palatalization, we must conclude that palatalization

arose as the result of the establishment of a new correlation. Palatalization must then have functioned as a suprasegmental feature and its use was expanded to include candidates that did not have the original phonological prerequisites. In order for that to happen, there must have been a considerable increase in palatalized alveolar clusters through what one might call 'legitimate means,' in order for the phonological system to reanalyze alveolar clusters as almost automatically palatalized. In that respect, I believe that Keymeulen (1991) is correct, when she suggests that weakening of inflectional syllables, especially in verbs, by means of apocopation of the vowels in them played the decisive role in this change. Preterit verb formations of the type ODu **sandida* > MDu *sandde* 'sent' are especially good candidates. This need not be a gradual change, as Twaddellian theory demands, but rather through variation between apocopated and non-apocopated forms in the language could have stimulated the association of palatalization with alveolar clusters. The same reanalysis of the correlation happened in Middle English where the deviating preterit pattern for verbs with short vowels and an alveolar cluster (e.g. *send, sent*), first recorded in the eleventh century, was eventually expanded onto verbs with long vowels (e.g. *burn, burnt; learn, learnt*; cf. Brunner 1960-62).

A final note about ACP: as it now functions in Aalst is a little more complex than I have hitherto described in general terms. For instance, it has an additional restriction on the stem vowel and one that relates to the morphemic segmentation of the word. The dialect does not palatalize eligible clusters preceded by *ă* and *ŏ*. Keymeulen points out that these vowels (if they have survived from Germanic into the current dialect) could not appear in words subject to West-Germanic velar palatalization (WGVP); all Gmc. **ă* and **ŏ* would naturally have been affected by *i*-umlaut and thus do not survive. Hence, all remaining words with such vowels are either the result of recent mutations such as vowel shortening (and hence are eligible for ACP) or are logically ineligible for palatalization. This is a strong indication that ACP is organically related to WGVP. However, this limitation on the stem vowel can be overridden when certain eligible suffixes are added. For instance, the word *klont* 'lump' does not have ACP be-

cause it has *ŏ*, but its diminutive does: *kloŋtiŋ*. There is no explanation for this irregularity, nor for the fact that ACP is automatic in diminutives with *ă* and *ŏ* even if the suffix is *-əkən*: e.g. *aŋəkən* '(small) hand.' In this latter case one might hypothesize that the non-palatalized suffix has probably reverted after previous palatalization and passed on the palatalization to the (simplified) cluster; according to the phonological and prosodic rules of the Dutch diminutive suffix, the word *hand* should have received a palatalized diminutive suffix. That is to say, the fact that *aŋəkən* has a palatalized *ŋ* is not the result of ACP *per se* but probably of interaction between ACP and the rules controlling the diminutive suffix. If the evidence from the velarizing dialects can be reliably related to ACP, the particular restrictions on this process in Aalst may be the result of later developments that are specific to that dialect. The editors of the FAND comment (with regard to map 36 *[hij] zit*, vol. 2) that words like *hond* 'dog' and *kant* 'side, edge' are subject to the same palatalization (ACP) in much of the palatalizing area. This contradicts the rules for ACP in Aalst where *hond* and *kant* are ineligible. However, the historical rationale for their exclusion in Aalst is persuasive, and it may be more plausible to assume that in other dialects the reach of ACP expanded over the original context.

1.4 Palatalization and Related Phenomena

PALATALIZATION IS ACCOMPANIED BY OR IS RELATED TO A NUMBER OF different phonological phenomena. The most important of these is *i*-umlaut. I argue that the *Mouillierungstheorie* of *i*-umlaut is correct, so it is not surprising to find a correlation in the dialectological and philological data between palatalization and *i*-umlaut. There also appears to be a phonological correlation between palatalization and vowel shortening. The dialectological research included below also shows a close relationship between velarization of alveolar clusters (and quite possibly of single alveolars) and the palatalization of such clusters as it

still survives in southern Dutch dialects. Finally, it is argued that the origin of WGmc. **r* can be explained only by palatalization of Gmc. **z*.

1.4.1 i-*Umlaut and Epenthesis*

A close relationship between palatalized consonants and Germanic *i*-umlaut was suggested early on. The so-called *Mouillierungstheorie* or 'palatalization theory,' which dates back to Scherer (1878) and enjoyed some popularity in the later nineteenth and earlier twentieth century (esp. Rooth 1935), states that the common mutation of stem vowels before a following front vowel or palatal semivowel *j* in the Germanic languages happened by first palatalizing the intervening consonants.

Umlaut has been recorded in all of the North- and West-Germanic languages, though in varying degrees. Among the modern languages, it is the most widespread in Standard German, where it acquired extensive use as a morphological marker (esp. as a marker for noun plurals, certain types of adjectives derived from nouns, the comparative degree, and the preterit subjunctive in verbs). Umlaut has been equally important to the other West-Germanic languages, though later phonological and morphological changes have obliterated or obscured much of this in Dutch and English. The relationship between such words as *drink* and *drench* is based on *i*-umlaut in pre-Old English or even to Proto-West Germanic because OE *drencan* < **drankjan* is a causative weak verb formed from the preterit of **drinkan* (= **drank*).There is a fair number of such pairs in English (*sit - set*, *full - fill, fall - fell*), as well as remnants of other morphologically motivated umlaut products (e.g. *vixen* < pre-OE **fuxīn*). Perhaps because the English plural formation is not as heavily influenced by umlaut as Modern German (*men, mice*, and *geese* being the only three surviving umlauted plurals commonly used) it does not stand out as an important process in English, though Richard Hogg calls it "uncontroversial" (1992b: 113). But this supposed dearth of umlaut in English is only relative in comparison with German. The situation is similar for Dutch, where the traditional view of

umlaut limited to short *ă* is belied by examples for umlauted reflexes of WGmc. **ŭ,ū, ā, ō* not all of which can be attributed to influence from eastern or southeastern (German) dialects (Schönfeld-Van Loey 1970).

From a phonological point of view, umlaut and palatalization are two sides of the same coin, both involving the rise of palatalized versions of their once non-palatalized counterparts, under the influence of a front vowel or *j*. This must not be misunderstood as an argument in favor of the notion that all umlaut in every word must pass through a palatalized consonant; analogy and morphonological pressures played (and play) a role in the further spread of umlaut.

As an alternative to distance assimilation the *Mouillierungstheorie* has received substantial support from dialectological field work and phonological analyses. Keymeulen (1991) describes ongoing palatalization and depalatalization phenomena in a Belgian-Brabantic dialect of Dutch (including comparisons with neighboring areas in Belgian Brabant and Limburg). She was able to prove that *i*-umlaut arises in the living dialects as a result of tendencies to depalatalize formerly palatalized consonant clusters (Keymeulen 1991; 1993). More specifically, the information she gathered as part of the field work in the dialects around the city of Aalst indicated that there was a geographical layering of different diachronic stages, with palatalized consonant clusters remaining in full force at the center; surrounding this nucleus a ring of wholly or partially depalatalized clusters with umlauted stem vowels or with epenthetic vowels before the consonant clusters; and finally an outer area with only sporadic traces of either palatalization or umlaut. Her analysis is considerably strengthened as relevant for larger parts of West Germanic by the fact that the same type of palatalized consonant clusters (alveolar cluster palatalization or ACP) has been found in North Frisian (see chapter 4) and some now extinct colonial dialects of German. Furthermore, if it is correct that velarized clusters represent a further development of ACP, this type of palatalization must have been widespread in continental Germanic, and possibly also in English. Velarization of alveolar clusters

is found in a large area of northern Germany immediately contiguous to the area where ACP is found, so that it is not unreasonable to connect it with palatalization. Epenthetic vowels, which, according to Keymeulen's research, develop in a stage when the palatalized alveolar clusters are depalatalized, are also recorded across West Germanic.

There is one other important peculiarity about ACP, or indeed about most types of living palatalization, namely the common disallowance of front vowels before palatalized clusters. Though only Keymeulen (1991) gives a thorough description of this phenomenon in a Brabantic dialect of Dutch, the correlation has been observed in German in the area around Groß Schönau (south of Dresden) in former Bohemia (Wenzel 1919), Transylvanian German (Scheiner 1887; Klein and Schmitt 1961; Thudt 1966), some Tyrolian dialects (Klein and Schmitt 1965) and Silesia (Bellmann 1967). Although the exact way ACP developed in the Middle Ages remains unclear, Keymeulen's suggestion that it was a reconditioning of the earlier West-Germanic velar palatalization (WGVP) combined with her observations of the vowels preceding palatalized clusters has led to the conclusion that ACP has a strong tendency, if not an absolute rule, to disallow the presence of front vowels preceding a palatalized cluster. This is illustrated clearly in the dialect of Mediasch (cf. Scheiner 1887; 1896) where Germ. *finden* 'to found, establish' appears as *fɑɲdn*, with a palatalized cluster and Gmc. **i* replaced by *a*. Also, in many German dialects (see figure 2, chapter 3) affected by ACP, the word Germ. *Feld* 'field' appears as *fald* or *faild*. Thus, front vowels shift to their back counterparts in such contexts, in a sense a form of *Rückumlaut*. That this development is not new is illustrated by the fact that southern Transylvanian also disallows front vowels in many cases before other palatalized consonants, in particular the assibilated velar, e.g. *draintXən* 'to drink,' *dātXən* 'to cover' (NHG *decken*).

Finally, it should be stressed that the correlation between ACP and vowel quality is not uniform through all time and at all places. While there is a strong correlation between ACP and the disallowance of front vowels, it is also true that palatalized alveolar clusters (and oth-

er palatalized consonants or clusters) have sometimes functioned as triggers of vowel fronting or umlaut, e.g. in southern dialects of Dutch, though it has also been noted in the Amsterdam dialect (Van Weijnen 1966:237). From a diachronic perspective this is hardly surprising since an eventual depalatalization of the consonant (cluster) will almost naturally lead to vowel umlaut. Occasional instances where palatalized consonants accompany fronted or umlauted vowels do not negate the general rule and are in any event relatively rare.

1.4.2 Velarization

Another sound change that is closely related to palatalization is velarization. In phonetics, velarization is the raising of the back of the tongue (Ladefoged 1982: 211). Velarization can be conceived of as the opposite of palatalization. Whereas with the latter sound change, a secondary feature is added towards the front of the mouth (the hard palate), velarization moves in the opposite direction, towards the soft palate (velum). If both sound changes are defined as a process whereby a secondary articulation is added, then velarization and palatalization oppose each other phonologically as well, as has been argued by Jakobson (Jakobson and Waugh 1987). This situation is illustrated by Russian, where most consonants are either palatalized or velarized. With regard to Germanic, Hinskens and Van Oostendorp (2004) comment that the process of palatalization of alveolars in the dialect of Maasbracht (in Dutch Limburg) is in fact a process of velarization.

Velarized consonants are common in Germanic, but especially interesting is the relationship between velarized alveolar clusters and alveolar cluster palatalization (ACP). The two phenomena are nearly always found together, either in the same dialect with different distributions or in closely related, neighboring dialects. This is particularly true of an area straddling the Dutch-German language border centered around Cologne and Maastricht (and extending from East Flanders into Brandenburg) but also occurs in Transylvanian German dialects (Klein and Schmitt 1961). In the more western parts of this area, ACP and various related

phenomena (*i*-umlaut, epenthesis, depalatalization) are more common, while on the eastern side, palatalized alveolar clusters blend into areas where the same alveolar clusters become velarized. The phenomenon is sometimes referred to as Rhenish velarization, but this is technically speaking incorrect because there are two separate types of velarization: first, the velarization of *-nd* clusters, which is our focus here, and second, the velarization of single *-n*(-) either word-finally or medially (e.g. *wiŋ* 'wine'). The second kind is usually referred to as Rhenish or Ripuarian velarization; in older German works the terms *Gutturalisierung* and, confusingly, *Ripuarische Mouillierung* (Frings 1913; Welter 1938) were used for this second type of velarization. Since there is considerable overlap between the two types of velarization (dialects might have both) as well as between velarization and palatalization, confusion over the terminology might easily arise.

A satisfactory explanation for the origin and development of velarization has yet to be given. Werlen (1983) lists several different hypotheses. Frings (1926), followed by Welter (1929), proposed that velarization is the result of a previous palatalization mutating under the influence of other phonological features of the dialects in question. In view of the close relationship between Rhenish velarization and ACP, both in the Limburgic-Rhenish dialect area and in the German colonial dialects of Transylvania (Siebenbürgen), this hypothesis seems most attractive. In the context of several vocalic changes in Germanic, Prokosch (1938: 114) proposed that the Germanic dentals and *r* and *l* must have been post-alveolar, a suggestion that might be taken as an early structuralist formulation of the hypothesis that alveolars may have been palatalized. Heinrichs (1955) argued that the continued presence of a palatalized diminutive suffix in dialects otherwise dominated by velarization (Armen, near Krefeld) proved that palatalization predates velarization, though this argument is not conclusive, since the palatalized consonant in the diminutive suffix could have been reinforced or even reimported when Standard Dutch came to dominate the Krefeld area from the sixteenth to late eighteenth century.

Considerable disagreement remains regarding the phonological or genetic relationship between different forms of velarization (velarization of *nd* and other alveolar clusters, velarization of single word-final *-n*) and in different parts of German (Ripuaria, Hessen, Prussia, Switzerland and Alsace-Lorraine). Some dialects seem to have only partial velarization, for instance only in word-final position while word-medially clusters *-nd-* (as in *finden*) are simplified, usually to *-nn-* (and *-ld-* becomes *-l-*, cf. Ramisch 1908; Hofmann 1926; Stritzel 1937). In connection with the dialect of Fulda, where some towns have full-fledged velarization of alveolar clusters and others assimilate the dental to preceding *n*, Noack (1938) proposes that assimilation is a newer phenomenon.

There are some indications that Dutch, too, went through a phase of fairly widespread velarization, nearly all traces of which have been obliterated (Frings and Schmitt 1942). The seventeenth-century Dutch poet Bredero writes *stongh* as the past tense of *staan* 'to stand' (instead of *stond*), and similar velarized forms remained even in western Dutch dialects (Rotterdam *stong*, Dordrecht *sting*) into the nineteenth century (Winkler 1874). It is unclear how this type of velarization is related to the common Dutch (and Old Saxon) velarization of the Gmc. sequence **-old, -olt* > *-oud, -out* (e.g. **gold* > Du *goud*, **holt-* > Du *hout*).

It seems probable that English also underwent velarization, as is evidenced by the form of the suffix for the present participle (now the gerund), *-ing* from OE *-end* (Luick 1914-40; Rooth 1941-42; Mossé 1957); cf. also words such as *shingle* < Lat. *scindula* < **scandula*. If the phonological explanation of velarization in Ripuaria proposed by Frings and Welter is correct—that velarization is a change succeeding a previous stage of palatalization—and if this theory has wider phonological validity, this would mean that velarization throughout German, Dutch, and English would be an indicator of the earlier palatalization of *-nd* clusters.

1.4.3 Vowel Shortening

According to Keymeulen, ACP in Belgian Brabant is automatically "linked" to shortening of the stem vowel (1991: 135; cf. also p. 137n. 1). The phenomenon is widespread in the area with ACP (cf. Goemans 1897; Welter 1929; Pauwels 1958), but it also appears in dialects with velarization. Vowel shortening is often connected with a palatalized or palatalizing suffix—the latter referring to a suffix containing an alveolar that creates a new alveolar cluster across sandhi—such as with diminutive suffixes, but not exclusively so. Keymeulen warns that vowel shortening appears before non-palatalized clusters and before simplex alveolars. In the dialect of Aalst palatalization and vowel shortening are inextricably linked. In the formation of comparatives and superlatives, palatalization and vowel shortening seem to be optional, but it is impossible for one rule to operate without the other: if palatalization is used, then the vowel is automatically shortened. Vowel shortening is also related to velarization, providing another clue that velarization and palatalization are genetically linked. In the Ripuarian dialect of Eupen (in German-speaking Belgium) stem vowels are shortened in practically all diminutives, regardless of whether the diminutive is *-(ə)kə* with the retained velar or one of the palatalized forms *-tjə* or *-tšə*, cf. *pīp* 'pipe' vs. *pipkə*, *brūt* 'bride' vs. *brytjə* (Welter 1929). Welter also suggested that there is a relation between these quantity alternations and the rise of the tones (*Schleifton/sleeptoon* and *Stoßton/stoottoon*) common in German and some Dutch dialects in this area. Velarization also blocked diphthongization in German dialects: e.g. *wiŋ* 'wine' ~ *Wein*; *bruŋ* 'brown' ~ *braun* (remembering that diphthongs are by definition long vowels). However, neither Welter nor Keymeulen is willing to claim that there is a direct, or causal, relation between palatalization/velarization and vowel shortening. Vowel shortening appears with both but the exact reason why these three phenomena are linked remains unclear. It is possible that palatalization (and subsequently velarization) led to a general reordering of the moraic equilibrium of Germanic words. If Liberman (2007) is correct that the rise of palatalization is linked to West-Germanic gemination, this would have caused a shift towards greater syllable

weight in the root (while detracting from secondary and final syllables). Some or even most syllables, in order to avoid overly heavy root syllables would have automatically shortened the stem vowels to accommodate the greater syllable weight in the new palatalized geminates. Other dialects may well have resisted palatalization or gemination in words with already maximally heavy root syllables (as seems to have been the case with Old Norse; cf. Schulte 1998 and Liberman 2001).

1.4.4 Rhotacism

One final, closely related phenomenon is rhotacism. North-West Germanic developed an additional *r* from those reflexes of PIE **s* affected by Verner's Law, as in Du, Germ. *waren,* Engl. *were* cf. Goth. **wēsun*. This new *r* then merged with the existing PIE **r* in most dialects. The process of rhotacism in North and West Germanic has not been satisfactorily explained. However, evidence from Scandinavian runes has provided a clue that points to a role for palatalization in the process. In Viking Age runic inscriptions in Sweden and Norway we find the use of two separate symbols for *r* (Runge 1974; Haugen 1976; Alexander 1983; Spurkland 2005: 105). In addition to the older symbol ᛦ representing *r* in the elder futhark, inscriptions in the reformed younger futhark reveal a new symbol ᚱ. This new symbol soon supplanted the old one in Norwegian inscriptions, but in Swedish inscriptions the two symbols were used side by side while retaining their separate historical distribution. The new symbol ᚱ (commonly transcribed as **r**) was used for the reflexes of old PIE **r*, while the old symbol ᛦ (transcribed as **R**) was employed for the voiced reflexes of PIE **s*.[1] Thus, the two sounds had a distinct pronunciation for at least a while, before there was a complete merger. It has been proposed that the new *r* (from PIE **s*), before it collapsed and merged with PIE **r*, had the quality

[1] I adopt the convention of Scandinavian runologists of representing transcriptions of runes in bold face in order to clarify my argument and avoid the confusion that might otherwise exist due to the fact that these transcriptions do not match the symbols used in IPA.

of [r] and had developed by palatalization, going through a stage in which it resembled the palatalized *r* of Modern Czech *ř* as in *Dvořák*. Old *r* is thought to have been uvular [R], and the new *r* apical [r] (Runge 1974). It is supposed that the same distinction must have existed in West Germanic since the same factors and the same results obtain.

This explanation is not without problems. It makes perfect sense from a phonetic point of view and it may well be correct. From a phonological point of view, however, several questions arise. First of all, we must reject statements regarding the *phonetic* quality of the two different *r* phones in Viking Age Swedish. Whether they were uvular or apical or anything else we cannot know, and these proposals are *ad hoc* explanations. Secondly, it is curious that only the supposedly voiced counterpart of PIE **s* should have become palatalized and not **s* itself. It is sometimes proposed that **ᚱ** with its new value may have represented a palatalized */ʒ/ from earlier */z/, and this is not impossible, though unlikely, as the rune seems to have been in competition with **ᚴ** rather than **ᛋ** from its earliest appearance. Although the voiced version of PIE **s* is commonly transcribed as *z*, the Gothic evidence for */z/ (in the Gothic alphabet **𐍆**) is not unambiguous. Gothic seems to have had haphazard working of Verner's Law. One would have expected Go **wēzun* to correspond with Germ. *waren* and the only explanation around this mismatch is to posit a different stress pattern in Gothic from West Germanic thus preventing Verner's Law in this instance in Gothic. But why did **s* not become palatalized? North-West Germanic appears to have lacked a voiced counterpart for **s* as it completely merged with **r*, leaving **s* once again orphaned in the phonological system as it was before Verner's Law operated, though */z/ was resurrected in German and Dutch in the later Middle Ages.

1.5 The History and Linguistic Geography of Palatalization in Germanic

Neither the history nor the linguistic geography of palatalization in Germanic has received enough attention. The scholarship on these aspects of the question remains fragmented. Nevertheless, over the past century or more, several different theories regarding the origin of Germanic palatalization have been proposed. Most of them share the view that palatalization is an external influence from neighboring languages. The majority of the research into the origin of palatalization in Germanic has come from studies on Old English and Old Frisian. The reason for this focus is probably the survival of a relatively large and early written record for Old English. Since it was easy to establish palatalization of velars in Old English, this dialect of Germanic has become the primary locus for historical phonologists studying palatalization. Although Old Frisian does not survive well (there is only a small corpus, which dates to after *ca.* AD 1200; see chapter 4) the linguistic closeness of this language and its modern dialects to Old English has caused Frisian to become included together with English in theories regarding the origin of palatalization. The presence of palatalization in other Germanic dialects has been downplayed considerably, often even ignored. But palatalization and assibilation are known from all surviving Germanic languages except the now extinct East Germanic branch.

1.5.1 The Linguistic Geography of Palatalization in Germanic

Throughout the recorded and reconstructed history of the Germanic languages, palatalization has been found in both the Northern (i.e. Scandinavian) and Western branches in all of the affected languages. However, it would go too far even for East Germanic to conclude that no palatalization ever existed there. This branch is represented by the surviving fragments of Wulfila's Gothic Bible, which presents a Germanic language at an early stage of development in an orthography that is standardized according to a foreign model (Ancient Greek). Consi-

dering that in the history of Germanic palatalization is a form of assimilation of unstressed syllables with a palatal vocalic or consonantal element into the stem and given what we know of Gothic stress patterns, Wulfila's Gothic of the 4th/6th century AD is an unlikely candidate for such a sound change, at least at that stage of historical development (for Gothic and Proto-Germanic stress see Liberman 2006). It is not at all unlikely that later Gothic—for which we do not have any philological evidence—would have resorted to shortening the long forms with the long vowels, assuming that Gothic shifted word stress to the root syllable (i.e. reduced the ability to contain full vowels in all syllables except the stem) as other Germanic languages did, something which is not at all certain. If such a hypothesized change happened, palatalization would have been probable, given the many palatal elements in morphological suffixes.

Palatalization has been recorded with certainty in all other branches and languages of Germanic. In Scandinavian (North Germanic), palatalization seems restricted to velars and it appears to be, at least at first sight, a fairly recent development. It is recorded in Icelandic, Norwegian, Swedish, and Danish. Recent scholarship on velar palatalization in Norwegian and Swedish suggests that the assibilation (fricativization) of Gmc. **k* to [ʃ] or [ç] (e.g. in Bokmål *kirke* [ʃɪrkə] or *kjerke* [çɛrkə] 'church') is gaining ground, especially in urban dialects of Norwegian (see Kristoffersen 1998). In Nynorsk the same word 'church' is *kyrkje* [kyrcə], also with orthographic representation of palatalization. Danish has limited evidence for palatalization; nevertheless, the shift of older /ɣ/ to modern /ˌɪ/ or zero fits the Germanic pattern of velar palatalization (Basbøll 2005: 218 n. 31). Liberman (2007: 10, 12-13) summarizes several other phenomena in Scandinavian dialects, including the opposition between two variants of Gmc. **n* and **l*, in which palatalization almost certainly played a role. In general, Scandinavian palatalization is probably old, predating the earliest written records.

The best-known variety of palatalization in West Germanic is again velar palatalization, which predates our earliest written records. In the literature it has usually been associated with Old English and Frisian and described under the name Ingvaeonic, North-Sea German-

ic, or Anglo-Frisian palatalization. These are all loaded and controversial terms (see below and chapter 4), since they are imprecise, including dialects that ought not to be included while excluding others, so that I prefer to use the term West-Germanic velar palatalization (WGVP). Old Saxon and Old Dutch were affected by West-Germanic velar palatalization. Northern dialects of Modern German in Brandenburg, hardly on the North Sea coast, have a reflex /j/ for Gmc. **g* that resulted from West-Germanic velar palatalization. The age of WGVP is attested to by the Anglo-Saxon runic inscriptions, which already distinguished between the so-called *cen* (ᚳ) and *calc* (ᚴ) runes (Page 1999).

West-Germanic velar palatalization affected both the voiced and the voiceless velar in all known West-Germanic dialects, except perhaps Upper German dialects, though our understanding of earlier Old High German phonology is too limited to say anything definite about this. On the surface, it seems that dialects that early on developed a plosive /g/ from the voiced velar fricative WGmc. **g* (/ɣ/) (i.e. all of Upper German) did not palatalize the voiced or the voiceless velar, at least initially. It is unclear whether there is any relationship between this apparent lack of velar palatalization in southern dialects and the Second Consonant Shift. However, one important fact contradicts the notion of the absence of velar palatalization in southern German and that is the opposition between *ich-* and *ach-Laut*, i.e. [ç] and [x], in all of High German except parts of High Alemannic (Swiss German) (cf. Kranzmayer 1956). The phonemic status of these sounds (whether as independent phonemes or as positional variants of other phonemes) is under dispute (see chapter 3 for a discussion), and the sounds are reflexes of Gmc. */χ/, */ɣ/ and */k/. Nevertheless, the origin and phonetic basis for the distinction between [ç] and [x] is that of the frontness or backness of the preceding vowel, respectively. This is exactly the pattern of WGVP. It seems likely, therefore, to assume that the opposition is quite old (much older than believed by some; cf. Russ 1982) and that it dates back to pre-Old High German or Proto-West Germanic.

If we accept that Old High German (or, at least, High German at some point) produced palatal and velar reflexes of both the voiced and the voiceless velar, then the phenomenon was ubiquitous in West Germanic. In English the palatalized reflexes became incorporated into the standard language after a further step of assibilation turned them into the affricates /ʧ/ and /ʤ/. In Frisian the same sounds developed in slightly different fashion, producing a partial merger with /s/ (for the voiceless velar). The status of the other reflexes, including /ʧ/ as in *tsjerke* 'church' and /ts/ (for the same word which appears as *tserke* in other dialects), has not been addressed satisfactorily by phonologists of Modern West Frisian, though the scholarship with regards to East Frisian is much clearer (see chapter 4). In Low German and Dutch, WGVP also produced affricates, as is attested from the earliest period by placenames from the Low Countries and Saxony. The greater majority of these affrications were undone in Middle Low German, but in most Dutch and some German dialects the affricate reflex of the voiceless velar Gmc. **k* has survived in the diminutive suffix, as /ʲ/ in Modern Standard Dutch and as /ʃ/ and /ç/ in other dialects (see chapter 2). In all West-Germanic languages (except Upper German), initial Gmc. **g* shifted to a partial merger with /j/ (cf. OE *giefan* > ME *yiven* 'to give'), though this merger was partly undone, either internally through phonological reordering or morphological leveling, or through external influence (influence from Old Norse is usually cited as the reason for the appearance of a plosive in MnE *give*).

In addition to velar palatalization, Dutch, German, and Frisian—and possibly English—developed a secondary palatalization correlation in consonant clusters of *n* and *l* + dental, sometimes also other alveolars. This phenomenon, for which no standard English name is available, I have called alveolar cluster palatalization (ACP). It can be observed especially well in Brabantic dialects of Dutch spoken in Belgium and has been described by Keymeulen (1991); for that reason the main description is included in chapter 2. However, the same phenomenon has been observed in some German (see chapter 3) and North Frisian dialects (see chapter 4). It is also likely that velarization of alveolar clusters in a large number of German

dialects, sometimes called Rhenish velarization, is related to ACP and that palatalization preceded later velarization. ACP and velarization are often found in neighboring dialects and were especially common in the now extinct colonial dialects of German in Eastern and Southeastern Europe (Prussia and Transylvania). ACP appears to be a later development of WGVP. Van Loey (1969) argued that it must have begun before Dutch lost distinctive consonant length (gemination), i.e. certainly before the fourteenth century and possibly before the eleventh century. This accords well with the fact that ACP (and the *later* development of velarization) exists in the German dialects brought East by settlers in the fourteenth century. A complicating factor in the reconstruction of ACP is the fact that there is some evidence that Middle English also underwent this change. The gerund suffix *-ing* derives from the Old English participial suffix *-end* (Rooth 1941-42; Mossé 1957) a change also recorded in Thuringian dialects of German (Hentrich 1906). Liberman (2007: 6) adds a few more examples from Middle English that suggest that ACP was active in other alveolar clusters. He also argues that palatalization of other consonants (single consonants, not just clusters) was widespread in Germanic, though only some North Frisian dialects retain any widespread palatalization of labials and other consonants (see chapter 4).

1.5.2 The Ingvaeonic or North-Sea Germanic Theory

Technically, we are dealing with two separate subtheories. The first views the so-called Ingvaeonic traits of West Germanic as substrate influences, while the second considers them to be innovations of a group of West-Germanic dialects, but this distinction is not always clearly articulated by scholars. Frings (1944) describes the history of the West-Germanic languages in terms of the names for the Germanic tribes mentioned by Tacitus in his *Germania*. He argues that linguistic features spread as the various tribes who speak different varieties migrated. He even went so far as to distinguish between Common Ingvaeonic and Coastal Ingvaeonic. But the term "Ingvaeonic" is controversial, and most modern researchers prefer the term "North

Sea Germanic." Maurer (1952) and Schwarz (1951) held that the term "Ingvaeonic" is a cultural designation and ought not to be used in linguistic research. The Frisian tribe almost certainly did not worship the same gods as the Ingvaeonic cultures, though it shares in the linguistic developments of North Sea Germanic, while some Ingvaeonic cultures were not affected by the linguistic phenomena usually subsumed under this term. But the problem is more complex than the replacement of one term by another, since, as the discussion in Maurer (1952: esp. 176f.) shows, there are several "layers" within the dialects and languages that are commonly considered North Sea Germanic. The history of the Dutch language is a case in point.

The position of Old English in this question has long been considered of central importance. [2] Older scholarship held that the palatalization found in Old English and Old Frisian points to a common development in these two languages, and thus to a shared moment of inception. Siebs (1901), Luick (1914-40) and Campbell (1959) held that the origins of palatalization must lie in the continental period of both languages. Kluge's view (1901), though essentially the same, is a little more nuanced. He pointed out that the palatalization of Old English velars ("Gutturale") must have taken place at a time when a West-Germanic dialect continuum still existed, since certain words require the presence of an inflectional *i* that, according to Kluge's reconstruction, would have been apocopated by the time of the separation of Old English from the other continental Germanic dialects. More recently, objections to this view have been raised. Reconstructions of the relative chronology of Old English and Old Frisian sound changes have led some scholars to conclude that palatalization in these languages could not have occurred at the same time (Hogg 1979; Stiles 1995; Nielsen 2001), but Fulk (1998) and Laker (2008) show that the apparent different phonological behavior of the reflexes

[2] For some of the details of the history of scholarship on Old English and Old Frisian palatalization I am indebted to Stephen Laker who shared with me an earlier version of his article (2008) about the palatalization of velars in these languages.

of palatalized velars in the two languages does not necessarily require that palatalization originated in the two languages separately.

Old English and Old Frisian are not the sole representatives of Germanic languages with palatalization, but the relationship with palatalization in other, neighboring dialects has rarely been investigated. Laker notes in passing that "[i]t 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" and also that "there is sporadic orthographic evidence for palatalization in Old Saxon" (2008: 173). Yet, as is fairly typical of scholarship in this area, he shies away from discussing these related languages because the evidence is too "sporadic" and also because of the influence of Franconian on the formation of Dutch and that of High German on Old Saxon. Exactly why such an influence should disqualify Old Dutch and Old Saxon from the discussion, or how Laker defines Old Dutch if it is something different before the "Franconicization" of the language, remains unclear.

A complication in tracing palatalization in the continental West-Germanic languages is our relative ignorance of the languages and tribes who lived in the Low Countries and northern Germany before *ca.* AD 1000, and certainly before Charlemagne. Frings (1944) argued for the pivotal role of Dutch in studying the development of the West-Germanic languages. He pointed to the genetic relationship between Middle Dutch, Old English, Old Frisian, and Old Saxon, and in particular the number of shared features found in Flemish dialects. Kuhn (1955-56: 39-40) provided a useful summary of various smaller migrations in this area and the resulting linguistic confusion. The origin of English, or rather, its linguistic relationship to the neighboring continental Germanic languages, remains a matter of debate. Old English is most closely related to Old Frisian. Nielsen (1981) argues that the Frisians must have participated in the settling of Britain.

The exact prehistory of Dutch and the form of what is called Old Dutch—a term now preferred over Old Low Franconian—is unknown. Hogg (2002) has shown that modern Dutch does not derive directly from Old Low Franconian but includes phonological and morphological components traditionally considered Ingvaeonic, North-Sea Germanic, Anglo-Frisian, or Saxon. The so-called Ingvaeonic palatalization of velars that is usually taken as a distinguishing characteristic of English and Frisian affected Old Dutch as well, and remnants of palatalization have been detected in Old Saxon. Yet in both Old Dutch and Old Saxon most of the evidence comes from petrified place names and a small number of dialect words. Scholars suppose that both languages later lost this palatalization, resulting in the reversal of the palatalized velars to their original forms. The research by Keymeulen (1991, 1993) shows that palatalization must at one time have been pervasive in Old Dutch. One major problem with the theories arguing in favor of Ingvaeonic or Anglo-Frisian features in Flemish, or the supposed influences from Old Saxon on the coastal dialects of Flanders, is the conspicuous absence of alveolar cluster palatalization in the modern dialects, while it is so widespread in the neighboring Brabantic dialects.

The paramount problem of the Ingvaeonic or North-Sea Germanic theory is that much of it becomes a circular argument. The theory does not explain where North Sea Germanic derives its palatalization from. If it is an internal development, how did it come about? If it is the result of a substrate, what sort of substrate was it?

1.5.3 Influence from Old French (Romance)

A more recent theory about the origin of palatalization in Germanic looks to the Romance dialects of northern Gaul. Interest in this area has arisen as the result of observed morphological and phonological parallels between the southern dialects of Dutch and the neighboring dialects of Walloon French. The earliest history of Dutch, about which we know little, has led to considerable speculation about the relationship between Gallo-Romance and Germanic di-

alects during the first millennium AD. In particular, the Dutch dialect of West Flemish has been considered influential in the rise of Dutch. Goossens (1996) and Lange (1998, 1999) concluded that certain older features of Common West Germanic, and specifically of Franconian, appear to have been pushed out of the dialects that developed into Dutch from the Flemish dialects eastward. They argue that the West-Flemish "Kultursprache" (Lange 1999: 196) that developed between *ca.* AD 500 and 1000 lies at the root of what is now Dutch.

Lange attempts to reconstruct the earliest stages of the southern Dutch dialects in comparison with the dialectological and philological data available for the Germanic and the Romance dialects spoken in northern France and Belgium. Our state of knowledge about the former is limited; Lange can appeal to little apart from the fragmentary *Paris Dialogues* for the earliest period. About the early Romance dialects in this area, however, we know more. Lange concludes that palatalization in the southern dialects of Dutch, that is to say, in West Franconian, was a feature borrowed or imported from the neighboring Romance dialects, in particular North Gallo-Romance. Lange is not the first to ponder this possibility (cf. Selmer 1933), but he is the first to provide an extensive case for the Romance origin of palatalization. His argument is indebted to recent research into the migrations and earlier settlements of the Germanic tribes in the Roman provinces of Belgica and Germania Inferior. He claims that Franconian tribes had settled in this area, on the left bank of the Rhine, as early as the third century AD, and adopted the more prestigious Gallo-Romance spoken by the Gallic and Roman elite next to their native language, thus becoming bilingual. Crucial is Lange's claim that this dialect, unlike many other Romance dialects in Gaul, palatalized the voiced and the voiceless velar plosive before *all* vowels regardless of frontness, a feature that allegedly survives in modern Walloon French—though examples for palatalized (and affricated) *k* before back vowels seem to be sparse. Lange lists the Liège form *tchwèse* (French *chose*) (Lange 1998: 47-48). He believes that this feature was incorporated into the native Franconian dialects where the geminated velars allowed for easy reanalysis as palatalized geminates, so that early Old Franconian had

both simplex and geminate palatalized velars. It is from this epicenter that the neighboring dialects of English and Frisian then adopted their palatalization since at this early stage (before the seventh century) both were under considerable influence from the much more powerful Frankish empire.

Lange rejects any shared continental period for the English and Frisian tribes (the Anglo-Frisian theory). He ascribes the later disappearance of palatalized affricates in Dutch to the ascendancy of the westernmost dialects of Franconian, spoken along the North Sea coast of northern France and Belgium. This area, he believes, was settled somewhat later by Saxon tribes from across the Rhine that never adopted the Gallo-Romance palatalization and, more importantly, were influenced by the Piccardian dialects of Romance, which did not palatalize velars before back vowels. As a result, these Germanic dialects, which developed into what we now call Flemish, and which are Saxon (not Franconian), did not develop the same system of palatalized velars and when Flemish became influential, it eradicated the palatalized phonemes from the earlier period. This explains, according to Lange, why there appears to be a North Sea-Germanic or Ingvaeonic substrate in Dutch—in reality it is simply an earlier period of an internal Dutch/Franconian development.

Lange's description of the influence of West Flemish on the emerging Middle Dutch language sounds attractive, since it is in accord with what we know about the political history of that period. Also, among the southern Dutch dialects, West Flemish remains conspicuously free from palatalized consonants to this day despite the abundant survival of such consonants in conservative Brabantic dialects immediately to the east (i.e. Aalst, which is geographically in Flanders). Thus, the notion that other linguistic factors obtained there is cogent.

As a whole, however, Lange's specific claims about the origin of Germanic palatalization are unconvincing. Apart from the fact that he contradicts himself—by first claiming that Piccardian shared in the palatalization before back vowels and then that it either did not or reverted—there are other questions his account raises. One should not be dismissive of a pro-

posed disappearance of reconstructed features, since such situations existed, but some skepticism is warranted. There is no convincing philological evidence that Flemish first adopted palatalization and then shed it, all before meaningful records of the dialect begin. Absent such evidence, it seems safer to assume that Flemish never palatalized any consonants, for whatever reason.

The philological evidence upon which Lange bases his reconstruction of unrecorded Old Dutch, as well as dialectal Romance, is vanishingly small. I have already remarked on the absence of unambiguous examples for palatalization before back vowels in Gallo-Romance, but in view of the well-recorded palatalization of velars before *a* in all of northern Romance (cf. MnF *chat* 'cat' < Lat. *cattus*) it may well be correct. Yet the theory does not provide any phonological or philological motivation for the development of palatalized consonant phonemes in this area at that particular time. Why should Gallo-Romance deviate from the broader pattern of palatalization of velars in Late Latin across Europe? Since Lange admits the existence of similar palatalizations in some small islands along the Germanic-Romance language boundary (1998: 48-49), is it not possible to reverse the theory and postulate Germanic influence on the Romance dialects? Lange even alludes to this possibility in an indirect way when he remarks that sequence of velars and *j* were common in Franconian, though he does not provide an accurate picture of Germanic geminates before *j*. Finally, the notion that West Flemish developed out of a mix of Saxon and Piccardian influences is probably not correct. It is unclear whether it is Piccardian or Saxon that Lange holds primarily responsible for the absence of palatalization in West Flemish, though he uses their combined influence on the local dialect as an argument in support of his reconstruction, presuming thereby that neither source language had consonant palatalization. For Saxon this is untrue, since Old Saxon participated in West-Germanic velar palatalization (WGVP), which is illustrated both by surviving place names and recorded writings including the *Heliand* (see chapter 3). Although it is possible to argue for Low Franconian influences in Ms. C (cf. Ehrismann 1918: 151, 156f), the use of <ki>

for a palatalized velar stop is common to the entire tradition. That is to say, consonant palatalization was not imposed artificially onto the Old Saxon texts.

In sum, the theory is based on too many assumptions between which causal or evidentiary relationships cannot be proven. This is especially true of the earliest stages of Lange's reconstruction. The phonetic value of the proposed phones is beyond reconstruction anyway, so that the theory amounts to little more than an *ad hoc* conjecture.

1.5.4 Influence from Slavic

Since the Slavic languages are known to have palatalized consonants, their proximity to Germanic dialects has led several earlier scholars to propose that palatalization in the Germanic languages was borrowed from Slavic. The most vocal supporter of Slavic influence was Jacobus van Ginneken. In his monograph *Ras en taal* (1935), he propounded the theory that various palatalization phenomena in an area from the Dutch coast into modern Poland was the result of a so-called "pre-Slavic" substrate. No scholar has supported Van Ginneken's theory. His arguments about a postulated "pre-Slavic" ethnic migration across the area run counter to all we know about migrations and the settlement of North-Western Europe. Van Ginneken's argument is circular: palatalization is the result of these pre-Slavic influences as evidenced by modern Slavic languages, and palatalization proves that a pre-Slavic race settled the area before the Germanic peoples arrived. Nor does the theory do justice to the scholarship on the development of palatalized consonants in the Slavic languages. It is unfortunate, however, that Van Ginneken's valid dialectological and philological observations have gone unheeded as a result of his eccentric hypothesis.

A few other scholars have proposed Slavic influence on German dialects in the former Prussian areas (see chapter 3). Teuchert (1913: 100) claimed that the palatalization of velar */k/ > /ʧ/ in the German dialect of Przyłeki (German name Putzig) that was spoken there until World War II derived from the influence of the surrounding Polish language. Similarly, Gréb

(1921: 74) argued in favor of Polish influence for the dialect of Hobgarten in the former Hungary (now Chmel'nica in Slovakia). While these studies provide important evidence for palatalized consonants in German, the hypothesis of Slavic influence is almost certainly wrong. The patterns of palatalization, including the phenomenon of alveolar cluster palatalization (ACP), which is identical with the palatalization found in Dutch-speaking Belgium, pleads in favor of a much older, indigenously Germanic origin of palatalization in these dialects. This alternative is made even more feasible considering that regions in western Germany bordering on the current Netherlands have been proposed, though only tentatively, as the origin of the settlers of those parts of the Prussian territories where palatalized dialects were spoken until 1945.

1.5.5 Influence from Celtic

One final source of Germanic palatalization that has been proposed is Celtic, though, as far as I know, this suggestion has come only from Carl Selmer. Selmer investigated exclusively the palatalization of *l*, first the distribution of this pronunciation in German dialects (Selmer 1933), then the question of its origin (Selmer 1935). In the latter article he considered several different languages from which German could have borrowed palatalization, repeatedly avowing that palatalization "nicht deutschen Ursprungs sein kann" (Selmer 1935: 1222 fn. 107), a view in which he explicitly followed Eduard Prokosch (cf. Selmer 1933: 125; Prokosch 1913-14). Selmer rejected Slavic and Romance influence largely on the grounds of the *argumentum ad ignorantiam*—the absence of our knowledge about prehistoric contacts between Germanic and Slavic tribes—and because he rightly doubted that French (Romance) could be made responsible for palatalization tendencies in Silesian (Lausitz) and Thuringian dialects. Selmer, who was dismissive of scholars supporting the substrate theory, nevertheless believed in the presence and influence of Celtic tribes throughout continental Europe before the arrival of Germanic tribes. In particular, the survival of many Celtic toponyms across Europe led him to a

comparison of palatalization processes in Celtic and Germanic dialects. Selmer concluded that there are so many correspondences between the palatalization (or vocalization) of *l* in both linguistic branches that Celtic was the most likely origin of Germanic palatalization. He tempered this statement slightly by suggesting the alternative possibility that a mixed Celto-Romance influence was also possible, though he stated—incorrectly—that Latin had no inherent tendency toward palatalization, so that those Romance dialects that developed palatalization probably adopted it from Celtic (Selmer 1935: 1214).

Selmer's analysis is based only on the palatalization of *l*. What is more, his conclusions are based on very little linguistic and historical data that lacks a clear delineation in time or geography.

1.5.6 Internal Development in Germanic

The widespread presence of palatalization in all modern Germanic languages suggests that it is a phenomenon that predates the onset of literacy. It is unlikely that any of the languages that have been suggested as the origin of Germanic consonant palatalization could have been responsible for a phenomenon that is in all important respects so uniform over such a wide area. Moreover, when one realizes that all three of the major branches of Indo-European that are immediately neighboring to the Germanic-speaking area—Slavic, Celtic, and Romance—have palatalized consonant phonemes it would not be unexpected to find that the Germanic branch also had them.

Palatalization in Germanic is almost certainly an internal development. From a phonological point of view this should hardly be a surprising conclusion. Considering what we know about the Germanic parent language, it abounded with consonant clusters containing palatal elements—the right environment for the development of palatalized consonants. It differs in this respect in no meaningful way from the Slavic languages. It is, therefore, a little strange that there has been such reluctance to admit the probability or even the possibility that Ger-

manic, at some historical stage, behaved in the same way as Slavic and developed palatalization independently. No one to my knowledge has ever claimed that the Slavic languages borrowed their palatalization from some other language. The dictate of prevailing conditions in the living languages seems to have led scholars astray about facts in the past.

1.6 Palatalization and the Problem of Orthography

A CONSIDERABLE COMPONENT OF THE RESEARCH INTO PALATALIZATION relies on interpreting the written record. Phonemes affected by palatalization have been recorded in spelling only in a haphazard manner, both in the historical and the living dialects of Germanic, and this has led to misunderstanding of the phonological data.

A close examination of the historical evidence reveals the inaccuracy of the common view that Germanic did not have any palatalized phonemes as was held by Penzl (1949). The record may be difficult to interpret but careful analysis of comparative and historical data shows that palatalization existed throughout the history of the West-Germanic languages and has remained in existence to this day in many dialects.

The difficulty of recording palatalization accurately in spelling lies in many factors. First, the classical Roman alphabet did not include any symbols suitable to represent palatalized phonemes. This might suggest that Classical Latin did not have any palatalized phonemes; yet in Post-Classical Latin of the third century AD onwards, velars were palatalized and later assibilated (Stotz 1996), though no new symbol was invented to represent it. Rather, Merovingian scribes developed spelling rules that indicated the differing phonetic values of otherwise identical symbols.

A second factor is a phonetic one. Even if speakers and writers are aware of the existence of palatalized phonemes and want to record them in writing, they may be phonetically ambiguous. For instance, palatalized /kʲ/ is hard to distinguish from palatalized /tʲ/, as evidenced by

the spelling of OE *feccian* 'to fetch,' where the palatalized sound represented by <cc> derives from Gmc. */t/ (from **fetian*). Dialectologists have reported the same ambiguity in recording modern dialects, e.g. Pée (1936), who remarked that it was sometimes impossible to distinguish between palatalized /kʲ/ and palatalized /tʲ/ in the Dutch dialect of Louvain (Leuven) in Belgium (cf. also the remarks by Van Ginneken 1938-39). Ingrained spelling conventions are also largely to blame for the accepted view that Modern Standard Dutch does not have any palatalized phonemes, while standard treatments of Frisian phonology do the same to <tj> in that language.

In the pre-phonological era, many philologists made a sharp distinction between orthography and pronunciation. Thus, Johannes Franck dismissed the distinction between <g> and <gh> in Middle Dutch as a spelling tradition borrowed from Old French that had no relevance for the philologist (Franck 1910: 8-9). This reasoning presupposes that spelling was independent of pronunciation, a view that cannot be upheld. While it is true that spelling is informed by tradition, scribes will rarely use borrowed conventions that are wholly redundant for the language in which they are writing. More modern research has adopted a closer link between orthography and phonology and a parallel vocabulary has developed in orthographical research, including the distinction between graphemes (representing a functional difference) and allographs (representing non-distinctive variants). The functional principle is important in this regard; there is a strong correlation between spelling distinctions and phonologically distinctive entities. That is to say, whatever is necessary to obviate destructive misunderstandings (such as ambiguity or homonymy) will be reflected in spelling.

The functional principle is, of course, somewhat subjective, since what constitutes an "absolute necessity" may be a matter of interpretation, and we cannot assume a one to one relationship between orthographical and phonological distinctions. This is true not only for historical stages of language but also for the present. For instance, Modern Dutch and Modern German use spelling conventions that are underspecified when it comes to the phenomenon

of final devoicing. Thus, while G *Pferde*, Du *paarden* 'horses' both have a <d> corresponding to a pronunciation [d], the singulars of these nouns (G *Pferd*, Du *paard*) retain the spelling <d> even though the pronunciation, under the influence of devoicing in word-final position, has shifted to [t]. On the other hand, Modern English is infamous for the enormous overspecification in its spelling. For instance, there is no difference in pronunciation between *knight* and *night*, between *write, wright, right*, and *rite*, between *meat, meet,* and *mete*, or between *doe* and *dough*. One of the main problems is that all West-European languages adopted the writing system of Classical Latin, a system that was not able to represent the phonological peculiarities of all these different languages in dialects without adaptation. Anglo-Saxon scribes, for instance, invented several symbols for sounds not found in the Latin they came in contact with, brought to Britain by the Roman and Celtic missionaries in the sixth, seventh, and eighth centuries. Hence Old English had <þ> for /θ/, <ð> for /ð/, and <ƿ> for /w/, all three signs borrowed from their Runic alphabet, and presumably all were needed because Latin of the time did not have those sounds.

Nevertheless, the notion that a consistently applied orthographic distinction must reflect a phonologically distinctive contrast is widely accepted. It may even be argued that such orthographical confusables as are presented by English can only arise after considerable time has elapsed, since the earlier generations would still have taken the foreign model as the touchstone by which to measure their native spelling accuracy, there being no other standard to judge it by. It would not have prevented all variation altogether, but it would have limited variation and vacillation considerably.

Among the Germanic peoples, the Anglo-Saxons were the most prolific in adding new symbols to the foreign model, with the exception of the Goths. These people invented a completely new writing system based on three separate models (Greek, Latin, and Runic). Old Norse, as it has come down to us in Latin script, is of a much later date; its use of <þ> and <ð> is likely indebted to the Anglo-Saxon example. Old Saxon adopted the symbols <ƀ> and <đ>

from the Anglo-Saxon alphabet. Holthausen points out that they are used frequently in the *Heliand* and the *Genesis* (1921: §33, p. 20). In addition to these, only <æ> and <ę> appear uniformly and with any regularity in continental Germanic, though the latter is mostly restricted to Latin texts from those regions. Old Saxon also sometimes used <o̭>, <ṷ>, and a symbol Gallée presents as <├> and which apparently stood for *h* (Gallée-Tiefenbach 1993: §8, p. 12). Other distinctions are usually represented by digraphs or the use of diacritics (<æ> is of course also a digraph, combining <a> and <e>).

The representation of palatalized phonemes in the older Germanic languages is a special problem. As we have seen, some (e.g. Penzl 1949: 235-36) have concluded that Germanic did not have such phonemes. Penzl's objection to the notion of palatalized phonemes was twofold: first, an "important feature" such as palatalization, "affecting the entire phonemic system of the language," would have been represented in the orthography of the historical dialects, and second, there would have been Germanic dialects with palatalized phonemes alive today. He concluded that neither of these conditions is true, hence "a phonemic contrast between plain and palatalized consonants has never existed in Germanic." Penzl was wrong on both counts—the more astonishingly so, since he was aware of the development of Old English palatalized/assibilated **k* (Penzl 1947). His second objection is the easier to refute since there are still dialects with phonemic contrasts between palatalized and non-palatalized consonants. But the notion that palatalization was not reflected in orthography is also erroneous, though it is true that the historical dialects chose different methods to represent it and that they did not do it with the same sort of consistency as a modern language with standardized spelling.

Few researchers realize that palatalization existed in the historical stages of the Germanic languages. In most cases, if it is mentioned, it is a footnote in the development of the assibilated /ʧ/ and /ʤ/ of Modern English from Gmc. **k* and **g*, respectively, though even these two examples should have sufficed to disprove Penzl's statement about Germanic. Little research

has been done on the development of the same sounds in the continental Germanic languages, partly because we know so little about the earliest stages of those languages. Discussions about palatalization in Germanic, such as over the relative chronology of the sound shifts that led to the rise of /ʧ/ and /ʤ/ in English or the rise of the palatalized diminutive suffix in Dutch, have also been hampered by scholars' failure to distinguish between palatalization proper (the acquisition of a secondary palatal feature) and assibilation (the change in the manner of articulation). This problem has plagued the so-called Anglo-Frisian question (see chapter 4) even to the present day, as can be seen from the exchange between Stiles (1995) and Fulk (1998) about the dating of Old English and Old Frisian palatalization. Orthography of medieval texts plays a role in this. Since assibilation is such a profound change in the nature of the consonant in question, it becomes visible as a change in orthographical conventions much more clearly than palatalization not accompanied by assibilation. Hence many scholars have believed that palatalization did not occur until signs of assibilation can be traced in the record. Others, especially German-speaking philologists, have ignored assibilation as not belonging to the same category as palatalization, or classifying it as a secondary phenomenon at best. Perhaps the different perspectives arose as a result of different native-speaker experience, since few English-speaking philologists could ignore the fact that assibilated /ʧ/ and /ʤ/ of Modern English were caused by palatalization, whereas Standard High German lacks such salient consonants, and where assibilation (or *Zetazismus*) only appears in petrified place names in rural areas where Low German is spoken, or was once spoken.

The presence of palatalized and possibly assibilated phonemes in continental Germanic has been established, although few scholars seem to have noticed this fact. From the earliest stages of both Dutch and (Low) German we have enough evidence for assibilated Gmc. **k* which probably became */ʧ/ or */ts/, and later sometimes developed into /s/. Medieval Frisian shows the same development, though our sources for this language are much younger. Most of this evidence is gleaned from place name material, since that is usually the earliest Ger-

manic material recorded in Latin texts. The situation of the Old Ghent place names as described by Mansion (1924) is instructive. Because the place names appear in Merovingian Latin deeds and charters, the spelling conventions of Merovingian Latin are adhered to. Not surprisingly, we find that place names with initial etymological Gmc. **k* are spelled either with <c> or <ch>, depending on the following vowel. Since post-Classical Latin had undergone velar palatalization, Latin **k* had two reflexes: velar */k/ and assibilated (palatalized) */ʧ/. In order to ensure the correct pronunciation of these two sounds, Merovingian Latin spelling had developed the use of <h> as a diacritic to indicate the absence of palatalization whenever confusion could have arisen. That is to say, since palatalization was triggered by following */e, i/, the presence of this vowel was in itself enough of a clue, so that no further sign was needed. But other sound changes, as well as the influx of Germanic loanwords in the Migration Period, brought words into the language that had sound patterns alien to the internal development of Latin. Thus, whenever there was a sequence of */k/ + */e, i/, the spelling <ch> was employed to alert the reader that /k/ was to be pronounced, not /ʧ/. This system was used in early Latin deeds from Ghent: <ch> is used when followed by <e, i>. Mansion lists only two exceptions of Germanic names with initial <c> + <e, i> (not counting the example of OE *Cent*, which he included only for illustrative purposes), indicating a high level of consistency. One of these is an obscure *ceninga accarum*. The other is the town name *cimbarsaca* (also appearing as *cimbersaca*). While the etymology of this place name is unknown, we can reasonably conclude that the first <c> represented an original */k/ that came to be pronounced as */tʃ/, as later spellings and the modern pronunciation *Semmerzake* (with /s/) indicate.

The Middle Dutch spelling <gh> is an example of palatalization being represented explicitly in spelling. But the phonological importance of this spelling, and in particular its opposition to <g> in word-initial position, has been ignored for a century. The traditional view holds that the spelling distinction between <gh> and <g> in Middle Dutch is an orthographic affectation that was borrowed from Old French during the heyday of French courtly literature and

that had no phonological meaning for Middle Dutch. Thus, it is claimed, the practice of writing <gh> before front vowels and <g> before back vowels went back to a distinction in Old French, where it was used to mark the non-palatal pronunciation of OF **g* when followed by <e, i> in spelling. Sound changes in early Old French (as well as the influx of Germanic words) had caused there to be words with */g/ before <e, i> that had not undergone Latin palatalization of velars before front vowels; thus this distinction was useful. The contention is that Dutch merely borrowed this tradition in spelling (cf. Franck 1910: 8-9).

There are problems with this traditional point of view. First of all, the use of <g ~ gh> in exactly the same way as in later Middle Dutch can be found in texts that predate the beginning of Old French, the most notable being the Old High German *Isidor*. Since most philologists were aware of this fact, it has usually been concluded that this spelling convention was ultimately an invention of Latin scribes in Merovingian Gaul. Yet hardly a trace has ever been reported of such a convention in the comparatively extensive records of that period that have come down to us. Wells (1972) finds only a few instances of the spelling <gh> + <i> and they are (1) "infrequent," (2) only found in a few charters produced at the royal chancery (i.e. not in any other genres of texts produced in the large scriptoria), and (3) used almost exclusively for Germanic personal names. The evidence of <gh> used in early Italian Latin and a small number of additional instances in Merovingian Latin, as reported by Dietz (2006), does not contradict this statement, as these instances are also rare and used only for Germanic personal names. Although Wells does not draw phonological conclusions, his evidence suggests strongly that, as the distinction <g ~ gh> was not maintained consistently in these Merovingian charters, it had no phonological function in Merovingian Latin. This conclusion is all the more justified since there were no examples of <gh> followed by <e>. The manner in which <gh> is used indicates that it was an orthography adopted solely for Germanic material (names). This led Wells to believe that <gh> was a Germanic, not a Romance innovation, that

is to say, that the scribes at the royal chancery copied the spelling in their Latin texts from an already established practice used among Germanic scribes.

But if this is so, then the only reason Germanic scribes went to the trouble of inventing a new orthographic device not already available in the Merovingian repertoire—which, after all, was considerably creative in inventing new spellings—was that their language had a phonological feature unknown to Merovingian Latin. The distinction between <gh> and <g> taking place before front and back vowels respectively suggests that palatalization is involved. It is conspicuous that the Germanic scribes did not adopt the practice of the Latin scribes of having the following vowel indicate palatal or velar quality of the consonant. Late Latin had undergone palatalization of **g*, producing velar */g/ before back vowels and palatal */ʤ/ before front vowels, but Merovingian Latin did not specially mark the difference in spelling, since the following vowel automatically served to indicate the distinction. The Old High German *Isidor* (in the Paris Manuscript) consistently uses <g> for initial Gmc. **g* before back vowels (with only one exception), while a majority of the cases of initial **g* before front vowels is spelled <gh>. Thus, <h> was added as an explicit marker of palatalization in most of the relevant cases, but it cannot appear before a back vowel.

Though we have little evidence for the three centuries after the *Isidor*, the spelling <gh> appears again in wide use in Middle Dutch, and it is also recorded in Old Saxon and Middle Low German (Gallée-Tiefenbach 1993; Klein 2000). In recent years, Goeman (1995; 1998) raised the possibility that the traditional view on the origin of <gh> was incorrect, and he noted that the distinction between <gh> and <g> in Middle Dutch corresponded to a distribution distinction in Modern Dutch between dialects with velar and dialects with palatal realizations of Gmc. **g*. This lends credibility to the idea that Dutch (and its ancestors) did indeed palatalize Gmc. velar **g* (presumably before front vowels) and later redistributed this distinction, though some Dutch dialects maintain the distinction between velar and palatal *g* in the same way as Modern Standard German distinguishes between *ich-* and *ach-Laut*.

The fact that most scholars have ignored the importance of the distinction between <g> and <gh> in the Franconian and Middle Dutch dialects has had its impact on our understanding of Germanic phonology. It is likely that as early as the Old High German *Isidor* and well into the Middle Dutch period, there was a phonemic distinction between velar and palatal reflexes of Gmc. **g*. It is surprising that some scholars have tried to explain the use of <g ~ gh> without taking into account the linguistic context in which they appeared. As a result, they theorized that it may have indicated a distinction between stop and fricative reflexes of Gmc. **g*, thus tying this problem to the ancient dispute over whether Gmc. **g* was a stop or a fricative. As a result of my belief that West-Germanic velar palatalization affected a much larger area of Franconian dialects, I propose instead that Gmc. **g* in Old Franconian was a fricative in all positions.

Another sign used by early Germanic scribes to indicate palatalization was an added <i> after a consonant. It is commonly accepted that the sequence <ki> in Old Saxon prose texts indicates palatalized Gmc. **k*. It also appears frequently in Mss. M and C of the *Heliand* but also in the Werden Prudentius Glosses and the Freckenhorst Urbarium (Lasch 1939: 119; Gallée-Tiefenbach 1993: 129; Klein 2000: 42). Thus, <i> functions as a diacritic and has no independent phonological value (sometimes <e> was used). In the same way, <i> was added to <g> to represent Gmc. **j*, a practice known not only in Old Saxon but also in Old Bavarian (Schatz 1907: 98). It has been proposed, probably correctly, that Old English also used <gi> (sometimes <ge>) to indicate Gmc. **j* (Prokosch 1939: 77), but this view has not gained wider acceptance (but see Dietz 2006). Also, if we accept Liberman's (2007) phonological theory of the rise of palatalized consonants in Germanic, it is quite possible that the retention of <i> for Gmc. **j* in Old Saxon *-jan* verbs represented the palatalization of the preceding geminate. The use of <i> as a diacritic may have been inspired by Medieval Latin, where the velar plosives **k* and **g* and their palatalized counterparts could easily be identified in written texts by the quality of the following vowel. But it may also have arisen because scribes were unable to de-

cide whether the palatal element in the phoneme was vocalic or consonantal and, receiving no guidance from their Latin examples, chose to represent it as a vowel. These two explanations are not mutually exclusive.

Often, palatalization of the consonant was either not marked at all, or scribes and writers did not represent them in a recognizable or systematic way. The representation of the assibilated reflex of Gmc. **k* in the Middle Dutch and Early Modern Dutch diminutive suffix shows how indebted Germanic scribes remained to their Latin examples even after centuries of independent literacy. Clearly, by the seventeenth century, an affricate had become established in much of western Dutch but the exact nature of the sound appears to have puzzled native speakers, as evidenced by the many variant spellings that included <tg, ki, ti>.

Another source of information about palatalized consonants in Germanic are borrowings in neighboring languages. Kranzmayer (1938) showed how the orthography of a neighboring language (in his case medieval Slovenian) provides a clue to the possibility of palatalized consonants in Old and Middle Bavarian. He argued that the Slovenian spelling of the loanwords *žînj* (= Germ. *Sinn*) and *cílj* (= Germ. *Ziel*) proves that these *n* and *l* were palatalized in Bavarian at the time they were borrowed. However, his examples have little value, since it seems more plausible that the phonological context of these consonants (following a high front vowel) caused obligatory palatalization in Slovenian even if Bavarian had none. Yet Kranzmayer does make plausible on other grounds that Bavarian had palatalized alveolar clusters, suggesting that it is legitimate to look at Slavic languages for clues.

Sometimes vowels give an interesting clue to the history of the consonant system. As we have seen, there is a direct relationship between consonant palatalization and the development of West-Germanic umlaut. Keymeulen (1991) went so far as to conclude that there was a strong tendency to have either *i*-umlaut or palatalization but not both. Thus, the presence of *i*-umlaut may be an indication that the neighboring consonants were at some point palatalized, except in cases like the morphologized umlaut of Modern Standard German. This covers

practically all of North and West Germanic. At the same time, *lack of umlaut* is sometimes a better indicator of palatalized clusters, especially in dialect atlases, than looking for palatalized consonants. For instance, the printed version of the FAND does not treat ACP in an adequate way, leaving many of the distinctions to be recovered on the accompanying website. But where consonants may appear unremarkable, systematic absence of umlaut (especially in words that qualify for ACP) may be a guide to discovering marginal, hidden, or overlooked palatalized consonants.

Keymeulen's dissertation also showed a close relationship between palatalized alveolar clusters and the development of epenthetic vowels before those clusters. Hence even in dialects that are not currently affected by palatalized clusters we can posit their existence at some earlier time by the epenthetic vowels the depalatalizing process produced. This is ultimately the explanation for words like Du *einde* 'end' which probably originated in a southern dialect affected by ACP. Liberman (2007) has shown that Middle English recorded exactly such epenthetic vowels in words with qualifying alveolar clusters (e.g. *bleynte* from ME *blenchen* 'to blench'; Chaucer's *Knight's Tale* l. 1078), strengthening again the notion that English also underwent a form of ACP. This may provide a clue to the deviating preterit verb forms in English verbs like *sent, lent* (from *lend*), *leant* (from *lean* [against]), *meant, went*, *bent, rent* (from *rend*), *spent, felt* (from *feel*), *dwelt, smelt* (from *smell*), *spelt* (from *spell*), *spilt* (from *spill*), *built* (still recorded as *builded* well into early Modern English), *spoilt*, *burnt*, and *learnt* because all these verbs have qualifying alveolar clusters (cf. Brunner 1962: II, 263-64). The lack of umlaut in the preterit of *sell* and *tell* (with *sold*, *told* from pre-OE **sall-ida, *tall-ida*) suggests that ACP prevented the passing on of palatality to the vowel in the same way as in Germ. *kannte*, but it is unclear why present (from WGmc. **saljan*, **taljan*) and preterit should have behaved differently, or why *sell* and *tell* escape final devoicing of *d*. Nor do we know why *d* in alveolar clusters should have become devoiced at all, yet the correlation is striking; these spellings (and pronunciations) testify for the presence and functioning of ACP in medieval English. Brunner of-

fers no explanation but notes that the phenomenon is recorded as early as the late eleventh century.

To this day, the Germanic dialects struggle to represent palatalization of consonants in an unambiguous way. Before the advent of IPA, the German monograph series Deutsche Dialektgeographie in the first half of the twentieth century used a reliable transcription system of its own, though some distinctions were not made, such as between the voiced palatal fricative and the palatal semivowel (both transcribed as *j*) and the modern user familiar with IPA may be surprised to find that the series used the symbol *χ* to transcribe the voiceless palatal fricative /ç/ (*ich-Laut*). At any rate, few dialectologists even in more recent years have used standard IPA notation to indicate the nature of the consonants they were recording. This may be a blessing in disguise because, useful as IPA transcriptions can be, that system carries with it the danger that scholars will try to force recorded phones into preconceived categories provided by a standardized chart. It has led to some difficulty in relating 'naïve' spellings to phonetic or phonological reality. Just because someone writes <tj> does not mean that a sequence of /t + j/ is meant (see the examples of Dutch diminutives and Frisian in chapters 3 and 4). And throughout the history of Germanic literacy we have seen that when dialects do not have an independent written tradition and are forced to lean instead on the conventions of a dominant standard (and standardized) language, it becomes hard even for native speakers to record important distinctions unknown in that borrowed standard. For instance, Transylvanian German was rarely if ever written down—at least, documents (letters, charters, deeds) in that dialect are not abundantly available. In light of the competing consonantal sound changes (palatalization and velarization) that alternate in a particularly haphazard fashion in these colonial dialects of German, it would have been impossible for larger communities to agree on a regional standard transcription of palatalized alveolar clusters. For practical purposes, standard German was the only model for writing.

Considered in that light, Modern West Frisian is fairly well transcribed, with all manner of assibilated, affricated, and depalatalized consonants being recorded with reasonable accuracy, ignoring for the moment the many fine variations from one town to the next. But this underscores another point made before, namely that the orthography of a language more clearly reflects the presence of palatalized consonants when that language moves on from palatalized consonants to a stage of affricated or assibilated consonants. The latter are more salient, or at least differ more clearly from their unpalatalized genetic forebears.

Chapter 2
Palatalization in Dutch

2.1 Introduction

In this chapter I investigate the instances of palatalization in the dialects that are traditionally considered to be part of the Dutch language. We need to keep in mind that the term "Dutch" is a political convenience of a relatively late date. There were no "Dutch tribes" and hence no unified Dutch language before the appearance of Middle Dutch, a term which itself only unifies the various Germanic dialects of the Low Countries in retrospect. In recent decades, the term "Old Dutch" for the stage of the language preceding Middle Dutch has been gaining ground (in place of the older term "Old Low Franconian"), especially in publications from the Low Countries, but it must be considered a term of convenience, used as parallel to the earliest stages of English and German for which "Old English" and "Old High German" are common. For the purposes of this study the Old Low Franconian dialects will be considered the primary representative of the earliest stages of Dutch. Since in some sense the modern political and linguistic borders have informed the basic structure of this dissertation, I will also include all relevant data from Old Saxon, Old Frisian, Middle Low German, and the modern and historic Dutch-German border dialects inasmuch as they pertain to the linguistic geography and history of the Dutch language. The dialect continuity across the Dutch-German border, still visible today, was likely even more gradual in the Middle Ages (cf. Peters 2000).

2.1.1 The Phonology of Modern Dutch

If we were to believe the handbooks on Dutch phonology and grammar, the Dutch language does not have palatalization and never knew it. The only scholar to allow even a hint of consonant palatalization to be visible in his study is Jan Goossens, who, in his *Historische Phonologie des Niederländischen* admits an ambiguous [t ~ t'] in his chart of the Modern Dutch consonant system (Goossens 1974: 28, Fig. II,3). The treatment by Booij (1995) of the consonant system of Modern Standard Dutch can be considered the standard view. Below I have reproduced Booij's chart of Dutch consonants:

Table 2.1 – The consonants of Dutch (from Booij 1995: 7)

	Bilabial	Labio-dental	Alveolar	Palatal	Velar	Glottal
Plosives	p, b		t, d		k, (g)	
Fricatives		f, v	s, z		x, ɣ	h
Nasals	m		n		ŋ	
Liquids			l, r			
Glides		ʋ		j		

Booij qualifies this chart to deal with several problems. First, he explains that /g/ appears in parentheses in order to signify its presence in the language only in "non-native words such as *goal* 'i.d.' (football term), and as the contextual allophone of /k/ before a voiced plosive, as in *zakdoek* [zaɣduk] 'handkerchief'." The comment about /g/ as a contextual allophone appears irrelevant, since a phonological description should not take recourse to allophonic variants. But the parenthetical position of /g/ in his chart is rendered even more bewildering when he dismisses [ʃ, ʒ, c, ɲ] as phonologically irrelevant because (1) they appear only in loanwords and (2) can also be analyzed as phonemic combinations of /s, z/ and /j/. In a footnote Booij similarly dismisses /dʒ/ and /tʃ/, as in *jeep* and *chip*, loanwords from English, as "non-native" consonants that can be analyzed as sequences of /dzj/ and /tsj/ respectively. There are more

cogent arguments in favor of this dismissal than for the other ones, the most important one being the more recent appearance of these loanwords and the sounds in question than [ʃ, ʒ, c, ɲ], some of which have existed as marginal phonemes in Dutch, at least in French loanwords, for over two centuries. Relative age of a sound is an admittedly shaky argument, but there is some value in it, since a language's phonological system changes over time, and different sociological, cultural, and political circumstances obtain at different periods. It is therefore not unreasonable to propose that sociolinguistic and phonological factors in language contact are not static through time; thus foreign sounds are incorporated (or not incorporated) in different ways in different periods. With respect to the more recent English loans, I do not believe that Dutch speakers realize these English sounds as separate phonemes. I disagree with Booij's analysis of the Dutch sound represented as *j* in *jeep*. Few Modern Dutch speakers distinguish between the voiced and unvoiced variant and I believe both are usually considered allophones of /ts'/, although a case could be made for an analysis /ʧ/ or /dz'/.

The list Booij rejects is a series of palatal or palatalized consonants and one wonders why /g/ was allowed in the chart while [ʃ, ʒ, c, ɲ] were not, even though by Booij's own arguments /g/ has no advantage over them. Apparently, he maintains that these marginal phonemes must be analyzed as combinations of native phonemes, rather than allow them an independent role as palatal phonemes. No arguments supporting the desirability of this analysis are offered, so that the rejection of these marginal phonemes amounts to summary dismissal.

There is little scholarship about the place of these phonemes in Dutch phonology and much of the argument depends on one's view of marginal phonemes in a phonological system. Many scholars argue, as does Booij, that all of them are recent additions to the inventory from foreign languages; the first and third from French, and the second and fourth from Frisian, while the second and third have recently been reinforced by numerous loans from English. The fourth phoneme /c/ (or /ʧ/) may also have been reinforced by English by comparison

with Engl. /tʃ/ as in *chop*. But the relative age of these marginal or loan phonemes in Dutch is rarely discussed.

The history of the palatal nasal /ɲ/ seems to be relatively long. Modern Dutch uses *nj* in words like *oranje* 'orange' but also retains the older *gn* in some words of French origin e.g. *signeren* 'to sign.' Scholarship on the history of the phoneme is restricted to discussions about the origin of a handful of words. Attempts by Van Ginneken (1935: 23) to explain the word *plunje* 'household goods' as a palatalized variant of the word *plunder* are attractive but in the end the traditional explanation as a diminutive **plundje* (though no such form has been recorded), supported by Franck-Van Wijck (1912), De Vries (1997), and the WNT, is probably correct. Nevertheless, it is a very rare Germanic word with /ɲ/, because the phoneme has otherwise been restricted to loanwords from French, which has been the main reason for its designation as a marginal phoneme. Words with /ɲ/ appear as early as the thirteenth century, all of them loans. The word *oranje*, which has become a term with patriotic overtones in the Netherlands because of the royal House of Orange (a title inherited in the sixteenth century connected with the French region of Orange), is always at the forefront of this discussion. It was first recorded in AD 1282 as *araenge* 'orange' (cited in the VMNW). Many of the words with *gn* or *ng* where a velar nasal is unlikely are toponyms, e.g. *bourgongnen* 'Burgundy' (AD 1397) but there are also a good deal of other words, e.g. *gheassingneert* 'appointed' (AD 1346, cited in the CVRM). Even in the fourteenth century this spelling was common throughout the Low Countries. P.C. Hooft uses the words *grange* 'desire' and *Spangen* 'Spain' (1616) and Bredero writes *Karstengen* 'chestnuts' (1615), though he also uses the now modern spelling *-nj-* for the sound in *granje* and *Jeranje* 'orange' in the same poem. One may wonder how 'marginal' a phoneme is that has been around since at least 1282, unless one wants to argue that <ng> in *araenge* stands for [nʒ] as in French *orange* [orɑ̃ʒə]—but even then one has to argue about the admission rights of /ʒ/, another supposedly recent introduction.

As for the question of Goossens' [t ~ t'] (which corresponds to Booij's [c]), this notation, popular among some early generative phonologists, is inadequate. This and similarly non-committal notations are supposed to indicate "underspecification" of a phoneme, meaning that not all features are believed to be distinctive in a language or dialect, which would make the standard linguistic symbols for phonemes not applicable. It signifies at least that a sound has a deviating pattern of distribution but the solution is hardly elegant or enlightening. In this case, Goossens' explanation of the distribution of [t] and [t']—the latter is only used as an allophone of /t/ before /j/— makes some sense phonetically but none at all from a historical point of view. It thus raises the question to what extent synchronic phonological systems are dependent on the diachrony of a language. Practically all of the discussion about this "weak t" in Dutch, which I prefer to transcribe as /tʲ/, is related to the allomorphy of the Dutch diminutive suffix. In section 2.3, I wil discuss this suffix from the perspective of historical phonology, where I will also demonstrate the inadequacy of the standard approach to the suffix and /tʲ/. At any rate, if phonologists were consistent they ought at least to make a choice whether /t/ or /tʲ/ is the default (in generative terms: the underlying) phoneme and not confuse the phonological system with ghostlike allophones. There are also several other words with /tʲ/ that strengthen the belief that it ought to be considered a separate phoneme in Dutch. Usually these words are dismissed as foreign loans from Frisian, such as *tjilpen* that has been around in Dutch since at least 1605 (its first recording in WNT) next to variants *tsilpen* and *sjilpen* (and even one spelling *t'ilpen*). Why, after four hundred years, this sound could not be considered native is again as unclear as it was for /ɲ/. One may call it a marginal phoneme or a phoneme with a limited distribution but that still makes it a part of the phonological system.

Dialects pose additional problems. In his *Nederlandse dialectkunde* Weijnen wrote that for "allerlei zuidelijke dialecten" [various southern dialects], there is consonant palatalization as a "fonologisch correlatiekenmerk," that is, as a phonological opposition (1966: 283). The presence of palatal and palatalized consonants in various Dutch dialects was known and studied

as early as the 1890s and such studies are still being published, if much less frequently in recent decades. Colinet's dialectological study of the dialect of Aalst (Belgium), a study that launched the Belgian journal *Leuvense Bijdragen*, proved beyond any doubt that the living dialect contained extra consonants that were not mere allophones but full-fledged palatalized phonemes—even if the term "phoneme" was not used then (Colinet 1896). His findings were replicated in studies of several neighboring dialects, and they were impressed upon the scholarly community by people like Van Ginneken in the 1930s. Yet this knowledge was forgotten around the middle of the twentieth century. Despite the fact that Lut Keymeulen in her 1991 study of West-Brabantic dialects (again in Belgium) attempted to put this type of palatalization squarely on the dialectological map, the recent *Fonologische Atlas van de Nederlandse Dialecten* (FAND) ignores palatalized consonants almost completely. This oversight was partially corrected by the subsequent *Morfologische Atlas van de Nederlandse Dialecten* (MAND). The atlas makes the phonetic information available only at the accompanying website of the Dutch Meertens Institute for dialectological research, while the atlas itself provides no information about the phonology or phonetics of the symbols employed within its pages. In section 2.3 we will look at the palatalization of alveolar clusters in southern dialects.

If we take these comments into account and ignore for the moment the alveolar cluster palatalization in the southern dialects, we will arrive at the following revised table of consonants for (standard) Dutch:

Table 2.2 – The consonants of Dutch (revised)

	Bilabial	Labio-dental	Alveolar	Palatal	Velar	Glottal
Plosives	p, b		t, d	c͡	k, g	
Fricatives		f, v	s, z	ʃ, ʒ	x, ɣ	h
Nasals	m		n	ɲ	ŋ	
Liquids			l, r			
Glides		ʋ		j		

2.1.2 The Phonology of Middle Dutch

Handbooks for the earlier stages of Dutch hardly do a better job of taking into account the data of individual studies and articles on the topic than do the synchronic handbooks. Palatal and palatalized consonants do not seem to be present in any of the handbooks. Even the possible presence of palatalized velars is usually ignored, despite the irrefutable evidence of the shift /g/ > /j/ in Old Low Franconian (Old Dutch), still visible in some words today (e.g. *jegens* 'against, with respect to,' cf. German *gegen*—see below). At best, one encounters superficial descriptions of the confusion of Gmc. *j* and *g* (e.g. Schönfeld-Van Loey 1970: § 74). Part of the problem is the disagreement over the phonetic nature of Gmc. *g*—plosive or fricative—and its phonetic development in Dutch. Some scholars, especially earlier ones, have assumed that Middle Dutch had a voiced velar stop /g/ that changed to a voiced velar fricative /ɣ/ by the end of the Middle Dutch period (e.g. Franck 1909, 1910). However, the voiced velar stop /g/ almost certainly developed from an earlier voiced velar fricative /ɣ/. Goblirsch (2005) maintains that the West-Germanic consonant system was dominated by an alternation of voiced stops and fricatives. On the basis of the *Wachtendonck Psalms* he concludes that the voiced fricative had become a voiced stop by the Old Franconian period. Goblirsch states: "Weil das Altfränkische des Wachtendonckschen Kodexes der einzige Vertreter des Altniederländischen und Vorfahr des Mittel- und Neuniederländischen ist, nimmt man Okklusion des Velaren mit sekundärer Respirantisierung an" (2005: 81). This is a problematic statement, as Goblirsch does not specify at which stage he believes occlusion to have taken place nor at which the voiced stop reverted to a fricative. Moreover, as his last example *uueh*/*uueg* shows, at least in final position, <g> stood for a fricative.

Ignoring the elusive Old Dutch period for the moment, the following table is a summary of the traditional views of the Middle Dutch consonant system:

Table 2.3 – The consonants of Middle Dutch (based on Goossens 1974)

	Bilabial	Labio-dental	Alveolar	Palatal	Velar	Glottal
Plosives	p, b		t, d		k, (g)	
Fricatives		f, v	s, (z)		x, (ɣ)	h
Nasals	m		n		(ŋ)	
Liquids			l, r			
Glides	w			j		

For all intents and purposes, this is the same table as that given by Booij for Modern Dutch (and the layout has been adapted, for ease of comparison with Booij's chart). I will ignore the *phonetic* nature of /w/. Goossens does not discuss it. The difference between MDu /w/ (in my table) and MnDu /ʋ/ (in Booij's table) is of no real consequence for our purposes. Similarly, the phonetic nature of /r/ is unclear. Traditional opinions that the now common uvular /ʀ/ is a later innovation have not been proved. Goossens (1974: 73) argues that all the sounds put in parentheses were not yet independent phonemes. The voiced counterparts of /s/ and /x/, i.e. [z] and [ɣ], were still in complementary distribution with them (for which reason Goossens brackets [s] and [x] as well). In addition, he comments that [g] and [ɣ] were in complementary distribution, as were /n/ and [ŋ]. Goossens uses square brackets [ ] exclusively for all partners in the complementary relationship, in an attempt to remain neutral on the question of the nature of the "underlying" phoneme. It is clear, however, that the sounds I have not put in parentheses in table 2.3 above were the "old" sounds next to which "new" sounds developed—at least in the traditional view of the Middle Dutch consonant system. Voiced fricatives are considered by many historical phonologists to be a new development in Middle Dutch. Whereas /v/ was phonologized before the end of the Middle Dutch period, according to Goossens [z] and [ɣ] appear to have reached that stage only after its end. Van Loey (1970) seems to imply that /z/ was phonemic in Middle Dutch. Van Loey does not use this terminology and does

not distinguish explicitly between allophones and phonemes. He simply argues that *f* and *s* came to be voiced in anlaut position (1970: 260).

Above I commented on the difficulties associated with the use of non-phonemic, that is, allophonic quantities in historical linguistics. Goossens' comments about the rise of /v z ɣ ŋ/ as new phonemes in Dutch are not purely phonological; and he is by no means alone in this. What is the status of these sounds in "Middle Dutch"? And what value does a chart like table 2.3 above have when such sounds are listed on it as ghostlike entities? It may have been better to make a clearcut decision about their absence or presence.

The case of [ɡ ~ ɣ] is even less satisfying. First of all, as we saw above when we discussed Modern Dutch, /ɡ/ is not supposed to be a real phoneme in Dutch. It was permitted by Booij only as a marginal phoneme. Goossens argues that Middle Dutch also had this sound and that it was in complementary distribution with [ɣ]. There is nothing impossible or improbable about the velars /ɡ/ and /ɣ/ alternating with each other over time. As we have seen, Goblirsch holds this view for Dutch (and West Germanic in general). It appears that Goossens is of the same opinion, though his use of orthographic marks (i.e. his use of notations like [ɡ ~ ɣ]) makes his opinion on the matter somewhat unclear. Nevertheless, if Middle Dutch already had /ɡ/, it would seem likely that it has been a part of the Dutch consonant system ever since, rather than disappearing once more and reemerging in late borrowings from English and French, though the question is bound up with the distinction between "standard" and "dialect." The phoneme /ɡ/ may have survived in some dialects but not in others. In section one we will examine the question of Old and Middle Dutch **g* more closely.

I have already mentioned the age of /ʃ ʒ ʧ ʤ/. It is certain that three of these marginal phonemes were in existence in Dutch no later than the thirteenth century; the last one (/ʧ/) may also have existed in some dialects, as the CVRM records the first reliable spelling <tg> for this phoneme in a charter from Amsterdam dated AD 1349 and then consistently in that city until the end of the Corpus' database, which cuts off at 1400. A single instance *malentgien* (1347)

from Ninove in East Flanders may be earlier evidence, or it may have stood for /(d)ʒ/. In view of the origin of this /ʧ/ (from palatalized Gmc. **k*) it can be stated that its unassibilated variant /c/ was almost certainly already in existence, as indicated by the spellings <-kiaen, -kijn> (cf. Kloeke 1923; CVRM). For a more detailed discussion of /ʧ/ see 2.3.

Many more problems ar associated with the standard treatments than can be discussed here; I will return to a few of them in the course of this chapter. The handbooks idealize and abstract the situation. To some extent this is inevitable. The conspicuous absence of palatal consonants in either Old or Middle Dutch and the rather bland summary of the exact phonological relation between [ɡ ~ ɣ]—not to mention the relation between /j/, /ɡ/, and /ɣ/—are contradicted by numerous phonetic studies of Dutch dialects, as well as of medieval Dutch texts. For instance, Jacobs' (1911) analysis of Middle Flemish dialects points to a more complicated consonant system, and he teaches us a good deal about medieval orthography. I intend to show that medieval Dutch, or at least some of its dialects, almost certainly possessed palatalized velars. These velars would have been part of a much wider palatalization process that affected also Old English, Old Frisian, and Old Saxon. Keymeulen (1991: 56-60) refers to this wave of palatalization as "Ingvaeonic palatalization," meaning that it was operative at the beginning or even before the literary periods. Her term also differentiates it from a second wave of palatalization that took place in some Dutch dialects at a period that is most likely to be sought after AD 1200. This secondary palatalization also took place in Frisian at roughly the same time (cf. Tiersma 1979). What is more, these palatalizations must be considered *phonemic* shifts, rather than allophonic variations, since there is ample proof that consistent orthographic distinctions were attempted between palatalized and non-palatalized sounds. A large number of southern dialects of Dutch continue to have palatalization as a phonologized process.

One more marginal phoneme existed in Middle Dutch: the palatalized version of /l/, i.e. /ʎ/. It was not a common phoneme and may be termed marginal. Nevertheless, though it has disappeared from the living language (except in dialects with alveolar cluster palatalization,

see below section 2.4) it was probably in existence for a good many centuries. The earliest reasonably certain recorded form is from AD 1287 in the loanword *falgierthi* 'to fail, lack' (here conjugated with an enclitic pronoun). It was also spelled *failliren* (and recorded as such even earlier, in AD 1270), where it betrays more clearly the Old French origin *faillir*. Indeed, /ʎ/ does appear to be limited to a small number of French loans, e.g. *schaelgien* '(roof) slate' (modern Du *scalie*), though it is also recorded in native words, e.g. *stalgien* 'stall, stable,' here in a charter from St. Truiden in Belgian Limburg where palatalization is surprising (source: CVRM). Palatalized /ʎ/ seems to have died out roughly at the same time it did in French (where it degraded in the early modern period to coalesce with /j/), but the spelling <lg>, though alternating with <ll> with preceding or following <i>, is undoubtedly a representation of /ʎ/, which accords with our knowledge of Old French. In view of these comments, I offer below a revised version of the table of Middle Dutch consonants.

Table 2.4 – The consonants of Middle Dutch (revised)

	Bilabial	Labio-dental	Alveolar	Palatal	Velar	Glottal
Plosives	p, b		t, d	(c)	k, (g)	
Fricatives		f, v	s, (z)	ʃ, ʒ	x, (ɣ)	h
Nasals	m		n	ɲ	(ŋ)	
Liquids			l, r	ʎ		
Glides	w			j		

This chapter will survey the question of palatalized consonants throughout the history of the Dutch language. It is my intention to trace the presence of palatalization in Dutch from the earliest times up to the present. Therefore, I will first look at palatalized and assibilated velars in the earliest stages of Dutch. They have usually been referred to as the products of "Ingvaeonic palatalization." There can be no doubt that these velars existed. The historical record of the earliest stages of Dutch may be deficient, yet what little has survived, combined with

both the language-internal and external comparative evidence, can lead only to this conclusion. The following section is intended to complement the first. It presents a review of the historical development of the Dutch diminutive suffix. It is in this widespread suffix that /c/, which is palatalized /k/, survives to the present day in the guise of the assibilated *–tje* /ʧ/ (though it was still recorded as /c/ in the Belgian city of Louvain in the twentieth century). It contains the further development of previously palatalized /c/. I will also examine palatalization of alveolar consonant clusters in several Brabantic and Limburgic dialects in Flanders that appears to be an altered continuation of the Old Dutch palatalization of velars.

2.2 Palatalized **k* and* *g* in Early Medieval Dutch

An investigation of palatalized consonants in the earliest stages of Dutch is complicated. Our understanding of the exact origin of what came to be a flowering literary language in the Low Countries of the thirteenth century is limited owing to the fact that virtually nothing has survived that dates to before about AD 1100. As we have no corpus of Old Dutch to speak of, we possess no grammar of Old Dutch. The closest thing we have is Van Helten's grammar of Old East Low Franconian included in his edition of the psalm fragments surviving in that dialect (Van Helten 1902). Johannes Franck's *Altfränkische Grammatik* (1909, repr. 1971) curiously makes no mention of Low Franconian, unless one wants to consider the scanty references to Ripuarian one encounters every now and then. Schönfeld-Van Loey (1970) do not present a separate Old Low Franconian grammar and only refer to sound changes of that period of the development of Dutch as part of their general treatment of sound changes in pre-modern Dutch.

The small corpus of texts that has survived consists of several psalms and psalm glosses which have been published in various editions and have attracted the attention of a host of scholars, in addition to some glosses and place-name references in Latin documents, and ar-

guably a commentary on the *Song of Songs* (*Canticum Canticorum*). Both Van Loey (1970) and Donaldson (1983) point out, however, that the Wachtendonck or Old Low Franconian Psalms (German: *altostniederfränkische Psalmen*), twenty-one in all, are too far east in origin—probably written in south-eastern Limburg—to be considered properly part of the linguistic history of the Low Countries. Van Loey admitted that the linguistic features indicate that they are the precursors of (eastern) Middle Dutch, but alsoremarked that Middle Dutch proper developed much farther to the west. Van Loey also commented that the glosses of the *Lex Salica* are "zu stark verdorben" (1970: 253). The Ghent place names (Mansion 1924) together with the *Wachtendonck Psalms* are often considered our only real evidence for Old Dutch, though Willy Sanders (1974) has made a cogent argument in favor of including the *Leiden Willeram*, i.e. the Leiden manuscript of Abbot Williram's Latin-German commentary on the Old Testament Song of Songs, in our canon of Old Dutch. This manuscript was copied and, to some extent, adapted shortly before 1100 at the Northern-Dutch monastery at Egmond.

The study of the Old Low Franconian or *Wachtendonck Psalms and Glosses* is fraught with unusual philological difficulties. Robert L. Kyes summarizes the main problems in his diplomatic edition (1969) and his article on *i*-umlaut in Old Low Franconian (1964). He gives us a bleak picture of the philological value of both the Psalms and the Psalm Glosses. In addition to the fact that the entire corpus of Old Low Franconian consists of no more than a few thousand words, the *Wachtendonck Psalms and Glosses* surivive only in late sixteenth century copied excerpts. That is to say, no contemporary or semi-contemporary manuscript survives at all; the earliest copy is a good six centuries removed from the original. The second problem, which led Kyes to produce his own diplomatic edition of the Diez manuscript and the Lipsius Glosses, is that the orthography of these Renaissance-era excerpts is so unclear that the text of the various editions differ considerably. In his edition Kyes comments that the sixteenth century copyist must have misread some manuscript readings because his transcript contains numerous obvious errors, which Kyes nevertheless feels compelled to reproduce, lacking any

verifiable data to justify emendations. This situation contributed to already confused arguments between scholars in the nineteenth and early twentieth century over the actual text of the OLF psalms and glosses. Both Minis (1971) and Quak (1972) complain about the obvious inadequacies in Kyes' edition (particularly, his disregard for the importance of diacritics), but it remains the best edition. Minis' outright rejection of Kyes' edition is too harsh. Quak's edition (1981) includes the entire corpus of Psalms and Glosses, i.e. not only the Diez or Berlin manuscript (B) and the Leiden manuscript (Ld) of the Lipsius Glosses already published by Kyes, but also the Leeuwarden manuscript (Lw) containing Psalms 1:1 - 3:6, the shorter list of glosses sent by Justus Lipsius in a letter to Schott, from the first printing from 1602 (Sch), and Psalm 18 from the printing by Abraham van der Myle (M). Quak's is a critical edition, containing emendations and notes in a critical apparatus.

In addition to the fact that the Wachtendonck Psalms and Psalm Glosses survive in only five documents (the Lipsius Glosses, a partial copy of the Lipsius Glosses in a letter to Henric Schott, the Diez manuscript, the Leeuwarden manuscript, and a 1612 printing of Psalm 18), the first and third in this list are known to have been copied from the same manuscript (the now lost Wachtendonck Codex). In view of this situation, and bearing in mind that the Old Low Franconian text in the Wachtendonck Codex represented an interlinear gloss to a Latin Psalter text, this provides for a very limited usefulness of these fragments.

The usefulness of the *Leiden Willeram* is limited, partly because it has not been studied as a Low Franconian text. Sanders (1974) is correct in his opinion that this text is not written, as had been claimed by the older scholarship, in a South-Rhine Franconian or Middle Franconian dialect. Instead, using both philological-codicological and linguistic arguments, he proves that the language of the *Leiden Willeram* represents an imperfect attempt to render a South German text in a Low Franconian dialect, almost certainly the dialect of Egmond. The resulting text is one that relies heavily on the East Franconian original and so presents, in some way, a version of an Old High German text, though it is both in orthography and voca-

bulary a Low Franconian adaptation, much in the same way that the *Hildebrandslied* combines features of Old Saxon and Old High German. The text offers enough evidence to draw some limited conclusions regarding the phonological system of the Egmond dialect of the late eleventh century. It is good to keep the limitations in mind, but because of its considerable length, the *Leiden Willeram* does represent the earliest (nearly) complete work in Old Dutch.

The absence of a true pre-Middle Dutch corpus of texts and the troubling quality of the surviving fragments go a long way toward explaining the limitations on our knowledge about the exact way in which Middle Dutch, the first extensively recorded stage of the language, came to be. It is known from comparative and dialectological research that the language contains elements of Franconian, Saxon, and Frisian, but we know virtually nothing about the dates or the extent to which these dialects exerted their infuence. Schönfeld-Van Loey (1970) can go no further than to list some of the characteristics of these three constituent dialects and point to some of the recorded survivals of these characteristics in the few historical documents of the earliest periods of the Germanic Low Countries, or in modern dialects and place names. This becomes both intriguing and frustrating when clearly 'Saxon'or 'Frisian' survivals, such as words with lost nasals (e.g. the place-name element *-muiden* 'river mouth') turn up in areas where the tribes who spoke dialects with such characteristics are not believed to have been populous (cf. Schönfeld-Van Loey 1970: § 29). This confusion has given rise to the idea that such survivals should not be attributed to particularly Saxon or Frisian substrates in a type of Old Dutch that is presumed Franconian in nature, but rather to shared Ingvaeonic traits (cf. Van Loey 1970: 255). One of the most vocal proponents of an alternative to our current views of West-Germanic linguistic unity has been Maurer (e.g. 1948), who suggested that the dialect division in early Germanic was rather between North-Sea Germanic and what one might call "Inland Germanic," i.e. between the coastal dialects (Old English, Old Frisian, Old West Franconian) and those spoken further inland (Old Saxon, Old High German). The problem was taken up recently by Richard M. Hogg (2002) who poses several

serious challenges to our standard models of language evolution, in particular the *Stammbaum* Theory, in the context of the place of Dutch within the West-Germanic language group. In his analysis of three lexemes and one morpheme in Modern Dutch, Old English, Old Frisian, Old Saxon, Low Franconian and Central Franconian (Dutch *vijf* 'five,' *daad* 'deed,' *hij* 'he,' and the [nominative] plural marker *–en*) he is able to show that the modern Dutch forms do not uniformly derive from what is called Old Low Franconian but also includes forms, apparently haphazardly across the vocabulary and morphology, that would be considered Ingvaeonic, Anglo-Frisian, English, Frisian, Low German and/or Saxon. Hogg proposes no solution for this problem though he suggests that the answer may lie in examining the usefulness of *Wellentheorie* in this regard.

This means that arguments about the phonology of Old Dutch need to be very careful and limited. I believe that we can nevertheless demonstrate the likelihood of the presence of palatalized Gmc. */c/ and Gmc. */ɟ/ in the dialects spoken in the Low Countries before the end of the first millennium. These dialects almost certainly also had either palatalized /t'/ or assibilated /ts/ < /t/, though the presence of this sound (whichever it may have been) is harder to pin down, since it is almost impossible to separate the philological evidence for the working of a palatalized sound indigenous to Dutch, that is, Low Franconian, from the mechanical copying of High German forms with the affricate /ts/ which was produced by the working of the Second Consonant Shift. I take it as certain that in the oldest stages of Dutch Gmc. *t* underwent a change in some contexts, as evidenced by the such words as MnDu *sieraad* 'gem' < **kier-* and the common occurrence of /ts/ in Modern Dutch words, esp. those of Latin origin (e.g. *plaats, toets, etc.*) but exactly how this operated is probably beyond our reconstruction, at least at our present state of knowledge. Lange (1998) believes that West-Franconian palatalized its stops and then depalatalized some. Iverson and Salmons (2006) offer an interesting suggestion regarding a link between the Second Consonant Shift and palatalization.

2.2.1 Palatalized and Assibilated /k/ in Old and Middle Dutch

Let us first look at the evidence for palatalized */k/. The oldest evidence for it is usually considered to be in the instances of apparent assibilation in place names on the Dutch and Belgian coast. Interestingly, some scholars believe that this sound change occurred under the influence of Saxon settlers on the western North-Sea coast. This view was first mentioned in the early twentieth century and adopted by Schönfeld (Schönfeld-Van Loey 1970: xxix). It recently received vocal support from Lange (1998, 1999). The theory surrounding this phenomenon rests, to some extent, on the notion that a considerable number of Saxons remained in what is now Western Flanders after the greater part of their tribesmen crossed over to Britain in the early fifth century. Especially Schönfeld-Van Loey take it upon themselves to point out the correpondences in the place names on the opposite sides of the English Channel, appealing to several references to Saxons residing in Belgica in late Roman historical documents, including the *Notitia Dignitatum*. Van Loon (1986: 46) comments that the similarities between the place names on the Flemish coast and south-eastern England may also be due to Anglo-Saxon invasions of later centuries. The nature of the relationship between early Anglo-Saxon England and the Franconian coastlands, at least in the preliterary periods, is somewhat uncertain. The historian Stenton (1947: 10, 58-59) argued that Kentish culture in the sixth century was closely related to that of contemporary Rhineland Frankish culture and that there were dynastic relations between the Kentish and Frankish royal houses in the sixth and seventh centuries. It is also noteworthy that Elftrudis (Ælfþryþ), daughter of Alfred the Great, married Baldwin II, ruler of the Frankish County of Flanders, which, by the tenth century, was a prominent political force on the continent. Maurer (1948: 221-22) has argued convincingly for strong contacts between the two areas between the fourth and seventh centuries, based on both linguistic and archaeological arguments. It is unclear, however, whether the proven cultural and linguistic influences came from the Anglo-Saxons to the continent or vice versa. Maurer does not commit himself, though it seems more likely from his argumentation that the Franks exerted their

influence over Kent. Stenton also suspected that Franks dominated Kent until *ca.* AD 700, but it must be said that the historical evidence for this period is too meager to be considered conclusive.

The classical example for the linguistic similarities is that of a town in the Belgian province of West-Flanders recorded in the sixteenth century as *Budseghem* (Lange 1999: 187). It is apparently identical with a town recorded in AD 964 and 996 as *bucingehem* (Mansion 1924: 27), a name that Schönfeld-Van Loey consider reminiscent of English *Buckingham*. However, this example, cited by many scholars since, is little compelling in itself, since the earliest spellings of the town *do not*, on the face of it, indicate assibilation at all but rather present apparently straightforward <c>. Yet, it is in comparison with the modern spelling and pronuncation of the town (*Butsegem* near Courtrai, pronounced with /ts/)—as well as the sixteenth century spelling—that questions regarding the etymology and phonology of this word arise. Another example from the same toponymic study by Mansion is *cimbarsaca* (AD 815) which corresponds to modern *Semmerzake* (near Ghent, pronounced with /s/) and which was variously spelled *schemerzake* (AD 1101), *tsemmersake* (AD 1163), and *chemersake* (AD 1271). Mansion comments (1924: 126) that the etymology of this place name is "volkomen duister" (utterly obscure) but he also points out that the initial consonant could not have been simple /s/ but rather /ts/ or /tʃ/. Van Ginneken (1935: 19-21) mentioned several other place names from the southwestern Low Countries that exibit palatalization and assibilation, and he also included several Germanic place names that are currently in French-speaking areas and that usually escape the attention of Germanic scholars. One example is *Roubaix,* which derives from Gmc. **rodbec(c)a* 'red creek.' According to Kieft (1944b), assibilation of Gmc. **k* can be observed in place names from further north along the coast, in the Dutch provinces of North Holland, Groningen, and Drenthe, not to mention Friesland.

From a linguistic point of view, the argument is compelling since the pattern is recorded extensively and it does not include place names alone. Kieft also pointed to several words in

modern dialects, e.g. North-Holland *sermen* 'groan' (ABN *kermen*), Flemish *drets* 'dirt, mud' (ABN *drek*), Modern Standard Dutch *grissen* 'grab greedily' (< **gritsen* < Gmc **garakjan*). He concluded, "[T]och blijkt wel duidelijk, dat de ndl. kustdialecten van Vlaanderen, Zeeland, Noord-Holland en Groningen verreweg het meeste ndl. assibilatiemateriaal leveren" [Still the Dutch coastal dialects from Flanders, Zeeland, North Holland and Groningen unmistakably present by far most of the assibilated material] (1944: 180). He believed that this early Dutch assibilation is a clear trait of Ingvaeonic dialects and grouped both the Dutch and North-German coastal dialects together with English and Frisian on the basis of this shared trait. The instances are too consistent with known phenomena both in the internal development of the Dutch dialects and the related Germanic languages to be dismissed as marginal. Seemann (1886), Rooth (1932), and Lasch (1939) demonstrated the same assibilation in Saxon place names in Northern Germany.

The chronology of this development is not easy to pin down. Despite the many place names and the extensive dialect words with assibilated **k*, at least in later forms, the record for the early period of Dutch is deficient. The assibilations are nearly all recorded after AD 1000, sometimes much later, and earlier spellings seem to give no clue to any peculiar development, as is the case with Butsegem and Semmerzake. For all such instances of assibilated **k* the spelling is with <c>. Yet this spelling is interesting and it fits in a common orthographic convention in early and Middle Dutch (as well as in early High German). The town *cimbar-, cimbersace* has <c> before <i>. In Mansion's toponymic index there are few instances of this sequence. More usual is the spelling <ch> before <e, i>, and it has been widely accepted that this is a spelling convention borrowed from Merovingian practice (see chapter 1).

The practice in Merovingian Latin was apparently adopted to indicate non-palatalized Latin */k/ whenever it appeared in spelling next to <e, i>. The use of <h> as a diacritic was probably suggested by the lack of use for this symbol (since Latin */h/ was no longer pronounced) and its application in transcribing Greek (e.g. *Christus*). Thus, whereas Latin */k/

had been assibilated to */ts/ or */tʃ/ before front vowels by as early as the fifth or sixth century, this spelling convention was employed primarily in Merovingian Latin and Gallo-Roman */k/ before front vowels when this */k/ derived from sources other than Latin */k/, particularly */kʷ/ (e.g. *chi* for Latin *qui*), or when <e, i> in spelling stood for */ə/ rather than a front vowel. In either case, the orthography <ch> seems to have been employed to alert the reader that this sequence was not to be pronounced *[ts] or *[tʃ] but rather *[k]. The symbol <k> was rarely used in classical Latin. Thus, <ch> stood for */k/ (Stotz 1996).

The early Dutch place names in the Latin charters, especially when they were latinized (by adding a Latin ending such as *-us*), use the Merovingian orthography. Mansion noted that in place names <k> was uncommon at first, with texts usually having <ch> until the new spelling gradually took over in the eleventh century (1924: 138). Both *cimbar-, cimbersaca* and *bucingehem* violate this spelling in that <h> is absent. This is remarkable since the spelling, especially in Merovingian Latin, was well-established and widespread. Indeed, the use of <ch> before <e, i> is consistent in the Ghent material that Mansion included in his study. These two place names are significant in their deviation from this spelling. It seems logical to conclude that <c> in *cimbar-, cimbersaca* was pronounced like Latin <c>, i.e. as *[ts] or *[tʃ]. The later spellings of this place name with <sch> and <ts> support this hypothesis. The appearance of <ch> in AD 1271 must not be interpreted, I believe, as a 'corrected' or archaic spelling for /k/, since by the late thirteenth century, <ch> was no longer used for /k/. Instead, it had probably become another orthographic representation of */ts/ or */tʃ/.

This geographical and dialectological data points to the existence of palatalized /c/ in Old Low Franconian. If we assume that the early forms with the orthography <c> are indigenous words—and we have no reason to assume otherwise, especially in the place name *bucingehem*—the phonological pattern mirrors that of other Germanic dialects (in particular, Old English and Old Frisian), as well as that of the northern Romance dialects in neighboring Gaul, where Latin **k* before front vowels (and also before /a/) had become palatalized to */ts/ or */tʃ/,

almost certainly at the same period. I would like to avoid here the discussion of relative chronology of Old English palatalization and various other related sound changes. However, if we can be certain that palatalized /c/ existed in Old English (Wright and Wright 1934; Hogg 1992a) and Old Saxon (Holthausen 1900; Lasch 1939) the notion that the older stages of Dutch also had this phoneme can hardly be called a stretch of the imagination. The dialect words presented by Kieft confirm this pattern in Dutch. Thus, if we apply Bhat's definition of palatalization to this data, we can conclude that Germanic */k/ before front vowels underwent a phonemic split in some dialects of Dutch during the earliest period (cf. Bhat 1974: 50). The orthography employed in the surviving documents, which applies the rules of later (medieval) Latin to the Germanic dialects of the Low Countries, indicates that Gmc. */k/ had become */k ~ c/. The spelling <c> represents */k/ when followed by a back vowel or consonant, and some form of palatalized */c/ when followed by a front vowel. Some doubt may remain about what form this palatalized */c/ had in Old Dutch, but in view of the linguistic values that would have been assigned to these letters in scriptoria, based on our understanding of the linguistic development of Merovingian Latin and Gallo-Roman, we can conclude that Old Dutch palatalized */c/ had also spirantized to some form of */ts/ or */tʃ/. It is possible, but not likely, that at this early stage it had, in some instances (e.g. the place name *Semmerzake* already coalesced with /s/. This must have been a much later development, and one that was not uniform, as is made clear by spellings such as *tsemmersake*.

There are two more indications that palatalized /c/ existed in medieval Dutch. The first is the fact that this phoneme has been attested in some southern dialects in the early twentieth century (e.g. Aarschot, cf. Pauwels 1958; Louvain [Leuven], cf. Van Ginneken 1935, 1938-39). It has probably died out by now, since Pauwels (1958) noted that in Aarschot it was already restricted to older speakers in the early twentieth century. There is no evidence about this matter from any later studies. In many cases the original /c/ spirantized, so that its relationship to Gmc. **k* became obscured. The historical traces of palatalized /c/ and its development in the

various dialects are not easy to trace, to a great extent because, as Kloeke (1923) pointed out, they are disguised by the orthography of the Germanic languages, which never developed a clear system to represent palatalized /c/ (cf. chapter 1 on orthography). The etymology of these words often reveals the true nature of the consonants in question.

The second piece of evidence requires more in-depth discussion. This involves the development of the Dutch palatalized diminutive suffix (cf. section 2 of this chapter). There can be no doubt that this diminutive suffix was affected by palatalization, so that Gmc. **k* ultimately came to be represented in orthography (in Modern Standard Dutch) by <tj>. In the dialects that have palatalized forms of this suffix, Gmc. **k* has palatalized and spirantized. Nevertheless, there are several grave complications about the origin of this palatalization, which will be addressed in section 2 below.

*2.2.2 Palatalized *g in Old and Middle Dutch*

Before we discuss the changes to the consonants Gmc. */ɣ/ and Gmc. */j/ in early Dutch, we should establish the nature of these phonemes. Especially */ɣ/ is controversial, since it is not always clear whether we are dealing with a stop or a fricative. The sound derives from WGmc. */ɣ/, from IE **gh*. Prokosch (1939) maintains that the general trend in Germanic was a change from voiced fricative to voiced stop. Thus, */ɣ/ became */g/. But this change was not completed in all dialects of Germanic. While in Upper German this change is complete, the other dialects of continental West Germanic show only partial completion of the shift. Prokosch also believed that <i> in West-Saxon *giefan*, etc. functioned as a diacritic indicating palatal pronunciation of the preceding <g>. Old Low Franconian probably retained a fricative */ɣ/ in all positions except after a nasal where it was */g/ (Kyes 1964). Against this view Frings (1955) argued that Germanic **g* was a stop */g/ and that the tendency was the reverse: a spread of fricative */ɣ/ from the northern dialects southward. Prokosch' view seems more plausible, however. Medieval sources show that Gmc. **g* was a fricative early on, at least in

final position, with spellings of both <g> and <h> pointing to a devoiced [x] allophone; that is to say, by final devoicing Gmc. **g* came to be confused with Gmc. **x*.

We know that this WGmc. */ɣ/ came to be palatalized in many dialects and coalesced with */j/. The effects of this change can still be seen today in Modern English, where it worked extensively, eg. in *yesterday* < OE *giesterdæg,* and the same change is recorded in both Old Saxon and Old High German; cf. chapter 3.

In Dutch the phenomenon has been largely ignored, mostly due to the dearth of evidence for the earliest periods. Nevertheless, from the Old Low Franconian material that does survive we can conclude that it worked there as well. Yet Kyes, in his study of the Old Low Franconian Psalms, is unwilling to go so far as to conclude the presence of a palatalized **g'*. Instead he states that "the letter *g* may represent the reflex of either PGc. */j/ or */ɡ/ initially before front vowels, but elsewhere it reflects PGc. */ɡ/ or, before back vowels, also */ɡʷ/, contrasting with the reflex of */j/" (1964: 424). It is not clear whether Kyes' symbol ɡ denotes a stop or a fricative. He concludes that it is likely that <g> in the corpus represents the phoneme /ɡ/ with a palatal allophone initially before front vowels, and a velar allophone in other positions, except with a stop /g/ after <n>. Indeed, the spellings in the Wachtendonck Psalms seem to confirm this, but there is a handful of examples where Gmc. */j/ and */ɣ/ have been confused. Kyes himself cites *gi* 'you (plural),' *begian* 'to acknowledge,' and *begihte* 'confession' with <g> for WGmc. */j/ in initial position. In addition, there are a few examples of <i> for Gmc. */ɣ/ between vowels: *emiceio* 'always,' *eiselika* 'terrible,' *frangeneian* 'to turn away,' and *vuie* 'war.' The words *luoginda* 'roaring' (< **hlōwan* 'to low') and *olig* 'oil' (< Lat. *oleum*) represent additional examples of the use of <g> for WGmc. */j/, where the latter word is somewhat problematic, since <g> must represent, according to Kyes, a morphemic spelling for the glide in a putative genitive **oliges* /olijəs/. Kyes comments that the confusion of WGmc. */j/ and */ɣ/ is probably due to the importation of these words from another dialect, e.g. an "Ingvaeonic" or Central Franconian dialect, since this confusion is restricted to a small number of words. Cowan gives

no explanation for the confusion, though he suggests that "*j* est une sémivoyelle prépalatale probablement quelque peu affriquée parce qu'elle tend à se confondre dans l'écriture avec *g* [ɣ]" [*j* is a prepalatal semi-vowel, probably a little affricated since it tends to be confused in spelling with *g* [ɣ]] (1961: 16-17).

Sanders (1974) analyzed the language of the *Leiden Willeram* and also found the same confusion of <g> and <i>, where <i> stands for consonantal /j/. Furthermore, he proved that this confusion is not merely dependent on traditional spellings one commonly finds in the earlier Middle Ages by pointing out that the manuscript has (1) the relatively infrequent use of <g> for pronouns with etymological *j*, and (2) "reverse" spellings with <i> for etymological *g* (*iegen, iegiuan*). In addition, Sanders points out the very unusual form *iof* "if" (used three times), which helped Sanders locate the manuscript in Northern Holland, since this form of the conjunction is typically restricted to dialects of Middle Dutch and Old Frisian of that area, as attested by deeds from the area right up to as late as the early fifteenth century. Sanders adds that this form also occurs sporadically in Lübeck and Hamburg in the thirteenth and fourteenth centuries. The tight trade links between these two German cities and the Flemish cities of Bruges and Ghent may explain this fact, according to Sanders (p. 267). Clearly, for the scribe */ɣ/ and */j/ were not always distinguishable.

Other evidence has to be gleaned from dialectological and etymological research. There is considerable evidence that suggests that the oldest stages of Dutch did confuse */j/ and */ɣ/. One interesting discussion on the topic took place in the 1930s between Coenraad van Haeringen and Klaas Heeroma. The discussion was initiated by Heeroma's dialectological study of the words for 'udder' in Dutch in which he discussed, among others, an opposition between words with initial *g* and those with initial *j* (Heeroma 1936). He concluded that the forms with initial *g* (e.g. *gier, geer, geier, gedder, gidder*) should be considered derivations from those with initial *j* (e.g. *jaar, jieder, judder, juur*) but with a collective prefix **ga-*, with both forms ultimately deriving from a common Germanic **euder*. Van Haeringen dismissed this

derivation and saw in the alternation between *g* and *j* another example of a much wider pattern that also extended to the pronoun *jij/gij* 'you (2nd sg)' (Van Haeringen 1937; 1938). Especially in the latter article Van Haeringen presents convincing arguments against Heeroma's prefixation theory and pleads instead for a direct change *j* > *g*. He believed that the change was motivated by dissimilation, pointing out that /j/ in the older stages of the language was a fricative rather than a semivowel. Confusion arose when palatal allophones of /ɣ/ before front vowels overlapped with /j/.

Dutch philologists discussed several other words in which the same phenomenon can be observed, but no one remarked on the place of the sixteenth century word *ghiemant* in this context. At roughly the same period as the discussion over the Dutch words for 'udder,' scholars debated the etymology of *ghiemant*. Apparently, since the scholars in question were bent on explaining the initial consonant as a velar, it did not occur to anyone that here <gh> or <ghi> could stand for /j/, so that the word was merely a spelling variant for Modern German *jemand* 'someone' (Van Haeringen 1938).

For the sixteenth century Muller (1926) has presented direct evidence from a contemporary tract on Dutch spelling written in Ghent (Joas Lambrechts' *Nederlandsche Spellijnghe,* 1550) which indicates that the letter <g> was still pronounced there as either /ɣ/ or /j/:

> g, gé werd ghepronuncieerd tweasins, te wéten voor a o u, ghelijc offer en h tusschen stonde, tdicke ende platte van der tonghe achter téghen tverhémelte van den monde. Maar voor e ende i, zo medeluudse ghelijc i co[n]sonant voor de vocálen doed. (quoted in Muller 1926: 101)
>
> [g, gé was pronounced in two ways, namely before a o u as if there were an h inserted in between, [with] the thick and flat part of the tongue against the rear of the palate [i.e. the velum]. But for e and i, with a sound just in the same way as consonantal i functions before vowels.]

This comment also apparently illustrates that by the sixteenth century, the spelling <gh> had come to be used for the *velar* pronunciation.

Franck believed that the different spellings <g> and <gh> in older Dutch could ultimately be traced to a Merovingian scribal tradition (cf. chapter 1 on orthography). He comments that, although the spellings are undifferentiated before front vowels and diphthongs starting with a front vowel, the use of <gh> before a back vowel is "verhältnismäßig so selten" that this distinction was certainly systematic. Yet Franck did not believe in what we would call a phonemic distinction. In both his *Altfränkische Grammatik* and his *Mittelniederländische Grammatik*, he argues that the difference was orthographic in nature only. For Middle Dutch he is willing to allow no more than a distinction between the "mehr palatale[n] Laut vor hellen und mehr gutturale[n] Laut vor dunkeln Vokalen" (1910: § 9). As pointed out in chapter 1, this contradicts the phonological principle of medieval orthography and is, moreover, a misinterpretation of Romance orthography and phonology. Franck, Muller (1926: 95), and Tavernier-Vereecken (1968: 586-87) have argued for Dutch (for Old High German cf. Penzl 1959) that Frankish scribes adopted the practice of writing <gh> to indicate the non-palatalization of */ɣ/ before front vowels from Romance or Merovingian scribal practice. If we follow the evidence presented by Pope (1934), Wells (1972), and Stotz (1996), we are not justified to suggest the existence of such a practice in Romance in the first millennium. In Gallo-Roman, <g> was used almost invariably to describe both the palatalized and assibilated */dʒ/ before front vowels and the regular continuation of Latin velar */g/ because the quality of the following vowel would have indicated which of the two was meant. There was no spelling <gh> in Latin or Gallo-Roman (Wells 1972; Stotz 1996).

The use of this orthography in Germanic must have developed separately from the Latin-Romance spelling tradition. At any rate, Germanic peoples who did not speak any Gallo-Roman or Old French, especially the further they are removed from Gaul, would have known the orthography of Classical Latin at best, which did not know <gh>. As we have seen, Sanders (1974) concluded that the Low Franconian scribe of the *Leiden Willeram* who 'translated' Willeram's *Commentary* introduced the locally common <gh> into a text the original of which

(as attested by the other surviving manuscripts) did not use this spelling widely. It seems that the spelling <gh> for initial *g* was especially common in West Franconian (*Isidor*), in names recorded in deeds from the southwestern corner of the Low Countries and Middle Dutch. The distribution of <g, gh, ch> in *Isidor* is considered atypical and has given rise to considerable speculation. Braune-Reiffenstein (2004), where the discussion is summarized, do not take a position in the debate. The few twentieth-century studies present unsound hypotheses: the Merovingian scribal theory, which I have refuted, and Langobardian influence, which is unverifiable**.** Considering their admitted lack of knowledge about the Germanic dialects spoken in Frankish Gaul and the preponderance of <gh> spellings in *Isidor*, it is somewhat curious that Braune-Reiffenstein reject this text as not West Franconian (and instead classify it as Rhine Franconian; §6.d Anm. 11, p. 12). The apparent association of <gh> spellings with the area of Frankish Gaul and the Low Countries seems to make the conclusion of a (north-) western provenance most attractive. It is not here my intention to argue this point, but if we assume *Isidor* to be West Franconian (as others have), this text supports the theory of a West- or Low-Franconian orthographic, and probably, phonemic, development.

The differentiation between <g> and <gh> in the development of West- and Low Franconian then appears to be phonemic. The sequence <gh> could not be used before back vowels, as Franck has it, so that logically, as the innovative spelling, it must have indicated a 'new' phoneme. That <g> would have been used primarily for 'old,' i.e. etymological, velar Latin /g/ in Latin texts is uncontroversial. The Germanic dialects of the first millennium did not have this sound except after /n/, but transposing this use in Latin onto the equivalent velar */ɣ/ presents few problems. Apparently, <g> could be used before both front and back vowels, and in this respect it parallels exactly the practice in Romance, since the following vowel, serving as a diacritic, would have indicated the correct pronunciation. The use of the symbol <gh> will have been used for the palatalized version of */ɣ/.

In order to understand the confusion of */ɣ/ and */j/ in early Dutch, we should now consider the phonological features of this palatalized version of */ɣ/. A partial representation of the reconstructed consonant system of Old Low Franconian or early Middle Dutch would be as follows:

Table 2.5 – The palatal and velar consonants of Old Dutch

	Palatal	Velar
Plosives	c	k
Fricatives	(ç,) ʝ	x, ɣ
Nasals	(ɲ)	ŋ
Liquids	(ʎ)	
Glides	j	

This table clarifies the origin of the confusion between Gmc. *g* and *j*. The only difference between */ʝ/ (the latest IPA symbol for the voiced palatal fricative), i.e. the logical product by palatalization of */ɣ/, and */j/ is that the former is a fricative while the latter is a glide. Van Haeringen (1938) even went so far as to claim that */j/ was a fricative. This is probably not a correct way of describing the situation, though the statement can be considered a correct intimation of the ultimate truth behind the evidence. Martinet mainted: "Puisque la plupart des phonèmes résultent en fait de la combinaison de plusieurs articulations distinctives, nous pouvons nous attendre à ce que, dans bien des cas, un changement dans la réalisation d'un phonème résulte de la modification de l'une seulement de ces articulations" [Since the majority of phonemes are effectively the result of a combination of multiple distinctive features, we can focus our attention on the fact that, in most cases, a change in the realization of a phoneme is the result of the modification of only one of these features] (1970: 77). If we follow this principle, the current proposal explains well how *g* and *j* came to be confused in early Dutch: first, a step of palatalizing */ɣ/ before and under the influence of a following front vowel to */ʝ/; second, a collapse of a clear distinction between the fricative */ʝ/ and the glide */j/.

The idea that a new phoneme */j/ was created by means of a phonemic split is not unexpected, especially when we realize that all Flemish, Limburgic, and Brabantic varieties of Modern Dutch still have a distinction between the palatal or velo-palatal fricatives /ç - ɟ/ in lieu of the distinction between the velars or uvulars /x - ɣ/ in Modern Standard Dutch and northern dialects of Dutch. The view that these dialects only *realize* the 'underlying' velar fricatives as palatals may seem a mere nicety of phraseology, though of little consequence in synchronic linguistics. Nevertheless it reveals one of the major flaws of Generative Phonology, to which model this representation of the facts is directly indebted: its dependence on synchronic and standard-language data.

It is unclear what happened to geminated *g* in Old Dutch. The record is too fragmentary for any conclusions to be drawn, though there are some indications that Old Dutch geminated *g* became an alveolar affricate by palatalization. Van Ginneken (1935:20) reported that the place name *Brugge* (Bruges) was spelled *Bruzzias* (late tenth century) and *Brudgias* (1127) in charters, which indicates assibilation of geminated *-gg-* but there is very little evidence beyond this place name. The noun *brug* 'bridge' (probably from the same root as the place name) is recorded as *bricghe* and *brucghe* but never with any clear indication of assibilation. The same goes for the word *rug* 'back' (< Gmc. **hruggia*), which is recorded as *rucghe* (thirteenth century, VMNW); the spelling <cgh> is ambiguous. The only other word that has undoubtedly undergone assibilation of geminated *g* is *mug* 'mosquito, midge' (< Gmc. **muggia*). It appears in Middle Dutch variously as *messien, muesien, moesie* (thirteenth century, cited in VMNW) and also survives in some dialects as *mezik* (Alblasserdam). Because of its undoubted relationship to *mosquito* < Lat. *musca* some have doubted the origin of this word but the voiced velar is so widespread in early Germanic dialects that these doubts seem unfounded. The correspondence between the assibilated Dutch forms and the Romance varieties are probably no more than coincidence, the result of separate assibilations of similar roots in the two branches of Indo-European.

2.3 Palatalization of the Dutch Diminutive Suffix

The Dutch diminutive suffix has a special place in the discussion of palatalization. Kloeke (1923) proved that the modern forms with *-(t)je* are derived by palatalization from the Middle Dutch suffix recorded as *-kijn*. The topic was widely researched in the twentieth century. The recent morphological atlas of Dutch dialects (MAND) is right when it states that "[d]iminutive formation has been discussed in a great number of articles and books by leading historical language scholars throughout the first half of the twentieth century" (2005: commentary 25). The atlas devotes one third of its first volume to a new analysis of the distribution of the various diminutive suffixes in the Dutch dialects, thereby replacing Pée's studie from 1936.

Most recent studies have been morphological analyses and attempt to relate the different allomorphs to one primary or underlying morpheme in some form of generative framework. This focus has obscured the history of the suffix and the phonological implications for our understanding of the histofy of the Dutch language have not received due attention. When one examines the suffix from the perspective of diachronic phonology, it becomes clear that it is part of a wider trend of velar palatalization in Old and Middle Dutch.

2.3.1 The Allomorphy of the Dutch Diminutive Suffix

Modern Dutch has an extensive system of diminution. The Dutch dialects have a wide range of different forms of the diminutive suffix, and some are in competition with one another. Modern Standard Dutch has five allomorphs that are distributed according to phonetic and prosodic criteria: *-tje, -etje, -je, -pje,* and *-kje*. The distribution rules are as follows:

1. the form *-tje* is the base form, used for most long-stemmed words that do not end in an alveolar or labial plosive or fricative (e.g. *maan ~ maantje* 'moon');

2. the form *-etje* is an allomorph reserved for short-stemmed words that do not end in an alveolar or labial plosive (e.g. *man ~ mannetje* 'man');
3. the form *-je* is used for words that end in an alveolar or labial plosive or fricative (e.g. *hand ~ handje* 'hand'; *poes ~ poesje* 'cat'; *koop ~ koopje* 'buy, bargain');
4. the form *-pje* is used for long-stemmed words that end in *-m* (e.g. *bloem ~ bloempje*); and
5. the form *-kje* is used for polysyllabic words that end in *-ng* with stress not on the final syllable (e.g. *koning ~ koninkje* 'king', but note: *ding ~ dingetje* 'thing,' which is short-stemmed). This rule is no longer productive.

There is some slight variation for these rules; for instance the word *bloem* is diminutized as *bloemetje* by some speakers, but such alternates are probably due to competing rules from dialectal allomorphy or from lexical or phonological variants in dialects. In this example, the vowel of the word *bloem* is analyzed as short by speakers who prefer the variant *bloemetje*, while speakers who choose *bloempje*, analogous to *boompje*, analyze the vowel as long. That is to say, these speakers classify the word differently based on a different prosodic analysis but they follow the same rules.

2.3.2 *The Phonology of the Dutch Diminituve Suffix*

Recent handbooks of Dutch phonology and morphology, most of which use some form of generative grammar, choose *-tje* as the base form. Booij states: "We would like to express the phonological similarity of the five diminutive suffixes by deriving them from one underlying form, /tjə/, through a number of MP-rules" (1995, 70). The allomorphs *-je, -pje* and *-kje* are considered variants that arise due to place assimilation. The allomorph *-je* appears after words ending in /t/. Thus, the plosive of the suffix is said to be assimilated to the preceding /t/. The second (*-pje*) appears after words ending in /m/, and the third (*-ke*) after words ending in the velar nasal /ŋ/. Booij does not offer the rule that generates the allomorph *-etje*, but it is well known that it occurs after short-stemmed nouns ending in /n, m, ŋ/.

The morphological analysis of the diminutive suffix is based on its phonology. Current views on the phonological status of the Dutch diminutive suffix take the form of the standard language (ABN), i.e. *-tje*, as the basis for discussion, as they are presented, for instance, by Cohen et al. (1972), Goossens (1974) and Keymeulen (1991). Cohen et al. claim that in the word *tasje* 'little bag' the appearance of [ʃ] is a "realisatie van de foneemcombinatie /sj/" (1972: 78). Goossens' historical phonology of Dutch analyzes words like *ratje* 'little rat' as containing [t]j > [tʼ]j. In his view, the diminutive suffix contains the phoneme /j/, which influences neighboring /t/ to produce the palatalized allophone [tʼ]. Goossens attempts to make sense of his model by defining the Dutch voiceless dental stop as [t ~ tʼ]. Keymeulen presents the same model. After a description of the origin of the palatalized and assibilated suffix, especially in relation to Flemish and Brabantic dialects (1991: 30-31), she points to the allomorph *-je* functioning in Modern Dutch, which palatalizes the preceding consonant (she gives the examples *handje, katje, takje*).

There are also detailed studies of the phonology of the Dutch diminutive, e.g. Robinson (1980), Booij (1995), and Kooij and Van Oostendorp (2003, a popular introduction to phonology). All of them present generative models. They decide on one underlying or base form for the diminutive suffix and derive the allomorphs by a number of generative rules. In identifying the fact that stem-final *m* and *ŋ* influence the place of articulation of the following plosive, Booij makes a case for the fact that (1) a plosive element is part of the suffix, and (2) this plosive is sensitive to assimilation. According to his analysis, it is logical to select *-tje* as the base form since it is the easiest form from which to derive the variants.

However, some aspects of the current analyses of the phonology and allomorphy of the Dutch diminutive suffix do not work. For instance, Booij notes that the allomorph *-kje* violates a phonological principle of Dutch, namely the assimilation of nasal consonants to a following obstruent (1995: 70). Following this principle, Dutch should have had **konintje* or **koningtje* as the diminutive of *koning* 'king,' with the velar nasal assimilating to the following /t/ of the suf-

fix. This is not the case since the suffix *-kje* is no longer productive and is reserved for words that in Middle Dutch ended in phonetic [k] by final devoicing from Gmc. */g/. Modern Dutch *koning* goes back to Middle Dutch *coninc* */konɪnk/. This means that the suffix *-kje* in Modern Dutch does not derive from the underlying form by any phonetic rule but is instead lexicalized from Middle Dutch.

The current generative models of Dutch diminutive allomorphy have little regard for the history of the Dutch diminutive suffix and its historical phonology. An important objection to the standard analysis, from a historical point of view, is that the origin of the phoneme /j/ in the diminutive suffix is left unexplained. When, where and under what conditions did it arise? It is not unreasonable to propose that Modern Dutch has a phoneme /j/ in the diminutive suffix, but how it came to be there is a question that cannot be answered by a synchronic model like Booij's. This problem has been treated with too little regard in general. Keymeulen contends,

> Het foneem /j/ is dus het enige palatale foneem dat het Nederlands rijk is. Het is verantwoordelijk voor de palatalisering/mouillering van alle palatale klanken die in het Nederlands kunnen optreden, maar het is zelf niet door mouillering ontstaan, aangezien het een rechtstreekse voortzetting is van Wgm. j̯. (Keymeulen 1991: 69-70)
>
> [Therefore, the phoneme /j/ is the only palatal phoneme in the Dutch language. It is responsible for the palatalization of all palatal sounds that can appear in Dutch, but it did not itself arise as a result of palatalization, since it is a direct continuation of WGcm. *j*.]

Keymeulen maintains a distinction between *palatalisering* 'phonetic palatalization' and *mouillering* 'phonemic palatalization.' Although it is true that the phoneme /j/ was not added to the Dutch phoneme inventory through palatalization, Keymeulen's statement leads to the incorrect generalization that the phoneme /j/ was never on the receiving end of any sound shift. That is to say, while /j/ was inherited from West Germanic, several sound changes have caused other phonemes to merge with /j/, adding to its functional load. In view of the histori-

cal evidence, the notion that the diminutive has always had /j/ is wrong, as Heeroma (1959) observed:

> Als ik zeg dat *tje* in *maantje* een uitbreiding van het diminutiefsuffix *je* met een *t* is, is dat synchronistisch gedacht. Historisch is het precies andersom: niet *je* is de normale vorm van het suffix, maar *tje*, en *tje* is niet ontstaan door uitbreiding van *je*, maar *je* door vereenvoudiging van *tje* in bepaalde positie. Historisch gezien is *tj* ook geen groep van foneem *t* plus foneem *j*, maar een combinatorische variant van *k*, uitgegroeid tot een zelfstandig gemouilleerd foneem. (Heeroma 1959: 130)
>
> [When I say that *tje* in *maantje* 'little moon' is an extension of the diminutive suffix *je* by *t*, then that is a synchronistic statement. Historically, it is quite the other way around: the normal form of the suffix is not *je* but *tje* and *tje* did not arise through extension of *je*. In fact, *je* arose by simplification of *tje* in a certain position. Historically speaking, *tj* is not a cluster of phoneme *t* plus phoneme *j*; it is a combinatory variant of *k* which has grown into an independent palatalized phoneme.]

Heeroma correctly places the diminutive suffix in its historical context and argues for (1) analyzing the *orthographic* sequence <tj> as a monophonematic unit and (2) giving this unit the status as an independent phoneme. Not all Dutch dialects have retained or ever possessed this monophonematic status for the diminutive <tj>. The evidence in the FAND and in the MAND suggests that /j/ is present in the suffix in some dialects, but it is neither ubiquitous nor ancient as has been traditionally assumed. Heeroma (1959) suggested that this assumption has been caused by the spelling of modern Standard Dutch. The spellings with *j*, e.g. <-tje, -je, -pje, -kje>, are to a large extent the chance products of orthographic developments during the later Middle Ages and should not be interpreted to imply the insertion of /j/ at some point in the history of Dutch.

A second objection relates to Booij's comment, that "normally the nasal consonant assimilates to a following obstruent" (1995: 70). The situation that Booij finds worrisome is that the initial /t/ of the suffix seems to change to /k/ under influence of /ŋ/, whereas /ŋ/ does not affect any other phoneme in any other morpheme in the language. He lists several examples for

morpheme-final /ŋ/ where it alternates with [ŋɣ] and [ŋk], such as *fungeren* /fœŋˈɣerə/ 'to function' and *functie* /ˈfœŋksi/ 'function (n)' (Booij 1995: 80). These examples are meant to underscore Booij's point that the phoneme /ŋ/, in view of its restricted distribution in Dutch, assimilates to its surroundings, rather than influencing neighboring consonants. Booij realizes that this situation is caused by the inheritance of lexicalized items from older stages of the language. As Weijnen (1966: 256-57) pointed out, Modern Dutch /ŋ/ derives from older /ŋg/. This biphonemic sequence is retained in Modern English *finger* /fɪŋgəʳ/. In Middle Dutch /g/ was subject to final devoicing, explaining such forms as *jonkvrouw* 'Lady' < *jonc* [jɔŋk] + *vrouw* (lit. 'young woman').

With regard to the diminutives of nouns ending in /ŋ/, Booij's argument in favor of an underlying form /tjə/ is therefore rather weak. Why does /ŋ/ violate the assimilation rules of Dutch in the diminutive suffix when it behaves according to the model Booij proposes for other contexts in which /ŋ/ interacts with surrounding phonemes? Apart from the general observation that "[t]he deletion of /t/ ties in with the tendency in Dutch to simplify clusters" Booij does not provide an answer to this question, nor do Kooij and Van Oostendorp (2003), the only other phonological study that mentions the assimilation of /ŋ/ in the diminutive. Booij's phonological model for the diminutive suffix is, then, in part contradictory to his model for assimilation. Specifically, Booij's inclusion of /t/ in the underlying form of the diminutive suffix causes a violation of the assimilation rules. Booij misanalyzes the diminutive forms ending in /ŋ/ because the "*k*-initial variant," as he calls it, is in fact a *j*-initial variant preceded by the devoiced [ŋk] variant of morpheme final /ŋ(g)/. This solution saves Booij's assimilation rules, since it is no longer the /t/ of the suffix that is being influenced by a preceding nasal. If one wanted to stay within Booij's generative model, the solution would be to insert a rule for *t*-deletion or assimilation after preceding /k/, which would also salvage Booij's choice of /tjə/ as the underlying form of the diminutive suffix.

Kooij and Van Oostendorp (2003: 169) formulate a rule for words ending in /p/: "De /t/ van het achtervoegsel wordt niet uitgesproken als de stam op een obstruent eindigt" [The /t/ of the suffix is not pronounced when the stem ends in an obstruent.] They, too, are forced to produce a separate rule for words ending in nasals. This procedure is not desirable, especially considering the fact that as early as the 1970s phonologists were concluding that generative phonology was producing too many rules. On the topic of diminutives Tiersma commented that separate generative rules for a small pool of 'unusual' variant forms was "a very high cost" (1980: 251). His focus was vowel alternations between noun stems and diminutives, another difficulty for generative models. Yet his comment is equally applicable to our question with /ŋ/. In his opinion, rare, non-productive forms should be considered lexicalized, a proposal that is to be prefered over extra generative rules.

The objections mentioned above illustrate some fundamental weaknesses in current approaches to Dutch diminutive allomorphy and its phonology. Generative solutions abound in contradictory rules, making the system top-heavy. Additionally, because their focus is almost invariably the living language, they ignore nearly all historical aspects. As we saw, Booij was unable to reconcile the behavior of the velar nasal in the rules for diminutive allomorphy with his general rules for Modern Dutch phonology because he overlooked the role of lexicalized remnants of Middle Dutch. Another considerable weakness that has not been seriously addressed is the fact that current solutions are all based on normative views of the "standard language" and ignore dialectal variation, cf. Kooij and Van Oostendorp (2003): "In informele spraak wordt *je* tot *ie* na een obstruent." [In informal language *je* changes to *ie* after an obstruent.] First, forms ending in *-ie* are *not* merely "informal" language but are dialect forms (primarily from the provinces of Holland, Zeeland, and Drenthe). They have no place in Modern Standard Dutch which, like any standard, is no more than the representation of an artificially created norm. The grammar of ABN does not allow diminutives in *–ie*, and I am not aware of any other phonological study that has ever allowed this form for ABN. Kooij and Van Oos-

tendorp are including rules from two different dialects in one system. On a more fundamental level, they make the mistake of picking their illustrations arbitrarily and claim that a form like *stalletjie* is a nonexistent version of *stalletje* 'little stall.' On the contrary: it is a common form in the dialect of my native region as well as a substantial part of Holland, Drenthe and Overijssel (cf. MAND: map no. 2.7.1.8). Their concept of "informal language" is ill-defined and, I believe, illusory.

The conclusion is that most analyses of modern diminutive allomorphy obscure its history since they tend to subsume all variation under one phonological system containing rules of active phonetic derivation from one current base form. The range of modern variation should not, however, be brought within one comprehensive analysis since the modern language is not one monolithic entity, and neither were its ancestors. An examination of the history of Dutch diminutive allomorphy and of dialectal variation will reveal that phonemic palatalization played a much more important role in the history of Dutch than is usually acknowledged and that the spelling change from <-ekijn> to <-(t)je> merely reflects the period when already palatalized /c/ was assibilated and lost its relationship with velar /k/.

2.3.3 The Modern Dialects

In ABN the diminutive suffix appears in several forms, depending on phonology and prosody. Even with regard to ABN there is some disagreement about the phonemic makeup of the diminutive suffix. Paardekooper (1944) objected to the views that had become standard sixty years ago and wrote that a representation of *-tje* as [cə] is incorrect. He argued that speakers of ABN only have one consonant in this suffix and that it does not contain any plosive. Instead, he said that the correct transcription of this consonant is [ç]. Paardekooper also believed that this sound, which he called "weak t," should be awarded the status of independent phoneme since it can differentiate between minimal pairs: *buitje* 'shower (weather)' – *buiten* 'outside' /bœyçə/ – /bœytə/, *laatje* 'small drawer' – *laten* 'to let' /laçə/ - /latə/. In many Hollandic dialects,

upon which much of the phonology of ABN is based, this is a valid statement, but other dialects do have /cə/ or /tʃə/ (cf. FAND, MAND).

Across the Dutch language area there are several different types of diminutive suffix. It is traditional to distinguish two main types: palatalized and non-palatalized suffixes, though this ignores some details, such as an area that probably retains the old Germanic *-īn* type, as well as further developments within the palatalized forms. The palatalized suffix now dominates Standard Dutch, whereas the non-palatalized suffix is often believed to be a Flemish dialectalism; however, it is widespread not only in southern dialects of Dutch but also in eastern and north-eastern dialects, and it is the dominant type in Low German (Kloeke 1929, Pee 1936, Schönfeld-Van Loey 1970, FAND, MAND). The old Germanic suffix *-īn*, is the sole diminutive suffix in nearly all Saxon dialects of Dutch in the Northeast of the Netherlands, excluding Friesland (where Frisian is spoken in addition to Standard Dutch) and Groningen. According to the recent phonological atlas of Dutch (FAND 1998-2005), final *-n* in these *-īn* dialects, still recorded by Kloeke in the first half of the twentieth century, has disappeared without a trace.

Both the palatalized and the non-palatalized forms represent modern developments of the same historical form MDu *-(e)kijn.* The origin of this suffix is obscure and various theories exist regarding its derivation. Since the older Germanic dialects were poor in diminutives—at any rate, few texts survive with more than a handful diminutives each—it is hard to trace the origin of the modern suffix now dominant in both Modern Dutch (*tje*) and Modern German (*chen*). The MAND, summarizing the research on the diminutive suffix, mentions three theories regarding the origin of the suffix and considers each of these theories equally plausible and none of them proved.

One theory was proposed by Hofmann (1961), who believed that the modern suffix is a blend of two separate suffixes, namely the older Germanic *-k* (originally used in Germanic for pet names, later for diminutives throughout West Germanic; cf. MnE *bullock, hillock*), and the

-īn suffix mentioned above (originally for the formation of adjectives with the meaning 'belonging to,' later for diminutives throughout West Germanic; cf. MnE *chicken* < **kukīn*; *swine* < **su-īn*). Hofmann argued that the two suffixes were originally combined for their separate meaning, thus 'small NOUN belonging to X.' Later the adjectival element was forgotten. Another theory, as described in the MAND, is a variation on the same idea as Hofmann's, namely that the two diminutive suffixes were blended hypocoristically, each separately as diminutive markers. This theory was proposed by Kluge (cf. MAND 2005: commentary 26), but has not found many followers. A third theory holds that the suffix goes back to an ancient simplex suffix *-ikīn*. From an etymological standpoint the first of theory seems most attractive because it works with already accepted derivations and combines them with the fewest new assumptions. The last one is the most problematic because it leaves many questions unanswered. With our current knowledge no solution is in sight.

As the MAND shows, it would be false to believe that Dutch dialects can be classified as palatalizing dialects and non-palatalizing dialects, as if all dialects picked either one or the other type of suffix. I am ignoring the clearly delineated *-īn* area from the discussion, since it is not relevant in the present context. This is assuming that this area does retain the old Germanic *-īn* suffix, but it is also possible that we are dealing with later assimilations that have obscured the original presence of a consonant. In either case, and absent clear information on this question, this matter does not affect the argument. In fact, many dialects have both types, and distribute them according to prosodic and phonological rules. Dialects that have a distribution of palatalized and non-palatalized forms are common in Belgium and the southern Netherlands (especially in Brabant and Limburg), but they also exist throughout the Dutch language area outside of Zuid-Holland. The FAND is unfortunately deficient in its data on this topic since it presents only two diminutive forms, both ending in *-d* (*kleedje* and *hoedje*, maps no.s 66 and 67, vol. IV). Based on those two examples alone, the atlas may lead to strengthening the common misconception that any given dialect possesses either the palata-

lized or the non-palatalized forms throughout. The more recent MAND clarifies matters greatly.

For instance, the dialect of Courtrai (Kortrijk) has both palatalized and non-palatalized forms (Dassonville 1931). The former are used exclusively for words ending in *-t*. A third type of suffix in Courtrai—a simple *ī*, used for short-stemmed words ending in *b, d, z, l, r, m* and *n* + ə —developed according to Dassonville from the form *-egi* or *-ige*, which is more widely distributed in other parts of Flanders. If Dassonville is right, we may assume that *ī* is also a manifestation of the palatalized diminutive suffix, since it is hardly an instance of Gmc *-īn* this far south. Other words in this dialect receive the non-palatalized *k* type. The Rhenish dialect of Eupen assigns palatalized forms to words ending in dentals (*t, n, l*) and non-palatalized forms to all other words (Welter 1929). Though Welter argues against characterizing the Eupen dialect as a Dutch dialect—and instead insists that it is a German dialect—I include it here to underscore the geographic extent of this phenomenon. I do not disagree with Welter on the point but consider it irrelevant for our purposes. In Aarschot (Belgian Limburg) long-stemmed nouns ending in dentals (*d, t, n, l*) receive a palatalized suffix *-k'ə* or *-t'ə*, other words receive a non-palatalized suffix *-(ə)kə* (Pauwels 1958). In Aalst (Belgian Brabant) only long-stemmed words ending in *n, d* and *t* are capable of receiving the palatalized suffix. All other words, as well as words whose root ends in *n, d* and *t* and that have shortened and/or umlauted stem vowels, receive the non-palatalized (or depalatalized) *-kən* suffix (Keymeulen 1991: III, 17-32). A more complicated distribution exists in Gelderland and the southern part of Overijssel (Kloeke 1929). Although the basic distribution rule is phonological—palatalized forms with *-(t)jən* after words ending in *d* and *t*, non-palatalized *-kən* after all other words—Kloeke noted that the palatalized forms were spreading eastward at the expense of non-palatalized forms, first being adopted by the younger generations.

The division between palatalized and non-palatalized suffixes ignores another problem already alluded to, namely that of later depalatalization. For instance, the strong correlation

between palatalization and umlaut in the Aalst dialect allowed Keymeulen to establish the inseparable link that exists between the two phenomena. Vocalic umlaut has superseded palatalization of consonants in diminutives in Aalst, causing the once palatalized consonants to become depalatalized, that is to say, they have reverted to suffixes with velar /k/. The MAND also includes forms illustrating another direction depalatalization has taken in several dialects: the guttural spirants of central Holland and Utrecht through velarization of original palatal spirants.

2.3.4 The History of the Palatalized Suffix

That the palatalized *j*-type suffix derived historically from the *k*-type suffix *-ken* was only discovered in the early twentieth century. One can find a helpful summary of the research on the topic in the introduction to Willem Pée's atlas of Dutch diminutives (1936) and in the chapter on diminutives in the MAND (2005: commentary 25). Until 1908, when Ferdinand Wrede published a groundbreaking study on German diminutives, no one realized that there was a connection between the *j*-forms and *k*-forms. Wrede noticed several peculiar alternations in north-western German dialects (those bordering on the Dutch and Frisian language areas) and ascribed the presence of forms with *j* to Frisian influence. Dutch philologists soon compared Wrede's German material with the dialectological and historical evidence for Dutch. Wrede's idea that Frisian palatalization had someting to do with the rise of *j*-types in Dutch and German was dismissed. Wobbe de Vries (1921-22) objected that Frisian influence could hardly be argued for Flanders in the High to Late Middle Ages. Instead he suggested that the suffixes *-tje* and *-ken* had always existed side by side. In addition to the historical arguments against Frisian origin for the palatalization there is the fact that Frisian, like many Dutch dialects, distributes palaltalized and non-palatalized suffix according to phonological and prosodic rules. And the Frisian diminutive suffix did not become palatalized until roughly the same time as the Dutch suffix (cf. Hofmann 1961 for North Frisian). De Vries's comments

sparked a debate in the 1920s between De Vries and G.G. Kloeke about the rise of the *j* type of diminutives in Dutch. Pée (1936:52) commented that the exchange between Kloeke and De Vries got lost in a mass of details, variants, abstract terms, and theories. He was not impressed by Kloeke's and De Vries's historical arguments, mostly because he considered their dialectal evidence inadequate, which was one of the main reasons for his own research into the topic.

Nevertheless, Kloeke (1923) proved that the *j* forms derived from the *k* forms, but his theory of expansion from Holland south- and eastward was rejected by De Vries (1928). De Vries's argument that palatalized forms in the North-East of the Netherlands suggest a much older, indigenous tendency was supported by Van Ginneken (1938-1939) in his review of Pée's monograph. Van Ginneken believed that the palatalized forms spread northwards from the southeastern dialects around Louvain (Leuven) and that they were ancient, possibly dating back to Old Dutch (that is, Old Low Franconian).

As for the linguistic process that gave rise to the palatalized forms, Kloeke and De Vries represented opposing views. Kloeke believed that the *-(e)kīn* forms of Middle Dutch were palatalized some time between the late thirteenth and early fifteenth centuries so that *k* gradually developed into *tj*. He cited numerous spellings for the period that suggest, in his view, this gradual shift. De Vries (1921-22) proposed an intermediate stage in the shift of *k* to *tj*, represented by a spelling fashionable in the seventeenth century of intrusive *t* in morphemes ending in *-n*, e.g. *gelegentheid* for *gelegenheid*. He believed that this phenomenon was so widespread that it would have asserted itself in diminutized nouns as well, leading to such hypothesized forms as **maantkīn* for 'little moon.' This sequence of *tk* would then have palatalized to *tj*, and De Vries (1927) cited the parallel development in northern dialects of Low German (Lasch 1912). Pée (1936) supported this view.

Yet such an intermediary step probably never existed. For one, De Vries never proved that this seventeenth century intrusive *t* was widespread or old. The fact that it survives in some words in Afrikaans, Dutch, and German (e.g. Afrikaans *geleentheid*, *moontlikheid*, Modern

Dutch *ordentelijk*, German *gelegentlich, ordentlich*) proves little. Secondly, the 1600s are about two centuries too late in the shift from *k* to *j*. A third objection is that De Vries's derivation of *k* > *tk* > *tj* serves only to accommodate modern spelling conventions. As we have seen, many Hollandic dialects of Dutch do not have [tj] but [ç]. To be sure, Dutch has a large number of dialects with *t* forms, but there are relatively few with consonant clusters tC. Finally, the spelling variant <tk> does not seem to have been recorded.

If we reassess the historical and dialectal evidence from a phonological point of view, we will come to a different conclusion. Kloeke was justified in ascribing the shift of *k*-forms to *j*-forms to palatalization. On the other hand, De Vries was probably right when he claimed that this palatalization was old and did not spread from Holland but was a general trait across the Dutch speaking area. The confusion arises in the evidence of the early modern period. Several spellings from the sixteenth and seventeenth centuries, namely *-tge(n)* and variants on the one hand and *-kiaen, -tiaen* and variants on the other, appeared inexplicable to the scholars in the early twentieth century. Nevertheless, it was widely believed that the latter was the halfway point toward the final product, i.e. /tχ/, that is to say, that an affricate was the intermediate step. Once again, modern spelling led to a misinterpretation of the seventeenth century evidence. The idea that <g> here represents /χ/ is almost certainly wrong. A contribution by Kern (1929) regarding colloquial Hollandic forms of the seventeenth century shows that /χ/ existed *independently* as a diminutive marker (i.e. in *mannechie*), and it exists to this day in many Hollandic dialects (e.g. between Rotterdam and Dordrecht; cf. FAND: IV, map no. 66; MAND *passim*). Moreover, Muller (1926) has pointed out that the grapheme <g> in the transitional spellings for the palatalized /k/ could also be interpreted as a representation of /j/. In the previous section we examined the relationship between *g* and *j*, and Muller's proposal is cogent.

Before we look at the phonological development of the consonant in question, a brief excursus on a preliminary issue is needed. A phonological explanation of the process involved in the change from <kijn> to <tje> has to take prosodic matters into account. The evidence

from Modern Dutch shows that prosodic considerations influence the morphonology of the Dutch diminutive suffix to this day. For instance, the presence of a linking vowel between short stems and the diminutive suffix in Modern Standard Dutch has its roots in Middle Dutch prosody. Said more precisely, the *retention* of this linking vowel—if one assumes this vowel to be old—in any given dialect is motivated by Middle Dutch prosody.

Middle Dutch *-(e)kijn* is a heavy suffix containing a long vowel. Whether <ij> had the phonetic value of [iː] or of the diphthong [ɛɪ] as in Modern Dutch is of no importance. Either way, the vowel was long. As a long vowel in a derivational suffix it would have stood out somewhat in Middle Dutch morphonology. Middle Dutch had several derivational suffixes with long vowels, such as *-doem, -heit, -lijk, -ijn, -lijn* (Franck 1910), but words with them were relatively few in Middle Dutch, and *-doem* and *-lijk* became shortened in most dialects of Modern Dutch, while *-ijn* and *-lijn* have survived only marginally as archaic or sentimental forms, or in petrified words and phrases. What is more, nearly all others were used to form nouns from adjectives, whereas *-kijn* formed a new class of nouns from other nouns. An indirect consequence of this difference was that *-kijn* would have appeared in a larger number of superheavy words.

One obvious step in the development of diminutized nouns is their shortening. Where Middle Dutch forms are generally heavy or superheavy (cf. *paardekijn* /paːrdəkiːn/), the Modern Dutch forms are shorter (cf. *paardje* /pardjə/). It has shrunk from two prosodic feet to one. This shortening must be considered an integral part of the development of diminutives and the diminutive suffix. There is strong evidence from southern dialects that shortening of the stem vowel was an automatic prosodic process triggered by heavy suffixes in (super)heavy words. For instance, around Liege (Montzen) we find: *blūm* 'flower' – *blymkə*; *pē̜ət* 'horse' - *pętšə* (Welter 1933), illustrating a correlation between long and short vowels. The dialect substitutes a short vowel for a long stem vowel in nouns with a diminutive suffix (as well as other suffixes), regardless of whether the suffix contains a palatal consonant. Not all dialects show

evidence of this vowel alternation; it is noticeably absent in Western dialects, e.g. Hollandic. This may be another indication that by the time shortening took place, these dialects had already lost vowel quantity as a phonological feature, leaving only consonant change and apocope as options. The synchronic evidence supports a pattern that can be observed in the diachronic development of diminutized nouns throughout the Dutch language area. Thus, Dutch diminutives have undergone consistent prosodic shortening. The primary instrument was apocope since the linking vowel <e> has been lost in nearly all diminutives except in Standard Dutch nouns with short vowels and ending in a single consonant except /d t/ (e.g. *man – mannetje*). Its retention in those nouns serves to distinguish them from short-stemmed nouns ending in a consonant cluster (e.g. *mand – mandje*). This rule is not observed in all dialects; dialects in Friesland, Noord-Holland and Limburg have forms like *mantsje/manke* and *staltsje/stalke* and the Drechtstreek (north of Dordrecht) has *staltie* (MAND 2005). Additionally, the full long vowel of the diminutive suffix was reduced in all diminutives in all dialects except in the *-īn* area. The same shortening happened to many of the other suffixes (cf. *-doem* /doːm/ > *-dom* /dɔm/, *-lijk* /liːk/ > *-lijk* /lək/), although Dutch retains the long suffix *-heid*.

This shortening must have lasted into the sixteenth and seventeenth centuries, as Kloeke's evidence attests (Kloeke 1923). In addition to the shorter forms *-ke* and *-tje*, Dutch dialects used forms such as *-tiaen* and *-kiaen* until well into the Modern Period. It is conspicuous that we also see the disappearance of forms with <k>. However, this change is much more rapid than the process of shortening. In deeds and charters, the <k> forms were almost entirely gone before the end of the fourteenth and are almost universally replaced by forms with <t>. Literary texts retained <kijn> much longer. The explanation for this change given by Kloeke is correct: "[E]s hat sich hier ursprünglich um einen schwierigen Laut, das *palatalisierte k* gehandelt" (1923: 223; emphasis in the original). That the change from <kijn> to <tje> involved palatalization has been understood for a long time. Yet there are several problems with Kloeke's theory, as De Vries (1924; 1928) pointed out, that need further clarification.

The criticism by De Vries centered on Kloeke's model of expansion of palatalized forms from Holland. Another more important point is Kloeke's timeline. Kloeke claims that in the thirteenth and fourteenth centuries a change in pronunciation took place that made *k* acquire something of the quality of the following *i*, so that it became palatalized. The first problem is one of terminology. What Kloeke describes is assibilation (German *Zetazismus*). This is the moment when the phoneme changes its manner of articulation. Yet modern phonology rejects the idea that /k/ could change to /tj/ (to adopt the traditional representation) in one step. Kloeke assumes that it was not until the thirteenth or fourteenth century that /k/ became palatalized—by which he means both the acquisition of palatalization *and* assibilation, i.e. both change of place and manner of articulation. Martinet has reminded us that two such steps at the same time are rare (1970: 77). Thus, Kloeke's theory that a Middle Dutch phoneme would have become palatalized is unlikely. As historical linguists like to point out, the Dutch language did not have a great abundance of palatal or palatalized phonemes and so the feature of palatalization would not have had a great functional load at any point in the High to Late Middle Ages. This view is correct in general traits, and so it is not very likely that /k/ first came to be palatalized in the thirteenth century. Thus, if we accept Martinet's position, with acquisition of palatalization ruled out for this period, the change Kloeke and his colleagues observed in thirteenth- and fourteenth-century Dutch was assibilation. We must conclude that the <k> in <kijn> must have been palatalized already by the time assibilation took place and that earlier Middle Dutch must have had palatalized /c/. This confirms our conclusions from the previous section on Old Dutch.

If we accept the presence of /c/ in Middle Dutch, we must reinterpret the spelling change in the diminutive in the thirteenth and fourteenth century as the change /c/ > /ʧ/. The symbol /ʧ/ stands for all manner of variants, since there were (and are) many regional variants. It is likely that the palatalized velar /c/ may have shifted to a palatalized alveolar stop /tʲ/ in some areas, to a alveolo-palatal affricate /tç/ in others, to a straight palatal fricative /ç/ yet elsewhere,

etc. All these variants occur in the MAND. Important in this analysis is that we separate the moment of palatalization (as the result of WGVP in Old Dutch) from the moment of assibilation or the shift in place of articulation (in the thirteenth and fourteenth century).

In light of what we have seen above, Paardekooper (1944) has a strong case in favor of a separate phoneme /tʲ/ as the modern reflex of palatalized */c/ < Gmc. */k/. Its existence in Old and Middle Dutch has been made probable. So far, its absence from Modern Dutch has been assumed. At any rate, analyses like those by Goossens (1974), which explain the *allophone* [tʲ] as a case of assimilation of *underlying* /t + j/ are unsatisfactory because the existence of such underlying phonemes has not been made evident in all cases. It is possible that Early Modern Dutch */tʲ/ has since become dissimilated into a sequence /t + j/, but it is difficult to relate allophones like [ç] used in many dialects in words like *ratje* to underlying /t +j/. If one, however, takes /tʲ/ as an independent phoneme, all five allomorphs of the Dutch diminutive suffix can be easily accounted for. The first two (*-tje* and *-etje*) represent the phoneme in a straightforward manner, while the third (*-je*) only elides the redundant alveolar element, which is absorbed in the stem-final alveolar. The fourth (*-pje*) may seem the most complicated to connect but it is not; a change /tʲ/ > /pʲ/ is an example of place assimilation. The fifth (*-kje*) could be termed an example of place assimilation /tʲ/ > /c/, but it is better to assume that /tʲ/ never arose because the stem-final velar prevented Middle Dutch */c/ from becoming alveolar. Diminutive allomorphy becomes a good deal simpler once one realizes that the key lies not in Modern Dutch but in Middle Dutch. Dutch has undergone no significant phonological changes in the last seven hundred years, so that a Middle Dutch system of allomorphy has remained virtually unchanged to this day. Only the fifth allomorph (*-kje*) has become a relic of a now inoperative rule, since MDu */ng/ has since merged into /ŋ/, causing the Middle Dutch rule of final devoicing to become ineffective for this phoneme. The allomorph remains as a lexicalized form

and thus preserves the Middle Dutch alternation of word-final [ɡ ~ k] disguised in Modern Dutch as [ŋ ~ ŋk].

2.4 Alveolar Cluster Palatalization in Dutch Dialects

PALATALIZATION OF CONSONANTS EXISTS TO THIS DAY IN A RELATIVELY large number of modern dialects in Belgium and the southern tip of the Netherlands. They have received a great deal of attention ever since Colinet's study of the dialect of Aalst (Colinet 1896), and in particular since the mid-1980s. In 1991, Lut Keymeulen finished a Ph.D. dissertation on this phenomenon in a group of dialects centered on the same city of Aalst. She showed a direct correlation between *i*-umlaut and consonant palatalization in Brabantic and Limburgic dialects, thus providing substantial corroboration for the so-called "Mouillierungstheorie" of West-Germanic *i*-umlaut (cf. Liberman 2007). What is more, her analysis shows that the current palatalization in these dialects is not a recent development but rather is rooted in an old pre-Dutch, Franconian or Ingvaeonic, palatalization process from which it has been "reconditioned" (Keymeulen 1991; 1993).

Keymeulen separates the alveolar cluster palatalization, which is associated with alveolar consonant clusters, from another palatalization process around the cities of Louvain (Leuven), Tienen and Aarschot, which is associated with single velars. The latter process has disappeared in these cities since Goemans (1897), Van Ginneken (1935; 1938-39), D'Hoop (1944), and Pauwels (1937; 1958) described them in the first half of the twentieth century, though the process has apparently survived in a few villages south of Louvain, particularly in Ottenburg, which lies at the very edge of the Dutch-French language frontier (Keymeulen 1991: 277). The palatalization of geminated consonants in Belgian dialects mentioned by Van Loey (1969) is the same palatalization process we are discussing in this chapter (i.e. of alveolar clusters). Weijnen (1991) also mentions palatalization of velars and labials in Dutch central Limburg

(roughly between Maastricht and Roermond). The FAND confirms that these dialects also palatalize alveolar clusters (vol. 4, maps 166-168). The position of the dialect of Meijel (c. 15 miles northwest of Roermond) is under dispute (cf. Crompvoets 1991; Hermans and Crompvoets 2000; Draye 2000). It is likely that these processes are all related, appearing in such close proximity. It is also probable that there is a relationship between all the forms of palatalization in the Dutch-speaking area (see below).

2.4.1 A Phonological Description of Alveolar Cluster Palatalization

Some dialects spoken primarily on the southwestern edge of the Brabantic dialect area of Dutch, as well as some in north-central Limburgic exhibit several common or very similar features of consonant palatalization. Because of their similarity we will consider them together, in particular the dialect of Aalst, before examining a number of the other palatalization

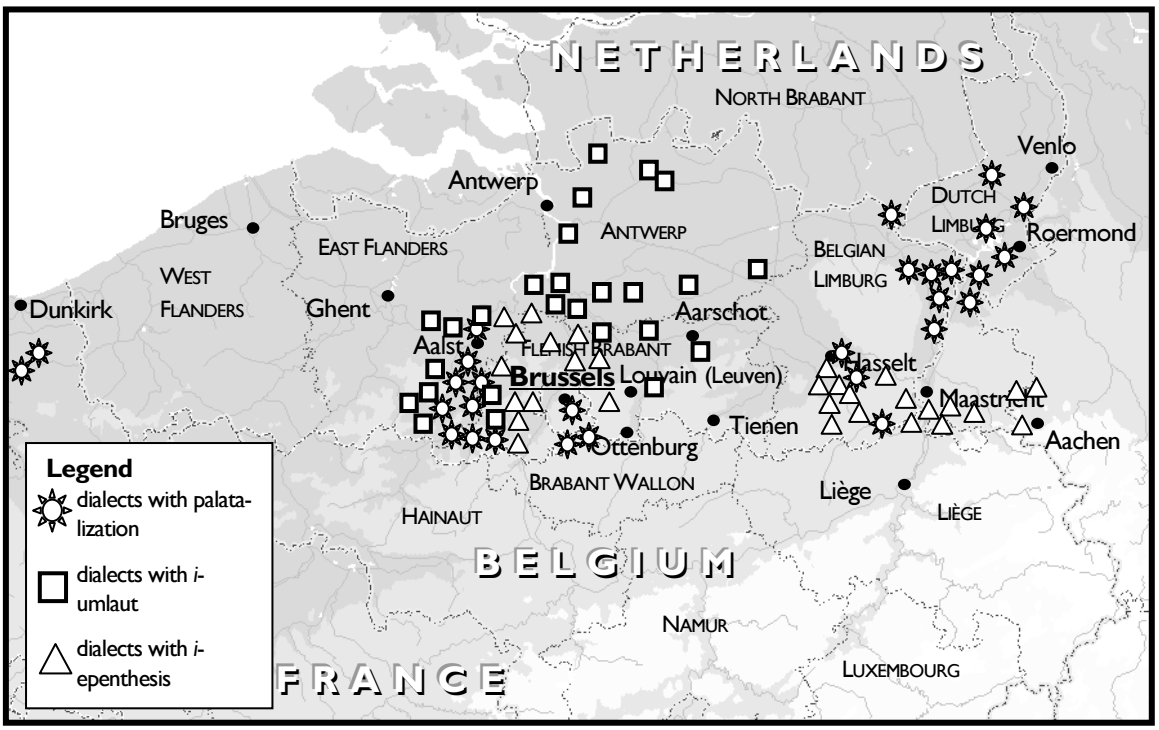

Figure 2.1 Dutch dialects with alveolar cluster palatalization, *i*-umlaut, and *i*-epenthesis. Data from Carême (1950), Keymeulen (1986; 1991), Crompvoets (1991) and Hermans and Crompvoets (2000).

processes in Brabantic and Limburgic dialects of Dutch.

Figure 2.1 shows the four main areas where this phenomenon occurs: first, in an area around Aalst, second in an area south and east of Brussels, third, in a small area between Hasselt and Tongeren, and fourth, along both banks of the Meuse river in the Dutch and Belgian provinces of Limburg. These comprise both Brabantic dialects (in the Belgian provinces of East Flanders and Flemish Brabant) and Limburgic dialects. Keymeulen (1991) uses the term "Zuidwestbrabantse mouillering" in Dutch, referring only to the situation around Aalst, which is in the southwest of the Brabantic dialect area (located in the east of the modern province of East Flanders). I use the term alveolar cluster palatalization (ACP) in English for this phenomenon in order to avoid a geographic bias, because, ignoring some details of distribution, the same type of palatalization appears in German and Frisian dialects.

Carême (1950) pointed out that between the cities of Aalst and Brussel there was a growing decay of the palatalization. Keymeulen (1991) confirms this. There appears to be no sign of any palatalization or its concomitant processes in the provinces of West- and East Flanders, except in the easternmost area where a Brabantic dialect is spoken (the region around Aalst). The line of demarcation between dialects that have ACP, umlaut, or epenthesis and those that do not is almost identical with the course of the River Scheldt.

Keymeulen has shown that Aalst is one of the most conservative of the dialects with ACP, at least of the ones for which reliable studies exist, though she also warns that even in Aalst and surroundings ACP is losing ground, ostensibly under the growing influence from Standard Dutch (cf. also Keymeulen 1983). The conditions under which ACP functions are illustrated by the following rules for the dialect of Aalst (Keymeulen 1991; 1993):

1. only alveolars in the following clusters are affected: nt, nd, ns, nz, lt, ld, ls, lz, ts, dd, dt, ds, nst, lst, tst, dst, nds(t), lds(t). These clusters are:
    a. homogeneous alveolar clusters;
    b. the first consonant must be [–continuant]; and

   c. the second consonant must be [–sonorant] (i.e. must be an obstruent);
2. only initial and final clusters are affected (i.e. no clusters word-medially undergo ACP);
3. ACP occurs only after a short vowel, but
   a. this vowel cannot be schwa /ə/; and
   b. ACP does not occur after /ɔ̆/ or /ă/ unless these are the result of a recent shortening process or if they precede the diminutive suffix;
4. ACP only occurs in monomorfemic position and across morpheme boundaries, but never across word boundaries (except in lexicalized expressions like *veel te* 'much too').

Keymeulen concludes (1991: 142) that in the dialect of Aalst, palatalization has been phonologized only in monomorphemic situations. In inflections and word derivations, palatalization is produced by a phonological rule (i.e. the palatalized consonant is not present in the underlying, or deep structure of the word).

Despite some noticeable differences in the distribution of ACP in the different areas with the phenomenon, the distribution of ACP in the Aalst dialect is representative for practically all dialects that have ACP. Van Ginneken (1934-35), who already essentially the same distribution of consonant palatalization in Aalst, also commented that similar rules applied to the dialects of Tongeren, Louvain, and Hasselt, though he did not separate the palatalization of alveolars from the more general palatalization in Belgian dialects of Dutch. He remarked that the distribution of rule 3b (above) in the Aalst dialect is identical in its application in Louvain and extends to the cluster *-ng*. Thus, in the Aalst dialect the words *kiṇḍ* 'child,' *wiṇḍ* 'wind,' *teṇṭ* 'tent,' *maaṇḍ* 'month,' and *bɪḷḍ* 'image' contain palatalized alveolar clusters, while *hond* 'dog,' *mond* 'mouth,' *grond* 'ground,' and *hand* 'hand' do not because all contain /ɔ̆/ or /ă/. In the same way, Van Ginneken noted that *bliṇje* 'blind,' *greṇjel* 'locking bolt,' and *viṇje* 'find' in the Louvain dialect contained palatalized alveolar clusters, while the counterparts of *hond, mond, grond,* and *hand* again did not. In addition, words ending in the suffix *-ing* palatalized this suf-

fix to *-iŋj(e)*. It appears that the Louvain dialect has since lost its palatalization, and even Goemans (1897) was already skeptical about whether Leuven still had phonemic palatalization. Nevertheless, the pattern described by Goemans in the 1890s and Van Ginneken in the 1930s fits the pattern described for Aalst. On the other hand, the dialects of Dutch Central Limburg palatalize alveolar clusters in words like *lint* 'tape,' *kant* 'side,' and *hond* 'dog,' without the restriction on the preceding vowel. This is one of the reasons why they are not considered to be eligible for ACP, which does not allow palatalization in *kant* and *hond* (FAND vol. 4, maps 166-168). The town of Meijel (west of Venlo) on the linguistic border between Limburgic and Brabantic represents an island of ACP in a region where, apart from occasional occurrences in the neighboring town of Neerkant, palatalization is not otherwise known. Crompvoets (1991) has argued that Meijel has a unique type of ACP that sets it apart from the surrounding dialects and is not related to other occurrences of ACP. This conclusion is not correct because his argument is based on the theory that ACP arose under the influence of preceding vowels. Only Meijel has certain vowel forms, especially front vowels, which, according to Crompvoets, means that the phenomenon in Meijel must have arisen independently and recently. Instead, it is more plausible to assume that Meijel developed certain front vowels under the influence of ACP, so that one can argue that the type of ACP in Meijel is conventional, though possibly an old relic in a depalatalized region.

One may wonder how essential the rule of vowel quality is. Considering the more than superficial similarities between ACP and the Central Limburg palatalization, it could be argued that the latter represents an innovation. Keymeulen (1991) has compelling arguments to support the notion that this vowel rule is old and important. Words with original Gmc. **ă* or **ŏ* would have undergone *i*-umlaut in words with a following **i* or **j* under West-Germanic primary umlaut, which affected all of the Dutch-speaking area. That the modern dialect of Aalst still does not palatalize consonant clusters with preceding /ɔ/ or /ɑ/, suggests that ACP is affected by the presence or absence of original **i* or **j* in Germanic. The only remaining words

with /ɔ/ or /ɑ/ are those of Germanic stems without **i* or **j*. ACP is sensitive to phonological information that could only have been incorporated into the process at a very early time, and so we must conclude that ACP arose from the original process that caused West-Germanic primary umlaut. Keymeulen (1986; 1991; 1993) argues that this process is Ingvaeonic Palatalization and that, *ergo*, there is a direct link between West-Germanic primary umlaut and palatalization of consonants.

2.4.2 Concomitant Phenomena

Bolstering this claim is the dialectological evidence Keymeulen uncovered in the dialects immediately surrounding the surviving palatalization. Much of her findings confirm Van Ginneken's (1935). Fanning out from these palatalizing city dialects, both in easterly and westerly direction, there are several rural dialects that exhibit a more or less advanced degree of disintegration of palatalization (see Figure). There are three main concomitant phenomena with ACP: *i*-epenthesis, *i*-umlaut, and phonological *Rückumlaut* (that is, depalatalization of once-umlauted vowels). The first two of these phenomena appear in the place of, or in some cases, together with palatalized alveolar clusters in dialects that are farther removed from the palatalizing centers. Keymeulen's detailed data for Aalst (1991) provides a clear picture of the layered manner in which the three phenomena are situated around each other. Keymeulen (1991: 231) argues that epenthesis is the first stage in a process of depalatalization and that continuing depalatalization of the consonant clusters in these dialects leads to umlauted vowels. She argues that epenthesis is the stage when a palatal element separates itself from the palatalized consonant cluster and appears as a separate segment to the left of the cluster. Her argument is that the phenomena manifesting themselves next to each other in space must have happened sequentially in time (Keymeulen 1993: 118, 122). It remains to be stressed that because of the gradual decay of consonant palatalization that Keymeulen observed in these dialects there is some overlap between the three phenomena: dialects may exhibit palataliza-

tion, umlaut, epenthesis or even all three (much rarer) in different lexemes. In one word a dialect may have an umlauted vowel (or "palatal" vowel, as Keymeulen calls it), as well as palatalization, in another an umlauted vowel without palatalization, in yet another no umlauted vowel but both epenthesis and palatalization. However, statistical analysis shows a clear graduated layering of these three phenomena with palatalization at the center.

ACP is also accompanied by vowel shortening. Above I said that ACP only occurs after a short vowel. That is essentially Keymeulen's synchronic analysis of the current dialect. In reality, a length correlation remains operative with ACP. Long and short vowels alternate in morphological pairs such as *spelen* 'to play' ~ *speelt* 'plays' (3rd person sg.) [spe:ln] ~ [spɪʃtʲ], while historically long vowels have become shortened before palatalized clusters, such as *maand* 'month' [mɔɲtj] or *beeld* 'image' [bɪʃtʲ]. This parallels the shortening of stem vowels in diminutives in a large number of dialects including the German Rhenish dialects and Limburgic dialects of Dutch. Incidentally, this diminutive shortening applies both to words with palatalized and to those with non-palatalized suffixes (cf. Welter 1929; §63, p. 76; 1933: §182, p. 129).

One other concomitant phenomenon is backing, or a phonologically triggered *Rückumlaut*. Before a palatalized cluster a short front vowel is replaced by its back counterpart. Thus, a word like *flōet* 'whistle' (Du *fluit*) has as counterpart *fluṭṇ* [flʊtʲɲ] 'small whistle' (Du *fluitje*), where the diminutive suffix (here *-n*) causes palatalization. In Aalst only the vowels /y œ ɛ/ are affected, appearing before palatalized clusters as [u ʊ ɑ] respectively (Keymeulen 1991:137-38; 1993: 125). Keymeulen maintains that this phenomenon is caused by dissimilation. In view of her persuasive argumentation regarding the chronology of ACP, this is a reasonable conclusion: when these dialects reconditioned the correlation between palatalized and non-palatalized consonants, and consequently greatly increased the number of palatalized clusters, a secondary correlation between palatalized consonant clusters and non-palatal (that is, non-front) adjacent vowels developed.

It is somewhat puzzling that Keymeulen insists that the front vowel in all such words is indeed a fully incorporated underlying front vowel and that ACP causes *Rückumlaut*. With this term I want to draw particular attention to the implication of Keymeulen's theory, namely that in many cases ACP causes a reversion to an unumlauted vowel similar to what these words would have had before West-Germanic palatalization and umlaut occurred. For instance, the word *muts* 'cap,' Keymeulen claims, has underlying */myts/ but is pronounced as [muʃ]. Since this is an example of a simplex (monomorphemic) lexeme, it can hardly be argued that a phonological process changes an underlying phonological form with a front vowel into a surface form with a *depalatalized* back vowel. There is no evidence for this reconstruction of the underlying front vowel, as only the back vowel appears in speech. Because we have a correlation between short front vowels and short back vowels, it would seem attractive to assume an alternation of this kind as a phonological process. Yet in the context of the development of ACP in these dialects, one must take into consideration the timing of the concomitant dissimilation of preceding vowels.

If Keymeulen is correct in maintaining that ACP developed organically from Old Franconian palatalization, without some intervening gap, and thus not as a later secondary wave of palatalization, and if umlaut is indeed the product of the shift of the feature of palatality from the consonant to the preceding vowel (i.e. when palatalization of consonant cluster collapses), then *muts* and words like it could never have acquired this umlauted front vowel, the dialects not having undergone depalatalization of consonant clusters yet. This is all the more so with *muts*, which is a borrowing from Medieval Latin or Old Spanish, both of which would have had /u/, so the umlaut cannot be old. The cluster *-ts-* betrays that it cannot have been Old French *amusse* which probably had /y/. Hence, would it not be better to claim that umlaut of such words never took place? This would help elucidate why the correlation between palatalized consonant clusters and non-front stem vowels arose, because a strengthening of palatalization impeded the development of West-Germanic primary umlaut in words with palata-

lized clusters. The two, by Keymeulen's own argument, are related. Thus, the vowel correlations in Aalst and other dialects with ACP reflect an ancient relationship, though it does not follow that either the front vowels or the back vowels have been preserved unchanged since Old Franconian.

It is clear that ACP is retreating. In his study of the dialect of Aarschot Pauwels (1958) reported only remnants of palatalization of consonant clusters in that dialect. In an earlier publication (Pauwels 1937), he had remarked on the fact that he remembered some older speakers using a palatalized velar [k^j], a usage that had died out by the middle of the twentieth century. By the 1950s, palatalization had been widely replaced by umlaut. Figure 2.1 suggests that umlaut is now widespread in the area covering roughly the province of Antwerp and the eastern portion of Flemish Brabant, situated centrally between the two remaining areas of ACP. These facts point to the likelihood that the two areas where ACP is now still in use were at one time at the extremities of a contiguous area where this process operated. This is Keymeulen's (1991) conclusion, and it is at the basis of her argument in support of the causal link between palatalization and *i*-umlaut. She claims that ACP was replaced first by epenthesis and finally by phonological *i*-umlaut in many dialects.

It is unfortunate that the FAND, the only recent phonological atlas for the region, does not give more evidence of the type of umlaut associated with decaying ACP. Coincidentally, the editors' selection of lexemes includes no candidates which could have developed umlaut under the phonetic conditions pertaining to ACP. Their selection included few words with the requisite consonant clusters and that pool was made up almost entirely of words with short /ɑ/ and /ɔ/, both of which are excluded from ACP. The FAND does, however, provide a small number of examples for phonological *Rückumlaut* (backing or, rather, umlaut blocking) and epenthesis, namely the words *metselen* 'to lay bricks,' *ekster* 'magpie,' *geld* 'money,' and *venster* 'window.' These correspond to the still relatively numerous examples for palatalized consonant clusters and shortening of long stem vowels in the two main areas of ACP. The only mi-

nor surprise is the lexeme *mens* 'human being, man' (from Gmc. **manniska-*). This word fulfills all the requirements for ACP, and it is indeed reported as containing palatalized clusters in the remaining areas with ACP, but one would have expected something like *[mɑɲʃ] or *[mɑɪɲʃ] as a result of the umlaut blocking accompanying ACP and epenthesis in retreating dialects. Instead, all dialects uniformly have stem vowel [ɛ]. It is true that the hypothesized forms with [ɑ] would have violated the rule that ACP does not occur after short /ɑ/, but this synchronic argument cannot explain the diachronic development of this form with *both* ACP and umlaut. No satisfactory explanation can be given for this state of affairs, and one is forced to postulate external influence from umlauting dialects.

2.4.3 The Dating and Linguistic Geography of Alveolar Cluster Palatalization

From the literature, especially from Keymeulen's work, it has become clear that the dialects around Aalst and in northeastern Limburg (Belgium) exhibit a modernized version of an apparently ancient palatalization process. But we have so far not investigated two important questions: (1) How widespread was this phenomenon in the past? and (2) How did ACP develop? Related to this is the question about the role some smaller, marginal dialects play in this regard, in particular dialects that palatalize not only alveolar clusters but also velars (esp. in Dutch Limburg).

There is very little literature on this topic. Apart from Keymeulen (1983, 1986, 1991, 1993) and Carême (1950), there has been no investigation of these questions. Keymeulen claims that ACP is most likely a continuation of a much wider palatalization tendency that affected all of Dutch. Her arguments in favor of linking the palatalization of alveolar clusters in Brabantic dialects with similar processes in Eastern Limburgic dialects are convincing and support the notion that the two areas were once part of a larger contiguous dialect area with the same palatalization. These phenomena have been referred to as one and the same throughout this section. It remains unclear, however, just how much further ACP extended. On the basis of histor-

ical and synchronic-comparative dialect evidence, Keymeulen suggests that all southern Dutch dialects had a tendency to develop a similar kind of cluster palatalization. She contends this even for the Flemish dialects of modern East and West Flanders, which lack any of the features of ACP or its regression stages, and of which Carême had concluded that they never palatalized alveolar clusters (Keymeulen 1991: 333). Her arguments for a proto-ACP in medieval Flemish dialects are, however, little convincing. There is some evidence that the East Flemish dialects adjoining the Brabantian center of ACP were at one point affected, as Keymeulen notes that these dialects palatalize the cluster /ts/ in some words. But the evidence she cites for the remaining Flemish dialects (West Flemish and the dialects in French Flanders) does not demonstrate any link with the palatalization of alveolar clusters. Her examples are:

1. the replacement of intervocalic /d ~ ð/ with a j-glide in some Flemish toponyms (e.g. *Ooike* < 1038 *Odeka*);
2. the phonemic split of Gmc. **ai* > *ē*[1] ~ *ei*, with the latter arising before a following */j/ (e.g. *eik* 'oak');
3. the palatalization of Gmc. */s/ in the cluster */sk/ > /ʃ(x)/ (e.g. /ʃxɛ̯p/ *schip* 'ship'); and
4. the replacement of /l/ with a j-glide (e.g. /mæ.l̩k/ or /mæ.jk/ *melk* 'milk').

Only the last one of these may be connected to alveolar clusters, but Keymeulen dismisses this, correctly it appears, as a superficial assimilation phenomenon. In light of this it seems reasonable to conclude that the Flemish dialects did not participate in any form of ACP except that the easternmost towns may have come under the influence of it from the adjacent Brabantian dialects. Thus, ACP appears to have been restricted to what Keymeulen calls the "continental dialects", i.e. the inland dialects of the southern Netherlands (i.e. Belgium and a small part of Dutch Limburg), and thus ACP cannot be considered an Ingvaeonic process.

There is little evidence of ACP elsewhere in Dutch and no one seems to have published anything about this. Nevertheless, there are a few hints that support the notion of a much wider spread of ACP. A direct causal link exists between ACP and the rise of epenthetic vowels.

The Dutch word *einde* 'end' is usually thought to be of southern Dutch origin, because its vocalism is suggestive of the pattern observed in the palatalizing regions. However, in the Corpus Van Reenen-Mulder (CVRM) we find the forms *heyntgin* and *heyntgiins* in a few charters written in Amsterdam in the late fourteenth century (AD 1381, 1386) that contradict the theory of southern borrowing.[3] This name derives from *hendrik* (with a diminutive) and shows diphthongization of Gmc. **e* before an alveolar cluster. In the same we find *reynte* 'interest' (Amsterdam 1388, Montfoort 1398), *reinte* (Zutphen 1351), *meynt* 'he believes, considers' (from *menen*, Deventer 1384), *ghemeynte* 'town' (Kampen 1382), *leynten* 'spring' (Du *lente*; Amersfoort 1364; Tienhoven [Zuid Holland] 1377) and the word *einde* itself appears as *eynde* (Utrecht 1375, Hoevelaken 1383, Leiden 1383, Zutphen 1393). It can hardly be argued that all these words have been borrowed from southern dialects so systematically over such a wide area at such an early date, especially when we see that the name *hendrik* appears without a diphthong in *southern* dialects of the fourteenth century (*henric* Antwerpen 1364, Halen [Belgian Limburg] 1384), though it certainly also appears there with a diphthong. It is more logical to conclude that the same sound change was in operation in the northern dialects of the fourteenth century or before.

In addition, Schönfeld-Van Loey (1970: §92, p. 112) remark on a phenomenon in older Dutch that parallels one surviving in present-day German (Modern High German) and that links the Dutch version of ACP not only to its appearance in certain German dialects (and the related phenomenon of velarization) but also to the whole of High German. As a result of syncope of unaccented vowels in final syllables, short-stemmed verbs that were susceptible to umlaut developed umlauted forms in their paradigm. In many cases, the alternation between umlauted and unumlauted forms was later undone as a result of analogical leveling. However, it was retained in some verbs ending in *-nd* or *-n(n)*, such as *kennen*, *rennen*, *(be)wenden*,

[3] I am indebted to Dr. Margit Rem of the Radbouduniversiteit in Nijmegen, the Netherlands, for kindly giving me access to the as yet unpublished Corpus Van Reenen-Mulder (CVRM).

schenden, bernen. These are verbs that in Modern High German retain this alternation between umlauted present tense forms and unumlauted past tense forms (*kannte, rannte, wandte, brannte*). That this phenomenon expresses itself in verbs ending in the alveolar clusters *-nd* and *-nn* suggests a much wider distribution of ACP than just in Dutch (see below for further discussion). It was alive in colonial dialects of German in eastern and southeastern Europe until 1945 (see chapter 3) and several North-Frisian dialects (Wiedingharde, Amrum; cf. chapter 4.4) also exhibit a palatalization correlation with alveolar clusters.

Keymeulen (1991) claims that ACP developed from an older process of palatalization—so-called Ingvaeonic velar palatalization—and focuses some attention on the development of the Dutch diminutive suffix and the 2nd person plural personal pronoun. The former has been discussed above and it was shown to be linked to Ingvaeonic velar palatalization. Keymeulen falls into the trap of dismissing the assibilated /tʲ/ as an instance of assimilation of a *phoneme cluster* (by which she means /t + j/), not realizing that this synchronic analysis cannot account for the development of the cluster. Her comment, "De consonantmouillering heeft in het Nederlands geen autonome fonemen kunnen doen ontstaan," [Consonant palatalization has not been able to produce any autonomous phonemes in Dutch] (1991: 69) is wrong. A historical analysis shows that Modern Dutch /tʲ/ arose as a single unit, the product of palatalized Gmc. */k/. This may or may not have split into a cluster at some later date (many dialects retain a single phoneme as the reflex of palatalized Gmc. */k/), but at any rate it disproves Keymeulen's conclusion.

Whether palatalization played any direct role in the development of the Middle Dutch 2nd pers. pl. personal pronoun *jī/je* is doubtful. The origin of this pronoun is debatable, though the classic view that it developed from a supposed enclitic **di* is no longer believed. It probably continues a common WGmc. pronoun **jīz*, which corresponds to OE *gi* (MnE *you*) and NHG *ihr*. This pronoun later became the 2nd pers. sg. pronoun when *du* was lost. The modern 2nd pers. pl. pronoun *jullie* developed from the compound *jij lieden* '(literally:) you people' (and

many variants) (Schönfeld-Van Loey 1970). [4] However, the development of the Dutch dialect variant *gij* of this same pronoun is probably the indirect result of palatalization, since it arose because of the confusion of palatalized Gmc. */ɣ/ and Gmc. */j/, something that also happened in Old English (see section 2.2).

2.4.5 The Phonology of ACP

The phonological explanation of the development of ACP by Keymeulen (1991) is not satisfactory. Since ACP centers on alveolar clusters, her suggestion that they were better vehicles for a palatal feature than other consonants is reasonable and her argumentation that the process is a reconditioning of the "vooroudnederlandse mouillering" [Pre-Old Dutch palatalization] (i.e. West-Germanic palatalization of velars) is correct. However, her description of the loss of palatalization in Dutch as the result of gradual reduction of palatality in the final consonants (that is, a lowering to schwa), which is indebted to traditional theory regarding the phonemicization (or phonologization) of umlauted vowels in Germanic (cf. Twaddell 1938; Buccini 1992; Schulte 1998), is unacceptable. As has been pointed out (Liberman 1991, 2007; cf. also Russ 1977: 218), the notion of a gradual, physiological shift of articulation effecting a phonemic shift runs into a logical problem: once the trigger disappears, all allophones affected by the trigger also disappear. Russ' question—At what point in the gradual reduction of palatality do the allophones become phonologized?—, though he provides an unsatisfying answer, exposes the impossibility of Twaddellian phonemicizations of allophones. Sound shifts only happen because of a change in distinctive features. A better explanation of West-Germanic palatalization is the so-called *Mouillierungstheorie* (Palatalization Theory), which claims that

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[4] English underwent a similar development, where OE *gi* was originally the 2nd pers. pl. until *thou* was lost. Although many dialects and standard English does not have a singular/plural differentiation of the 2nd person pronouns, some British dialects (e.g. in Yorkshire) retain the *thou - you* division, while dialects in the US employ compound pronouns such as *y'all* and *you guys* to fill the gap (cf. Brunner 1960-62).

palatalization of postradical consonants is responsible for the mutation of radical vowels (*i*-umlaut). Keymeulen supports this theory and, in fact, provides clinching proof that palatalization is responsible for the development of umlaut in Dutch dialects (and likely in other Germanic languages). It has recently been defended by Liberman (2007) who provides a more coherent phonological description of the diachronic development of palatalization in Germanic than does Keymeulen (cf. chapter 1). In his theory, palatalized consonants in these dialects arose as a result of gemination. They appeared in Germanic as phonemes, arising from a reanalysis of Cj clusters as CCʲ clusters (palatalized geminates). Thus, they existed as phonemes and disappeared as phonemes, rather than as allophones. Liberman argues that palatalization collapsed in Germanic because the phonological systems of most West-Germanic dialects could not support the suprasegmental feature of palatalization once vowels in final syllables underwent apocope. Palatalized velars obscured themselves through the process of assibilation, becoming palatalized (alveolopatal) affricates (cf. Engl. /tʃ/ and /dʒ/ from OE */kʲ/ and */gʲ/), while labials and alveolars often lost their secondary palatalization.

The Brabantic and Limburgic dialects did not shed palatalization. Instead, they developed a new palatalization correlation. In view of the evidence from the modern dialects, Keymeulen (1991) argues that alveolar clusters may have been the nexus of the new correlation. Yet the possibility that the current ACP, which is restricted to alveolar clusters, was at one point related to a continued palatalization of velars, evidence for which survived in dialects into the twentieth century, would contradict this theory, at least partly. Nevertheless, a strong case can be made that alveolar clusters, common as they are in Germanic, and hence, Dutch morphology (especially verbal inflection) and phonotactics, became the phonological focal point of the palatalization correlation. Keymeulen argues that four developments in Middle Dutch are relevant for our understanding of the reanalysis or reconditioning of the inherited Germanic palatalization: (1) a loss of full final vowels and the resulting loss of unstressed final syllables; (2) syncope of unstressed vowels in final syllables; (3) the loss of inherited West-

Germanic gemination; and (4) a lowering of short */ɪ/ and */y/. The first three factors are probably organically connected, while the relationship with gemination also supports Liberman's (2007) notion that West-Germanic gemination was an important factor in the rise of palatalization. When gemination collapsed in Dutch—which is believed to have happened before the beginning of the Middle Dutch period (Schönfeld-Van Loey 1970: §51, p. 58)—the palatalization correlation was naturally affected. Only clusters of two different consonants remained in Dutch. From a phonotactical point of view, it is not surprising that ACP became associated with alveolar clusters, since they are so common in Germanic. They increased in number as a result of syncope of full as well as unstressed vowels in suffixal syllables.

The example given above of certain verbs ending in *-n(d)* or *-n(n)* such as *kennen*, which retained the unumlauted vowel in past tense forms (retained to this day in Modern High German *kannte*, etc.), led Van Loey (1969) to conclude that gemination ended (and hence, ACP began) before the second half of the thirteenth century. The reasoning, according to the description of ACP we have seen above, is that (primary) umlaut in these verbs is the result of the collapse of palatalization, that is, the distinctive feature of palatality (or [+ HIGH]) was passed from the consonant to the preceding vowel, since *kennen* goes back to Gmc. **kannjan*. The retention of Gmc. */a/ in German and in older Dutch implies that umlaut was blocked, i.e. by the continuation of palatalization of the consonant cluster. The difference between the infinitive *kennen* and the past tense with /a/ is that the alveolar cluster *-nn-* in the infinitive is inherited from West-Germanic, while the alveolar cluster *-(n)nt-* in the past tense is on a morpheme boundary of the stem *kan-* (< Gmc. **kann-*) + past ending *-de* (< Old Dutch, MDu *-ede* < Gmc. **-ida*; in German the ending was *-te* but the same phonological principles obtain). Thus, the palatalization correlation with alveolar clusters, as we have encountered it in ACP, must postdate the collapse of inherited West-Germanic gemination, because otherwise the infinitive with its cluster *-nn-* would have qualified for palatalization under the phonological conditions for ACP. Since there is no palatalization in the infinitive (nor in the present plural), distinctive

consonant length must have disappeared earlier. Based on the spellings of Dutch place names in medieval Belgium Van Loey (1969) concludes that distinctive consonant length had completely disappeared by AD 1250.

Van Loey asks an important question: Why did palatalization replace consonant length? He suggests that palatalization was needed to maintain a morphological difference (present vs. past tense), that is, to express the presence of a second alveolar consonant with a linguistic function (1969: 354). This may be true of examples like *zetten* (< Gmc. **satjan*), which retain a difference between [zɛtə] (present tense) and [zɛtʲə] (past tense) in the dialects affected by ACP, but *kennen* appears immune to this argument, since *kennen* and *kende* (present and past tense in Modern Standard Dutch) maintain the same morphological difference without the use of palatalization. Yet the fact that MDu *senden* has a past tense *sande* and a past participle *gesant* (recorded, for instance, in the H manuscript of Heinrich von Veldeke's *Servatius*; Goossens 1991; *sandt* 'sent' was still used by the Dutch poet P.C. Hooft in 1634) suggests that palatalization became a marker of the second alveolar consonant with a morphological function (past tense: *zet-te* < Gmc. **sat-ida*; *ken-de, kan-de,* NHG *kan(n)-te* < Gmc. **kan-ida*; MDu *san-de* < **sand-de* = NHG *sand-te* < Gmc. **sand-ida*). This may have been a crucial morphonological rule in the development of the new correlation.

Keymeulen (1991) objects that palatalization of alveolar clusters is much more widespread than just in these verbs and often does not involve any morphological distinction. She argues in favor of an earlier date for the reconditioning of the palatalization correlation than Van Loey's, since the establishment of ACP need not be tied to one single other factor (loss of gemination), but her suggestion that the new palatalization correlation was fully established by the twelfth or early thirteenth century is not convincingly supported by philological or phonological arguments. It seems safest, therefore, to assume with Van Loey that ACP must have followed the collapse of West-Germanic gemination. However, as noted above, both North-Frisian dialects and Modern High German give evidence of having participated in the

processes that strongly resemble ACP (conditioning on alveolar clusters). Additionally, the same alveolar clusters (esp. *-nd*/*-nt*) underwent velarization in several Germanic dialects, including several dialects adjacent to the current ACP area (the so-called Rhenish Velarization, see chapter 3), as well as English (i.e. the change of OE *-end* > *-ing* in present participles and modern gerunds). It is probable that this type of velarization follows on a preceding stage of palatalization. Hence, it is not impossible that the process existed, perhaps in some embryonic stage, at a much earlier date over a much larger area and may in some way be an echo of a wider and earlier tendency toward palatalization in all of West Germanic.

Chapter 3
Palatalization in German

3.1 Introduction

Both High and Low German has or had widespread palatalization of consonants. The phenomenon has had an enormous impact on the modern standard language. This statement stands in stark contrast to common opinion which holds that palatalization does not exist now and has never existed in Germanic (cf. Penzl 1949). The history of the German language, especially if viewed through the restrictive prism of late nineteenth-century theories about German, obscures the true extent of palatalization. Very few scholars have produced systematic studies on palatalization in German dialects past or present. And yet even Modern Standard German contains at least one phonological crux that can only be understood rightly if one is willing to admit a role for palatalization: the distinction between the *ich*-Laut and *ach*-Laut reflexes of WGmc. *χ. More fundamentally, though, palatalization is responsible for the extensive system of morphological vowel mutations known as umlaut (or *i*-umlaut) that German is known for. However, despite the fact that the *Mouillierungstheorie* has been substantially proven at least since the 1990s (Keymeulen 1991), if not much earlier, leading handbooks like the *Althochdeutsche Grammatik* continue to deny the role of palatalized consonants in the formation of umlaut in favor of Twaddell's theory of distance assimilation (Twaddell 1938), because "palatalisierte Konsonanten sind … in der Geschichte des Hochdeutschen nicht erweisbar" (Braune-Reiffenstein 2004: 56 §51 Anm. 1b).

Paradoxically, German dialectologists have been willing to allow the existence of palatalization in fringe dialects, many of which have almost completely died out since the end of the Second World War and concurrent with the disappearance of German colonies in present-day Poland (East Prussia), Hungary (Zips), Romania (Transylvania = Siebenbürgen), and Slovenia (Kočevje = Gottschee). It remains in some smaller dialects of Bavarian German in Tyrol. But the nature, extent, and history of palatalization in these dialects, and indeed in native dialects within the boundaries of the modern German speaking countries, has rarely received proper attention. The origin of palatalization has nearly always been ascribed to influence from foreign languages: most popularly either to the Slavic languages that surrounded the colonial Germans in Eastern Europe and the Balkans or to the Romance languages in western and southern dialects. Influence from Frisian and even Celtic has been assumed in areas where no convenient alternative was available. The supposition that palatalization was a native development, and an ancient one at that, has seldom been advanced.

In this chapter we will discuss various palatalization phenomena in German, though this cannot be an exhaustive treatment. The scholarship, in the absence of real interest among historical linguists and dialectologists, is too fragmented. Nevertheless, there is enough evidence to make a contribution and we will see that palatalization could be found in all corners of German-speaking Europe, at least until 1945 when some dialects vanished.

3.1.1 The Phonology of Modern High German

The High German, or Second Consonant Shift (SCS) divides the German dialects into two separate groups. Although Low German has not disappeared completely, High German has influenced the phonology, morphology, and lexicon of the remaining regiolects in northern Germany, which is not surprising, considering that High German has been the standard and official language in northern Germany since the sixteenth century (Sodman 2000). First we

will look at Standard German, which is based on the modern High German dialects (see table 3.1 below).

Table 3.1 – The consonants of standard Modern High German (based on Wiese 1996)

	Bilabial	Labio-dental	Alveolar	Palato-alveolar	Palatal	Velar	Glottal
Plosives	p, b		t, d			k, g	
Affricates	pf		ts	(tʃ), (dʒ)			
Fricatives		f, (v)	s, z	ʃ, (ʒ)	ç	x	h
Nasals	m		n			ŋ	
Liquids			l, r				
semivowels		(ʋ)			j		

This is an overview of the codified standard language. It does not take into account the many deviations found in the High and Middle German dialects that are usually considered the geographical representation of High German in contradistinction to Low German. Meinhold and Stock (1980) do not include /ʋ/ as they take /v/ for a reflex of Gmc. **w*; even though this is true only of some dialects it is accurate to the extent that German does not have both a voiced version of Gmc. **f* and of Gmc. **w*. Standard (High) German never developed a voiced counterpart to Gmc. **f* , as it is represented instead by /b/ (from Gmc. **ƀ*), while Gmc. **w* developed into /ʋ/ in some dialects and into /v/ in others.

The chart says nothing about the distribution of these consonants and has at least one controversial point that will be discussed in some detail below: the relationship between /ç/ and /x/. Wiese includes two palato-alveolar consonants that are not usually considered monophonemic units: /tʃ, dʒ/ and one marginal phoneme: /ʒ/. He claims that /dʒ/ is used initially in words like *Job* (a loan from English) and medially in *Loggia* (a loan from Italian). However, in spoken German, there is no distinction between /tʃ/ and /dʒ/—or any attempt to render it—except among perhaps a small social class; few Germans without serious foreign-language training could produce a difference between the English words *job* and *chop*. The same objec-

tion goes for /tʃ/, which, despite the fact that it appears initially, medially and finally, does little work in German. Practically all words with initial and medial /tʃ/ are loanwords from Slavic or Italian (and not many at that). It is equally possible to analyze /tʃ/ as a sequence /t + ʃ/. In that case one might also analyze all of the affricates /ts/ and /pf/ as clusters, as do Meinhold and Stock (1980) and Wiese himself elsewhere (1996: 262). Benware (1986) also presents a phoneme chart for German that does not include affricates as monophonemic entities, but he omits /w/, opting instead for an opposition /f ~ v/. He also classifies /j/ as a fricative, rather than a semivowel or approximant, and does not consider /ç/ a separate phoneme (but an allophone of /x/).

As for /ʃ/, there is no question that this is a phoneme of German. It exists in all dialects of High and Low German. Nevertheless, this phoneme has raised some questions regarding its history. It is certain that it developed through palatalization from the Gmc. cluster **sk* but it is unclear how. Some dialects of Low German retain the cluster /sk/ in some positions (e.g. in Westphalia).

The case for /ʒ/ is less clear. Wiese raised the problem of deciding when and why a sound that was borrowed from a foreign language becomes incorporated or "phonemicized" in a language. He employs the criterion when "speakers of a language accept particular sounds or sound clusters in borrowed words without any noticeable tendency to change the sound or cluster in some way" (1996: 12) as an indicator that the sound is an "acceptable element" of the language. It is in this way he regards the status of /ʒ/ in German. Words like *Genie, Garage* and *Orange* are pronounced without any assimilation of the French /ʒ/ to another element in the phonological system.

3.1.2 The Phonology of Modern Low German

A description of Modern Low German phonology as a single, monolithic unit is impossible. As Stellmacher (1983) notes, there is no supraregional 'Standard Low German' as there is a

High German or Dutch standard, or even as there was at some point a standardized Middle Low German. The specific reason for the loss of Low German unity is the fact that with the introduction of High German as the written standard in northern Germany, which started to establish itself in the sixteenth century, Low German lost the "primary reason for its communicative existence" (Stellmacher 1990: 69). Although Low German remained the dominant vernacular in northern Germany well into the nineteenth century, the knowledge and use of Low German (Platt) has receded rapidly since the middle of the twentieth century. Löffler concludes: "Der Rückgang des Platt ist jedoch so stark, dass man es museal schützen muss" (2000: 2042). Still, the dialects remain to this day.

It cannot be denied, though, that their status complicates matters with regard to the modern language. What dialect or dialects should be chosen to represent the dialect area as a whole? Stellmacher (1990) argues that the traditional division into a western and an eastern group of Low German dialects, divided by a line that roughly coincides with the former border between the GDR and the BRD—a division that remains popular to this day—does not capture all the different facets that differentiate the many Low German dialects. The binary division is based almost exclusively on the form of the present tense plural suffix (*-et* vs. *-en*); it has been rejected in favor of more fractured models. In his contribution to the *Handbuch zur niederdeutschen Sprach- und Literaturwissenschaft* Stellmacher recognized 6 different "Dialektverbände:" Westphalian, Eastphalian, North Low Saxon, Mecklenburgish-East Pommeranian, Middle Pommeranian, and Brandenburgish, but other scholars have proposed other divisions. All models have little regard for consonants and are based on the individual developments of the Germanic vocalic system. This is perhaps not surprising since few consonantal phenomena cut across the Low German dialects.

The external western border of Low German, i.e. with Saxon and Low Franconian dialects of Dutch, has come to be more sharply drawn over the last decades than before. Although earlier scholars (into the first half of the twentieth century) often considered Dutch and Low

German as one motley blanket of Low German dialects, more recent sociolinguistic research rejects this view. Though historically accurate, it does not do justice to the growing division in all aspects between Dutch and Low German dialects. Stellmacher (1990) argues that while shared features and mutual intelligibility remain between neighboring Dutch and Low German dialects, cultural and political developments on either side of the political border have accelerated the linguistic divergence of the two areas. The growing prestige and use of High German on the German side of the border has led to an almost complete disappearance of dialect use in cross-border contacts in favor of High German (by both Dutch and German speakers).[5] As a result, the dialects are rapidly diverging from one another, each influenced by their respective national standards.

The border with High German is less easy to draw. It is in this contrast with High German that the older literature often lumped Dutch and Low German together. Yet at both ends of the traditional border between the dialects that are affected by the Second Consonant Shift (SCS) and those that are not the isoglosses fan out. The usual shorthand division between High and Low German is the *ik*/*ich* line, though some Low German and Dutch dialects have *ich* rather than *ik*. Goossens (1968) has shown that this is probably the result of lexical borrowing from High German rather than because of participation in the SCS. Absent an alternative definition, the *ik*/*ich* division remains the most common characteristic separating Low German from Middle German. From a phonological point of view this division is not always fortunate; using other criteria, the Middle German dialects can be considered part of Low German in contradistinction from Upper German, e.g. the distinction between fricative and plosive reflexes of Gmc. **g*.

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[5] Stellmacher concluded this in 1989. It may be that by now, twenty years later, English is making enormous inroads in this context just as High German has lost considerable ground in Dutch-German trade and commerce.

Modern research of Low German is still somewhat hampered by a data bias resulting from the German division 1945-1990, a bias that has not been corrected since German reunification. It appears that the communist regime in East Germany had little interest in the Low German dialects and though the *Handbuch*, published in 1983, refers to three dialect groups in East Germany, the basis for the phonological conclusions that are drawn is narrow. Stellmacher admits that there is no specific data for Middle Pommeranian and that he has to make do with some loose remarks by the author of a study of neighboring Mecklenburgish-East Pommeranian about supposed minor differences between the two dialects. Research is dominated by the western dialects of Lower Saxony and Schleswig-Holstein, where Low German dialects are still in use. It is not inconceivable that some conclusions about Low German are skewed by this bias, both in the sociolinguistic and the phonetic aspects of the research.

One final complication in the description of Modern Low German is the rapid decline of the Low German dialects in Prussia, Silesia, and Pommerania after World War II. It also feeds indirectly into the western bias, because no recent postwar description considers the place of these colonial dialects in the development of Modern Low German at all, as if the six centuries of their existence and participation in the mosaic of Low German development never happened. In prewar scholarship it was not unusual to ascribe the presence of palatalized consonants in these colonial dialects to influence from Polish or Sorbian. Symbolic for this attitude is the unwarranted footnote at the end of an article submitted by an amateur dialect observer about the Low German dialect of Rogasen in Posen (now Rogoźno near Poznań, Poland) that "the evidence for Polish origin of [vowel mutation] has now been delivered" and that this is not connected to Germanic *i*-umlaut but derives from the Polish feature of consonant palatalization (Koerth 1913: 281). The footnote was added by the editors of the journal, not the author of the article and the conclusion could not be drawn from the data presented in the article. Indeed, it is not impossible that some local peculiarities were due to contact with Slavic languages but these and other colonial dialects are interesting not only for their proximity to

neighboring languages but also because of their retention of ancient indigenous features. In view of the connections and similarities between the Low German dialects in Eastern Europe and High German dialects elsewhere on the fringes of the (former) German-speaking world it is unlikely that all consonant palatalization in all these dialects was imported from Slavic.

With these limitations kept in mind, let us look at the consonant inventory of Low German. Below, in table 3.2 we see the inventory of a western dialect, which is described well.

Table 3.2 – The consonants of the Low German dialect of Laer in Northrhine-Westphalia (based on Niebaum 1974)

	Bilabial	Labio-dental	Dental	Palatal	Velar	Glottal
Plosives	p, b		t, d		k, [g]	
Fricatives		f, [w ~ v]	s, z	j, [ç	x], [ɣ]	h
Nasals	m		n		ŋ	
Liquids			l, r			

It is not clear why Niebaum elects to represent his inventory with the boxed pairs of consonants. It is certain that in this Westphalian dialect [ç] and [x] are in complimentary distribution, so that it would have been easier to represent this phoneme as a /x/, which is the ancestor of both sounds. The use of the allophone [g] is limited to position before /n/, e.g. in *liggen* [lɪg.ŋ]. Niebaum claims that it sometimes occurs as an allophone of /x/ in the verbal prefix *ge-*, as a result of High German influence. This prefix has historical Gmc. */ɣ/ rather than Gmc. */x/, though in modern Westphalian it seems to have become /x/.

Palatalization of consonants is absent from the handbooks on Modern Low German. Not even West-Germanic Velar Palatalization (WGVP), ubiquitous in the other West-Germanic languages, seems to have survived, though such a conclusion would be based on the *argumentum ad silentiam*. That Low German was affected by WGVP is clear from the evidence from Old Saxon and Middle Low German, but also from dialectological data gathered in the twentieth

century. The Pommeranian dialect of Lauenburg (modern Lębork in Poland)—now extinct—participated in the palatalization of WGmc. **g* before front vowels where it merged with /j/ (Stritzel 1937). The curious distribution of reflexes of Gmc. **g* throughout the Low German dialects supports the notion that palatalization, at least of velars, was once widespread. Gallée remarked (Gallée-Tiefenbach 1993:168 §244) that by his time (*ca.* 1900) the original distribution of velar and palatal reflexes of Gmc. **g* based on the linguistic context (usually the following vowel) had been replaced by a geographical division between regions with primarily velar (Westphalian) and those with primarily palatal reflexes (esp. Eastphalian), regardless of linguistic context. Yet some areas with allophonic distribution, as well as areas with the merger of the palatal fricative with /j/ remained. This situation resembles that in Dutch somewhat, where velar reflexes predominate (including the gutturalized reflexes of the northern dialects) but with some remnant areas of palatal reflexes and dialects with phonetically distributed velar and palatal allophones. In addition to this, in view of the development of words like *beten*, which derives from *beetken*, Middle Low German must have gone through a stage of palatalizing and assibilating the reflexes of Gmc. **k* in the diminutive suffix much like Dutch (Lasch 1912; see below). Though the palatalized and assibilated forms have mostly disappeared to assimilate with stem-final *t*, some small dialect areas remained into the twentieth century with assibilated or palatalized *t*, e.g. in words like *bitjen/betjen/betschen* 'little bit' (High German *bisschen*; DiWA 2001-).

3.2 Palatalization in Old Saxon and Middle Low German

It is widely acknowledged that Old Saxon participated at least partially in West-Germanic Velar Palatalization (WGVP). Spellings from the Old Saxon corpus, esp. the *Heliand*, combined with the dialect's linguistic similarity to Old English make this statement hardly controversial, although both Lasch (1939) and Krogh (1996) reject a connec-

tion between the palatalization phenomena in Old Saxon and other Germanic languages (see below). There is evidence, however, that other consonants were also affected by palatalization.

3.1.1 Velar Palatalization in Old Saxon and Middle Low German

Both the voiced and the voiceless velar fricative underwent palatalization in Old Saxon. Evidence in favor of palatalization of Gmc. **g* includes the common confusion with Gmc. **j*. The semivowel is represented by <i, g, gi, ge>, suggesting a partial merger of the two phonemes: *giung* (< **jung*-), *giamar* (< **jiamar*). Gallée concluded that OS **j* was a "palatal-guttural spirant" (Gallée-Tiefenbach 1993: 151 §194).

Similarly, when Gmc. **g* appeared before a front vowel *i, e* it is not unusual to find a spelling <i, hi> or a zero-representation: *ieldan* (= *geldan*), *iuhu* (= *giuhu*), *Hieroldus* (< **Geroldus*). These modified spellings indicate that when the consonant was before a front vowel, the pronunciation was different. Both the (semi-)systematic way these spelling adaptations have been carried out and the partial merger with another phoneme indicate that we are dealing with a separate, palatalized phoneme. OS **g* must have been a fricative and not a plosive; otherwise merger with Gmc. **j* could not have taken place. Klein (2000b) argues that Gmc. **g* was represented by two variants: a plosive [g] after nasals and possibly before *n* and *l*, and a fricative elsewhere. This fricative he splits further: velar [ɣ] in the context of back vowels, palatal [j̟] in the context of front vowels and perhaps devoiced [x] finally. The close association and partial merger of Gmc. **g* and **j* remained until at least the seventeenth century. At that time, common spellings in Hamburg with *g* for *j*, such as *guewelen* 'jewels' and *gi* 'you (pl.),' started being replaced by spellings with *j*. Lasch (1918) concluded that this change in spelling was the result of a change in quality in initial **g*, namely that it became plosive and ceased to be fricative, a feature that had previously allowed <g> to stand for any palatal fricative.

Gallée (Gallée-Tiefenbach 1993: 168 §244) was probably mistaken when he said that the distinction between the palatal and velar reflexes of Gmc. **g* may not have been consistent. He based his conclusion on the absence of a systematic alternation between palatal and velar reflexes in modern Low German dialects. Instead of this, one finds a geographical distribution, whereby Westphalian dialects have generalized the velar fricative throughout, regardless of the linguistic environment, whereas Eastphalian dialects have only a palatal fricative. In eastern dialects of Low German, Gmc. **g* is represented by *j* in all contexts. It is more likely that at some point Middle Low German reorganized its phonological system and lost the opposition between velar and palatal fricatives (which also happened in Dutch), with the result that some regions generalized one and other regions another partner of the opposition.

The palatalization of the voiced velar stop Gmc. */k/ is less clear, even if we agree that the phoneme underwent palatalization (Holthausen 1900; Lasch 1918, 1939; Gallée-Tiefenbach 1993; Krogh 1996; Klein 2000b). Before the front vowels *i, e, ǣ* (< WGmc. **ā*) in Old Saxon we often find an <i> to indicate the palatalization of the preceding <k>, recorded not only in the M manuscript of the *Heliand* (e.g. *antkiennien* 3582 M) but also in other Old Saxon texts and other manuscripts of the *Heliand* (e.g. *gihwuilikies* 2284 *Heliand* C; *untkiende* 517 *Heliand* Frgm. S; *bikiert* for Lat. *convertere* in the *St. Peter Glosses*). The controversial point is the assibilation of Gmc. */k/ (in the older German literature referred to as *Zetacismus*). Much has been written about the presence of place names with assibilated Gmc. */k/ (e.g. Seelmann 1886; Rooth 1932; Wesche 1960), but as Krogh points out, there is a great difference between the onomastic materials and other early Low German texts. Place and personal names abound with forms that are evidence of assibilation or affrication (e.g. *Quernbetsi* < **Quernbeki*, *Zeven* < **Kivina*, *Betsingeroth*, *Bessingerode* < **Bakkingerode*). Yet the literary, non-onomastic material has almost no unambiguous evidence of assibilation, though palatalization is undoubted. Among the very few exceptions are *zint* 'child' (< **kind*), and *sever* 'beetle' (< **kefer*) recorded in a few isolated early Middle Low German charters and glosses, especially in northern areas (Lasch 1914: 177

§339). No satisfactory explanation has been put forward for the divergence between onomastic and non-onomastic material. It cannot be supposed that assibilation only operated in names. Krogh mentions that records are lacking for the southern and central parts of Westphalian between the tenth and thirteenth centuries, so that conclusions cannot be drawn about the spread of assibilation in those parts. The earliest assibilated forms occur only in charters from the twelfth and early thirteenth century onward. Few assibilated forms are found before AD 1175, and they are more common and earlier in the southeastern part of the Low German area. Thus, as Lasch already concluded, the assibilated forms develop from non-assibilated palatalized forms in the later twelfth century. This process mirrors the development of affricate phonemes from the palatalized Gmc. **g* and **k* in English around the same time.

The assibilated forms appear practically only as native material in otherwise Latin-language texts. One need not suggest that assibilation was erroneously recorded by non-native scribes, because most of the place names recorded with assibilation in the Middle Low German charters retain the affricates or sibilants to this day. It is possible that the orthographic model of Medieval Latin (where Lat. **k* had similarly shifted to */ts/ or */tʃ/) imposed a certain spelling on the palatalized OS **k*. Lasch also commented that, "Auch viele unsichere schreibungen, die alle für den laut z.t. im gleichen namen begegnen, bezeugen, dass dieser laut keine genaue entsprechung im vorhandenen system fand" (1914: 178).

For some reason many, though not all, assibilated spellings in Middle Low German revert to <k> spellings by around AD 1250 (Lasch 1939: 250). One view is that the assibilated forms remained in a phonological relationship with unpalatalized OS */k/. This is possible, especially if the distinction between */ɣ/ and */j/ was lost at some time between Old Saxon and Modern Low German; then, the loss of distinction between their voiceless counterparts */k/ and */tʃ/ would parallel that development. There is some anecdotal support for such a solution in the reflexes of the word for elderberry in modern Eastphalian dialects. While the High German

(and standard German) word is *Holunder*, Eastphalian uses a wide variety of words deriving from the Sorbian loanword *čeć* or *čećaty*, many including one or both of the Slavic assibilated *k*, e.g. *tscheetschke, schetschke, schoschke, keitschken, kätschken, kätschen, quitschke, zwetschen*, but also the more common *kaseken* and *keiseken* with depalatalized and deassibilated *k* (Seidensticker 1961). The survival of assibilated forms along with the certainty that this word was borrowed with pre-existent assibilation from Sorbian means that the assibilated Sorbian forms were incorporated into the Middle Low German phonology of those dialects. Sorbian assibilated **tʃ* and **ʃ* were equated with the native assibilated **tʃ* and **ʃ*. The later loss of assibilation, or as Seidensticker argues, the lack of assibilation in some Eastphalian dialects even at the time when such Slavic words were borrowed, and the resultant merger with or substitution of MLG **k* provides support for the view that a relationship between MLG **k* and **tʃ* remained.

Krogh (1996) rejects the notion that this reversal was the result of a language-internal phonological development. He presents a cogent objection that it is not very credible to posit a continuation of an equipollent relationship between a dental affricate and a velar plosive. He also doubts that the reversal was as sudden as the written records suggest but proposes that assibilated spellings disappeared more quickly from the written language than from the spoken language. He believes that the increased influence from High German from around that time is responsible for this change. This theory has merit but has yet to receive substantiation since southern German influence, while not absent, is not considered to be very strong before AD 1500. Yet Krogh's suggestion that this was a change in orthographic conventions rather than of phonology is probably correct to some extent. Around this same time, literacy in northern Germany increased, literary output in Low German started to expand, and the Hanseatic League, which brought together towns from all over northern Germany and the Netherlands, grew in importance, and a Low German regional codification may have played a role in pushing the previously common assibilated spellings out of the charters, as the Latin model was no longer prevalent.

One other complicating factor exists for late Middle Low German and early Modern Low German. In some dialects, especially in Mecklenburg-Western Pommerania, and also in Hamburg, Gmc. **k* was assibilated to *tj* and in some cases later assimilated to preceding *t*. Lasch (1912) discussed the curious form *beten/bäten* and explained it as deriving from the diminutive *beetken* 'little bit.' The situation in Mecklenburg was thus similar to that of Dutch, where Gmc. **k* in diminutives was particularly susceptible to assibilation and where it has remained to this day (see chapter 2). Palatalized *t*, the assibilation product of Gmc. **k* in the diminutive, has almost died out in Low German. According to the *Wenker-Atlas* (DiWA 2001-), now about a century old, diminutives in Low German are of two main types: in the northern part of Low German, diminutives do not exist as a morphological category but are circumscribed with some form of the word 'little,' while in the southern part of the dialect area the diminutive suffix is represented usually by *-ken*. When the atlas was made, there was still an area with *-tschen*, and other variants of assibilated **k* remained in some isolated towns. Lasch showed that *beten/bäten* developed from the diminutive form at some point after *ca.* AD 1500, which would suggest that the palatalized diminutive must have been much more widespread at some point. However, Lasch herself (1918) argued against Wrede's theory (1908) of the diminutive suffix as the origin of these assibilations. She objected with regard to the historical dialect of Hamburg (1) that assibilation of Gmc. **k* was not restricted to diminutives but rather affected all instances of **k* following **t* and (2) that the relevant diminutive suffix does not predate the appearance of *tj* in other positions.

Though Wrede's theory has several weaknesses (especially the erroneous supposition of an important Frisian-Dutch substrate in northern Germany), Lasch's objections are probably not entirely justified. Her first argument depends on the accuracy of the second, which is hard to prove because it is a negative proposition (*argumentum ad ignorantiam*). Because the situation in Hamburg and much of Low German resembles that of Dutch, it is safe to assume that similar phonological factors obtained as a result of shared linguistic inheritance. That two re-

lated languages should develop in a similar way should not be surprising. On the other hand, it must be stressed, as we have seen in chapter 2, that it is not clear why the diminutive suffix in Dutch should have developed in the way it did, while other instances of Gmc. **k* seem hardly, if at all, affected by the assibilation of the fourteenth century. It is true but not necessary that the assibilation of Gmc. **k* in Medieval Low German could have spread from diminutives to other categories. The development seems to be rooted in phonological factors. Thus, assibilated **tj* must derive from palatalized **k* under relevant phonological conditions (presence of *i* or *j*). An initial development in the diminutive suffix and later spread to other categories is not required. If we remember that the diminutive suffix is absent in large parts of Modern Low German, one wonders how influential such a rare suffix could have been in the past. It seems more likely, therefore, to assume the same phonological predisposition of Low German as in Dutch but not an identical path of development.

There is hardly any doubt that the velar palatalization of Old Saxon is the same in nature as that observed in other West-Germanic dialects, i.e. Old English, Old Frisian, and Old Dutch. Only Krogh has rejected the connection with WGVP. He does so on the uncertain basis of relative chronology and differences in distribution of the palatalized products, the exact objections raised in the past against the Anglo-Frisian Hypothesis. Lasch (1939) remarked that Old Saxon palatalization must *postdate* Old Saxon *i*-umlaut because of early words like *kietel* 'kettle,' which, both Lasch and Krogh argue, show that Gmc. **ă* had been umlauted. There are two major objections to this conclusion. First, this view of the relative chronology is based on the standard view of *i*-umlaut as a case of distance assimilation which rejects any link between consonant palatalization and *i*-umlaut. However, the *Mouillierungstheorie* of umlaut has been proven in its essentials. Thus palatalization must precede umlaut. In the particular example of *kietel*, the quality of initial *k* does not need to stand in any chronological relationship with the following *e*, since it derives from Lat. **ă* (< Lat. *catillus*)—thus, we have to posit palatalized */tʲ/ as the reason for umlaut in this word. Hence, Krogh is right that *in this word* um-

laut must have preceded palatalization of */k/ but not of */t/, and one cannot conclude that palatalization in general must follow umlaut.

The second objection is of a more fundamental nature and concerns the notion of relative chronology and the way it has been used by historical phonologists. Especially if one accepts the *Mouillierungstheorie*, it becomes clear that sound change cannot be viewed according to the domino effect. Palatalization did not 'kick in' when umlaut had been completed, a view contradicted by the *Mouillierungstheorie* in any case, nor indeed does umlaut take over from palatalization once it becomes obsolete. Instead, they work simultaneously and in concert, with palatalization of consonants representing the prerequisite phenomenon for (but not the sole distributor of) umlaut of stem vowels. Krogh's conclusion that Old Saxon palatalization of initial *k* is a much later phenomenon than its Old English counterpart rests on his assumption that the umlaut of **ă* in words like *kietel* is not ancient. For this he might even have cited alternations as *handi ~ hendi* (*Heliand* 4917, resp. from ms. M and C) as evidence of the late date of this umlaut—but he does not—except that this would once again ignore the fact that palatalization and umlaut are in operation at the same time as active processes. In short, we can point out that Modern High German retains the original vowel in the preterit *kannte* next to umlauted *e* in the present tense *kennen, etc.* and no one would argue that this proves a recent date for the umlaut of **ă*. To deny the possibility of a much longer history to this umlauted OS *e*, and by extension of palatalized *k*, is to argue *ex ignorantia*, since we have no meaningful written records in Old Saxon before AD 850.

Similarly, the objection that Old Saxon and Old English palatalization have different phonetic forms and distributions is of little weight. Nobody expects all Germanic dialects to behave like a monolith regarding every linguistic change, or else there would be no linguistic divergence of any kind. Even within Old English there is considerable variation regarding the development of palatalized *k*, so differences between normalized/standardized Old English and Krogh's Old Saxon examples are no obstacle. The same argument of alleged insurmount-

able differences between Old English and Old Frisian palatalization (as well as other phonological divergences) has not kept scholars from reviving the basic tenets of the Anglo-Frisian Hypothesis (see chapter 4). Therefore, there is no serious objection to considering Old Saxon velar palatalization as nothing but a local incarnation (or, in fact, several local incarnations) of the wider phenomenon of West-Germanic Velar Palatalization, especially in view of Liberman's (2007) theory that the common Germanic palatalization correlation goes back to the rise of gemination in Proto-West-Germanic.

3.2.2 Alveolar Cluster Palatalization (ACP) in Medieval Low German

As we have seen, palatalization in Germanic is not restricted to velars. One other type of palatalization that has been important is alveolar cluster palatalization (ACP). It is still to be found in Belgian dialects of Dutch but there are also remnants in North Frisian (see chapter 4) and, as we will see below, it was also widespread in some dialects of German. In view of this distribution and the circumstantial evidence that early Middle English also had ACP, we should perhaps not be surprised that the phenomenon was also active in Low German. Since palatalized alveolar clusters were not marked in any way in Old Saxon or Middle Low German, we have to rely on other clues to adduce this information. We will rely on the pattern of ACP described for the Brabantic dialect of Aalst (cf. chapter 2; Keymeulen 1991), namely that ACP is responsible for the development or further transmission of *i*-umlaut (insofar as West-Germanic Velar Palatalization has not already umlauted stem vowels) and also leads to epenthetic vowels. This leads to the following observations about Old Sxon and Middle Low Saxon. First, Old Saxon has several deviations from the normal pattern of *i*-umlaut that fit well with the general rule Keymeulen proposed for ACP and *i*-umlaut: dialects that have ACP generally do not allow umlauted vowels before palatalized clusters. Thus, umlauted vowels and palatalized alveolar clusters do not often accompany each other. Gallée lists several words with the alveolar clusters *-nd*, *-ld*, *-nn*, *-ll*, *-st* that fail to show uniform umlaut and in a brief

remark he admits that it is unclear whether the cluster is responsible for umlaut blocking (Gallée-Tiefenbach 1993: 43 §48n. 2).

Table 3.3 – Old Saxon words with umlaut blocking before alveolar clusters (C and M refer to the two main manuscripts of the *Heliand*)

1.	*aldiro* (M 571), *aldiron* (M 3859), *aldron* (CM 389), *aldrono* (CM 5197), cf. *eldirun* (CM 3273)
2.	*bandi* (Freckenhorst Urbarium 553)
3.	*elilandige* (M 5139), cf. *elilendige* (C 5139)
4.	*fallid* (M 4282), cf. *fellid* (C 4282)
5.	*giuualdit* (C 3502), cf. *geuuweldid* (M 3502)
6.	*haldid* (M 1827), *gihaldit* (C 2536), cf. *helith* (error for *heldit* C 1827)
7.	*handi* (M 4917), cf. *(h)endi* (C 4917)
8.	*lasto* (M 4288), *lazto* (M 4337, similar forms M 4361, 4375), *laztan* (M 5070), cf. *lezto* (C 4288)
9.	*mannisc* (M 4299), *manniscono* (C 2678), cf. *menniscan* (C 3103)
10.	*sandi* (C 242, M 3390, 4888)
11.	*standid* (M 1649), cf. *stendit* (C 1649)
12.	*ande* (Freckenhorst Urbarium 11), cf. *ende* (Essen Urbarium)

This list does not include a few other forms, such as *langerun* (C 5802) or *liudstamna* (C 248) instead of *lengiron, lengron* and *liudstemna* recorded elsewhere, because they are not strictly speaking alveolar clusters, though one might argue in favor of including them, since they include at least an alveolar in the cluster. The M manuscript of the *Heliand* seems to have more instances of umlaut blocking, which means that the blocking cannot be ascribed to Franconian influences, which are more common in C (Ehrismann 1918; Taeger 1977). The lack of umlaut in such words has not yet been explained, for alveolar clusters have not been considered a blocking environment.

Two other pieces of circumstantial evidence support the hypothesis that palatalization of the alveolar cluster was at work in Old Saxon. The first is the spelling of present participles in the Old Saxon *Prudentius Glosses* where the ending Gmc. *-*nd* appears consistently as <nth>, e.g. *breuianthia* (Gallée-Tiefenbach 1993: 134 § 174). There is no apparent reason why this clus-

ter should undergo the shift **d* > *th*. It is by no means certain that palatalization is present in this situation, but a spelling <nth> for a palatalized cluster is possible. It is a close parallel of the devoicing of the same cluster in a large number of English verbs, e.g. *sent* < **sended*, where palatalization seems to have been operational (see chapter 1). The second phenomenon that supports the argument in favor of palatalized alveolar clusters is the raising of Old Saxon and Middle Low German *e* > *i* before an alveolar cluster (Gallée-Tiefenbach 1993: 47 § 54; Lasch 1914: 87-88 § 138-39). This change also works before the velar nasal, but is more widespread before *-nd* and *-ld* and also affects those *e* that are products of *i*-umlaut *a* > *e*, e.g. MLG *twintich* < **twentich* < **twantig* 'twenty,' *inde* < *ende* < OS *ande* 'and.' Lasch comments that this change can be observed as early as the tenth century in Korvey. The phenomenon parallels that of the raising of vowels in ACP in Aalst (Keymeulen 1991).

There is, however, one potentially fatal objection to this theory, and that is the widespread velarization of *a* > *o* before clusters of *n* + consonant in Old Saxon, e.g. *ho(n)dscohc* 'glove' (and in a great many place names in Westphalia and around Merseburg) and before the cluster *-ld*, e.g. *old* < *ald*, *werold* < * *werald*. The same change is also common in Old English (*ond* for *and*). It might be argued that palatalization and velarization of the same clusters cannot exist at the same time. However, velarization is not universal in Old Saxon; Holthausen somewhat inaccurately called this change "vereinzelt" (1900: 28 § 76 Anm. 1). But we can point to one counterargument that may be relevant here and that is the fact that velarization of alveolar clusters developed from an earlier stage of ACP (see chapter 1). As we will see later in this chapter, Transylvanian German dialects and to some extent also Bavarian dialects represented a patchwork quilt of palatalizing and velarizing villages. Velarization was not imported from outside, only into some of these villages but not into the others. Instead, the prerequisites for the development of velarization from palatalization were inherent in all, but only some developed this second stage. The same, then, might have been the case in Old Saxon: velarization and palatalization went hand in hand, because one (ACP) produced the other (velarization). It may

be supposed that the more southwesterly dialects of Low German, being closer to what is considered the nucleus of both ACP and Rhenish Velarization, namely the Rhenish Franconian dialects, would be more inclined to these phenomena, but this is a conclusion that cannot be drawn from the available evidence.

3.3 Palatalization in Old High German

Evidence of palatalized consonants in Old High German is scanty, yet what little insight we do have in the matter suggests that consonant palatalization must have been widespread at some point. One major difference between the northern and southern dialects of German and which has caused palatalization in High German to be obscured is the Second Consonant Shift. The two most commonly palatalized consonants, the voiced velar fricative */ɣ/ and the voiceless velar plosive */k/ both underwent a change leaving few candidates for palatalization—assuming that High German was affected by West-Germanic velar palatalization. The lack of evidence for palatalization of WGmc. **g* in those High German dialects where it is represented by a plosive /g/ rather than a fricative /ɣ/ also provides substantiation for the notion that WGmc. **g* was a fricative at the time of palatalization.

There are few examples of the change /g/ > /j/ in Old High German. For northern dialects of Franconian Franck lists several examples with <j> for initial /g/, though all but one of them (the Ripuarian *iechose* from the Trier Prudentius Glosses) seem to be proper names. It appears that the Upper German dialects realized the phoneme as a voiced velar plosive /g/, though in Bavarian and southern dialects of Franconian it became devoiced in all positions as /k/ (Schatz 1907; Franck 1909; Braune-Reiffenstein 2004). In final position, Upper German had <c> or <k> for Gmc. **g* but also retained <g> in some rare cases. On the basis of Bavarian borrowings in Slavic, Braune (1874) proposed that Bavarian <g> could stand for a fricative, but this seems

unlikely. Nevertheless, in medial position /g/ frequently changes to /j/, especially in the sequences *-egi-* and *-igi-*. Franck (1909) seems unwilling to acknowledge that especially in western dialects of Franconian (those recorded in texts "vom rom[anischen] Boden" [§ 105.1]) this change was common, though in the end he admits that /g/ may have become palatalized fricative before coalescing with /j/ (§ 105.2). But we even find this palatalization and deletion of *g* in medial position in Bavarian (Schatz 1907: 80 §71b) and Alemannic (Braune-Reiffenstein 2004: 144 §149 Anm. 5a). The phonological (or phonetic) explanation of this change, especially if one assumes plosive /g/ throughout Upper German, remains elusive. The only hypothesis that would save all the facts is that palatalization of *g* medially between vowels preceded the change of Gmc. **g* from fricative to plosive, because it is more plausible to suppose the merger of a palatalized fricative */ʝ/ with /j/ than for mergery with /j/ by a plosive. Further evidence of the (partial) merger of Gmc. **g* and **j* is presented by the surviving examples of reverse shifts of **j* > **g* as in *Gicht* 'gout' (cf. Du *jicht*) and *Käfig* 'cage' (< MHG *kevje* < OHG *chevia* < Lat. *cavea*), which are the result of imperfect separation or accidental crossover of lexical items when the partial phonological merger was undone.

There is virtually no scholarship on the possible palatalization of Gmc. **k* in Old High German, though it is certain from the evidence of modern dialects that */k/ was palatalized if a front vowel followed before the end of Middle High German at least in some regions. Because of the lack of data for the historical dialects, I will discuss this topic below with the data for the modern dialects (section 3.4.2).

One of the few studies of palatalization in Old Bavarian is an article by Eberhard Kranzmayer (1938). He attempted to prove that umlaut in Bavarian is old (and original, i.e not imported from outside) by showing that Bavarian had palatalized alveolars. He believed that the *Mouillierungstheorie* was correct and that the presence of umlaut in Old Bavarian can be adduced from the presence of palatalized consonants, specifically alveolars (*n* and *l*, primarily). Kranzmayer first looked at the presence of umlaut of short Gmc. *ă* in the Germanized place

names of Bavarian colonies in Slavic lands. His thesis was that if the colonial dialect records umlaut, the home dialect (in Bavaria) must still have had active umlaut, while the colonies settled later would gradually lose umlaut as it ceased to be productive. Thus, Kranzmayer investigated Bavarian colonies settled at different stages. He concluded that settlements around 1100, 1200 and 1280 still show evidence of umlaut, but settlements of around 1340 and later no longer do this. Kranzmayer made a plausible case for the notion that Old Bavarian already had umlauted *ü* and *ö*. He showed that in later and modern Bavarian and Alemannic dialects original *i* and *e* became rounded to *ü* and *ö* under influence of "gerundete Mitlaute": e.g. *hölle (= helle), löffel (= leffel), tswölf (= tswelf), hülfe (= hilfe), müntsa (= mintsa)*. He argued that when medieval scribes replaced the correct closed vowels *i* and *e* with an apparently incorrect <u> and <o> (no umlaut markings, of course) this points to a beginning of this shift to rounded vowels that survives in the dialects to this day, and therefore presupposes the existence of /y/ and /ø/ which, he argued, these spellings represent.

Kranzmayer also argued that Bavarian loanwords in Slovenian have palatalized alveolars, e.g. *žînj* (=*Sinn*), *cìlj* (=Ziel) and that Bavarian must have had these palatalizations, but simply did not record them. This is a tenuous hypothesis, since it may also be the case that the loanwords were made to adjust to Slovenian phonology and acquired their palatalized consonants only in Slovenian, but Kranzmayer strengthened his case by pointing out that Bavarian dialects in Slovenia still had palatalized alveolars in 1938: *huⁱnʲt, gruⁱnʲt*. We will see below that this dialect had alveolar cluster palatalization (ACP) and its participation in the change is remarkable in that it cannot be connected with a Rhenish origin. Yet the phenomenon is too like ACP elsewhere in Dutch and German to be ascribed to coincidence (cf. examples *raiĝŋ* 'rain' and *vaʲɲštər* 'window'), even if some details are different—for instance, it also allows clusters with velars to be palatalized. Kranzmayer believed that the epenthetic vowels (usually *i*) found in Old and Middle Bavarian documents do not indicate an umlaut of the preceding vowel so much as the palatalization of the following (or sometimes preceding) cluster: *Goeme-*

richingen, troisite, Puirra, Gaidra, Ellianpurc, Eillanperht, Kaselia (1938: 91). His hypothesis is not improbable, but it seems more likely that these *i* and *e* are the epenthetic vowels produced by palatalization of the consonants. In either case, however, Kranzmayer provides strong support for the notion of palatalization in Old and Middle Bavarian. His argument suggests that both palatalization and *i*-umlaut, the latter now almost gone from Bavarian, were active there between AD 750 and 1330 and then gave way to velarization as evidenced by spellings *Hunger-* for *Hunder-* in place names (Kranzmayer 1956).

3.4 Palatalization of Velars in Modern German

PALATALIZED VELARS REMAIN IN MODERN DIALECTS OF GERMAN, IN ALL parts of the German-speaking area. They are for the most part continuations of the palatalized reflexes of Germanic velars produced by West-Germanic Velar Palatalization (WGVP). The rise of *ich-* and *ach-Laut* in High German dialects proves that WGVP continued to be active after the working of the Second Consonant Shift, but this is a convoluted topic and will be discussed in a separate section (3.5). In this section we will confine ourselves to looking at the more straightforward palatalized reflexes of Germanic velars.

3.4.1 Palatalization of Gmc. *g

Numerous dialects in the northern half of Germany continue to exhibit the effects of WGVP in their reflexes of Gmc. **g*. Gmc. **g* in the affected dialects appears as /j/. Although not absent from Low German, the information in the KDSA (esp. maps 85 and 102) and in the DiWA (e.g. maps 277 *ganz* and 279 *gebracht*) makes clear that this phenomenon is primarily Middle German. There is, however, a large area in Eastphalia where the verbal prefix *ge-* (which is lacking in practically all of Low German) appears as *e-*. The use of /j/ for Gmc. **g* is less common initially than medially, though the area of the former overlaps largely with the latter. Initial /j/ is

found in a large area around Aachen and Cologne and a band of semi-connected dialects stretching eastward from the northern and the extreme eastern parts of Thuringia to Berlin and into the (now extinct) dialects of Silesia and Pommerania. The phenomenon also survived to some extent in a few colonial dialects. According to Schwarz, the Transylvanian dialect, which had plosive /g/ initially throughout the area, must have gone through a period of g/j confusion, as many doubles remain, e.g. *gōmern/jōmern* 'to wail, complain' (1957: 41). The one surprising island where initial /j/ for **g* is recorded with any regularity is in Innsbruck in Austria.

Many Middle German dialects have a voiced palatal fricative or a palatal semivowel throughout for initial Gmc. **g*, e.g. around Cologne *jafel* 'fork,' *jras* 'grass' (Greferath 1922: 22), and it is also widespread in Low German dialects in Eastphalia and in a large area between Berlin, Magdeburg, and Wittenberg (DiWA map 277 *ganz*). It has been considered one of the typical features of the Berlin dialect, which is a mixed city dialect with strong Low German and Middle German influences (cf. Lasch 1928). In the German dialect around Lauenburg in Pommerania (modern Lębork, Poland; now extinct), some villages had a reflex /j/ before Gmc. **ā*, e.g. *jārštə* 'barley' (NHG *Gerste*), while the whole dialect vacillated between /g/ and /j/ before short *ă* (Stritzel 1937: §110, p. 56). A similar situation exists in Calbe an der Saale, e.g. *jaršdə*. In this dialect, Bischoff (1935: §137, p. 40) found that final Gmc. **g* in some words, especially *weg* 'gone' and *Weg* 'way, road,' was being represented more and more by a fricative, despite the fact that, in general, plosive reflexes were more common.

Contrary to expectation, many Low German dialects do not have the replacement of Gmc. **g* with /j/. Old Saxon **g* also underwent velar palatalization (see above section 3.1.1), as is indicated by the spelling of this sound as <i, j, hi, gi, gh>. Apart from the complicating factor of overwhelming High German influence on Low German, resulting in a common presence of plosive /g/, it seems that much of Low German followed a different path of development from the Middle German dialects. Instead of a complete or partial merger with /j/ (before front vo-

wels), most Low German dialects retained the original velar or palatal fricative, differentiated from /j/. In some dialects the velar fricative was generalized throughout, in others the palatal fricative alternates before front vowels with the velar fricative (which appears before back vowels); the situation is similar in Dutch dialects. This means, some examples of *g/j* confusion notwithstanding, that the older stages of the language kept the palatalized reflex of Gmc. **g* separate from **j*, as some modern dialects still do.

3.4.2 Palatalization of Gmc. *k

That Gmc. **k* in Old High German was subject to West-Germanic Velar Palatalization is clear from the existence of the alternation between *ich-* and *ach-Laut*. Yet, living remnants of palatalized Gmc. **k* (unshifted to /x/) are common in German, though one would be hard pressed to find a single reference to it in any handbook of German dialects, unless one counts the comment by Zhirmunski that some Low German dialects have such strong aspiration as to approach that of an affricate (1962: 275). Palatalized **k* manifests itself, as in Modern English, as assibilated or affricated /tj/ or /tʃ/, occasionally as /kç/. This fact has remained well disguised because it is only found in dialects on the edge of the German-speaking area: Luxemburg, Tyrol, Kočevje, Transylvania (Siebenbürgen), Silesia, Pommerania, and Prussia. Nearly all of the dialects that have assibilated *k*, the Tyrolian dialects excluded, are Middle Franconian dialects where the Second Consonant Shift did not reach Gmc. **k*. Thudt (1966), who summarized the different viewpoints on the history of this phenomenon, noted that when it is acknowledged, it is attributed to foreign or substrate influence. She rejects this conclusion on logical, phonological, and dialectological grounds, and says that there is sufficient evidence that it is an ancient and native German phenomenon:

> Wenn all diese Sprachen als Substrat in Anspruch genommen werden können und der Lautwandel außerdem z.B. auch in den Bantusprachen vorkommt, so ergibt sich daraus, daß die Fähigkeit Vordergaumenlaute zu bilden, vielen Sprachen eigen ist. Weshalb sollte der Wandel im Deutschen also nicht

> möglich sein? Die Randstellung der Palatalisierungen ist noch kein Beweis für fremden Einfluß. (Thudt 1966: 142-43).
>
> [If all these languages can be considered as substrates and if this sound change also exists e.g. in the Bantu languages, we can conclude that the ability to produce palatal sounds is common to many languages. Why should this change not also be possible in German? Yet the fact that these palatalizations appear on the periphery is no proof of foreign influence.]

Nevertheless, this is the view in the majority of publications: that these dialects must have adopted palatalization from the neighboring languages with which they came into contact. It is a tempting hypothesis but one based on the circular argument that it could not be native because central German dialects do not appear to have palatalized velars or other forms of palatalization.

Thudt described the phenomenon in southern Transylvanian dialects, based on observations of the living dialect made between 1958 and 1965. In these dialects, initial Gmc. **k* appears as /ʧ/ or /tç/ (she uses the notation *tX*) if followed by a front vowel (including umlauted vowels), or if there was a front vowel in a historical stage (Thudt's notation has been maintained): *tXänn* 'chin,' *tXirX* 'church,' *tXoiərš* 'cherry,' *tXienəŋk* 'king.' Assibilated /ʧ/ also appears medially and finally in cases of (former) gemination including old *-jan* verbs, e.g. *bratX* 'bridge,' *šaitXən* 'send' (NHG *schicken*), *draiŋtchen* 'drink' (NHG *trinken*; Thudt 1966: 138-39, cf. also Klein and Schmitt 1961-64), in the cluster *-nk-* after old Gmc. **i, e*, e.g. *waintXəl* 'corner' (NHG *Winkel*), and in some words in final position in clusters deriving from OHG vowel + */ɣ/, e.g. *hunitX* 'honey.' This confirms that the phenomenon that was described by Scheiner (1896) was still living after WW II. Similar circumstances exist in Hobgarten (Chmel'nica in Slovakia), e.g. *tsjiniχ* 'king' (NHG *König*), *tsjend* 'child' (NHG *Kind*), *daŋtsjn* 'to think' (NHG *denken*) (Gréb 1921: 69; Van Ginneken 1935), and in Luxemburg, e.g. *kretš* 'crutch' (NHG *Krücke*) (Bruch 1954). Palatalized (but not assibilated) Gmc. **k* is also reported for the Bohemian dialects of the Oberlausitz (Wenzel 1919).

Thudt pointed out an important reason why palatalized, and especially assibilated, Gmc. **k* is dismissed or ignored by scholars: it appears to be absent from the central German dialects. This explains why many scholars believe that peripheral dialects adopted the feature from elsewhere. Yet Thudt suggested that Old High German also has sporadic evidence for assibilated *k*, e.g. in OHG *zuirnstein* for *Quirnstein* 'quern.' This example is doubtful, and a complete absence of assibilated *k* in Old High German is natural because of the Second Consonant Shift, which early on (before the literary era) made most instances of Gmc. **k* unavailable for the process (though West-Germanic Velar Palatalization still affected the resultant voiceless velar plosive, see below section 3.5).

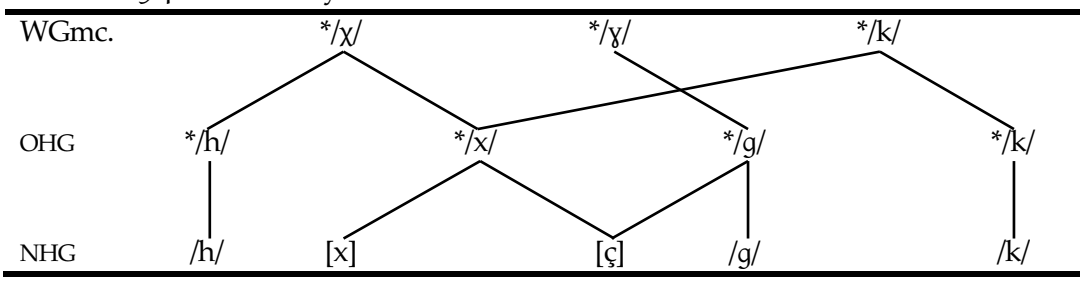
Nevertheless, assibilated *k* is also found in dialects where Gmc. **k* shifted and particularly in cases of (former) gemination. It survives in several valleys in Austria, especially the Innerötztal, the Innerzillertal, Innersilltal, Oberpasseier, the Ahrntal and the uppermost Isel area, and until recently it existed also in the now extinct Bavarian dialect of Kočevje (Slovenia). These dialects have *littša* 'gap' for NHG *Lücke* (Kranzmayer 1956). They also have strong palatalization of other consonants, so that *l* in *Lücke* is palatalized, the word *Bühel* 'hill,' is [pi:hʃ] or even [pi:ʒʃ] (e.g. the placename *Pischelsdorf* near Vienna), and *Kirche* 'church' is [kxɪrççə]or [tʃɪrʃʃə]. While the palatalized consonants are still common, the assibilated forms were reported as dying out among the younger generation. Kranzmayer (1960) argues that this phenomenon is ancient and existed in much larger parts of Bavarian until *ca*. AD 1300.

3.5 The History and Status of *ich-* and *ach-Laut* in Modern Standard German

One of the thorniest problems of Standard German phonology is the status of the so-called *ich-* and *ach-Laut*. That these two sounds are related has been understood for a long time. The majority of instances of both sounds derive from Gmc. **k* through the Second Consonant Shift. There is little disagreement among scholars that the

alternation is due to the environment in which the shifted High German reflexes of Gmc. **k* came to stand: [x] after back vowels, [ç] after front vowels. However, linguists throughout the twentieth century, even some working before the establishment of the field of phonology proper (cf. Viëtor 1915; Forchhammer 1924), have struggled with the question whether the two sounds are allophones of one phoneme or are independent phonemes. In order to make the complicated relationships more obvious, consider the following diagram:

Table 3.4 – The history of velar consonants in German



The diagram in Table 3.4 ignores several niceties in the development of German, such as the beginning of final devoicing, the date of the change from the voiced velar fricative to a plosive, or the phonetic nature of WGmc. */χ/ (sometimes claimed to be */h/, or */ɸ/), but these are of little importance here. We can conclude from the diagram that [x] and [ç] can have three different origins: WGmc. */χ/, */ɣ/ or */k/. From */χ/ come words like *hoch* [x] and *Licht* [ç]; from */ɣ/ we have *gewaltig* [-ɪç] and *groß* /g/; from */k/ come *Bach* [x], *ich* [ç], and *backen* /k/.

It is important not to confuse the situation by introducing so-called "colloquial" forms into the system for Standard German, as e.g. the pronunciation [tsʊχ] for *Zug* (cf. Wiese 1996: 214), which might lead to the conclusion that WGmc. */ɣ/ (OHG */g/) was involved in a phonemic split leading to [x] *in Standard German*. This is not the case, as such examples are drawn from Low German, where a different situation obtains, though even some areas of Upper German have fricative reflexes of WGmc. */ɣ/ intervocalically (Alsatian, Upper Franconian, North Bavarian and part of Middle Bavarian; Zhirmunski 1962: 309). The majority view is that

in Standard German the reflexes are either [ç] or /g/ (or, with devoicing, /k/), though an alternative view exists, based on the situation in southern dialects, that considers only [g] and [k], as allophones of /g/ reflexes of WGmc. */ɣ/.

The question whether [x] and [ç] are phonemes or allophones, which is related to the history of velar palatalization in medieval German, is complicated because the main test of allophony yields inconclusive results. Several disputed examples seem to run counter to the claim that the two sounds stand in complementary distribution. These minimal pairs, e.g. *rauchen ~ Frauchen, Kuchen ~ Kuhchen, Pfauchen ~ fauchen*, have the peculiarity that [ç] appears exclusively in the diminutive suffix, i.e. across morpheme boundaries. The voiceless palatal fricative also appears word-initially, as in *Chemie*. In view of this situation, Moulton (1947) posited the existence of a "juncture" phoneme /+/ on morpheme boundaries and formulated the rule that [ç] appears after front vowels and /+/. Leopold objected to this analysis on the grounds that it is a circular argument:

> To say that /x/ shows the allophone [ç] after open juncture in its zero form, means that there is no sign of open juncture. It amounts to saying that we must assume open juncture when /x/ shows the allophone [ç]. This is a vicious circle. (Leopold 1948: 179)

Leopold did not in principle object to the idea of juncture, but wondered whether it is "permissible to introduce considerations of word-formation into phonemic disquisitions" (1948: 180). If the answer to this is affirmative, he argued, then Moulton's solution is acceptable and one could conclude that [x] and [ç] are allophones. But if not, then the minimal pairs cited above imply that one must accept /x/ and /ç/ as independent phonemes. Other considerations have done nothing to clarify the question. Anglophone linguists, who have approached the distinction between the two sounds from a pedagogical point of view, argued that, for teaching purposes it is better to consider the two independent entities (phonemes, for all intents and purposes). Moulton himself advocated this position in a later publication (1962). There is

disagreement on the question whether native speakers of German can hear and reproduce the difference. The latter test, based on the Structuralist assumption that allophones, not having a functional character, would escape the notice of native speakers is unreliable as it is a flawed assumption. Especially if there is overlap of allophones from different phonemes (for instance, as the result of the neutralization of a phonological feature in some contexts), native speakers can distinguish different allophones, though they may have mistaken instincts about the phonological allegiance of individual allophones. Moreover, whenever trained linguists self-report (as Leopold 1948 does), the test is irretrievably spoiled.

Moulton's analysis of the problem has been criticized by several other linguists. For instance, Werner (1973) and Kohler (1977) suggested that Moulton's juncture phoneme is a suprasegmental feature, but this is an *ad hoc* explanation. When Kohler argues "Deutsch [ç] zeigt nach velarem Vokal, wie in *Frauchen*, an, daß eine Morphemgrenze unmittelbar vorausgeht" (1977: 110), he presents the definition of a phoneme, since the phonetic difference has assumed a morphological, even semantic function.

The view of phonology that includes a morphonological level of analysis has prevailed. In this view, only morphemic minimal pairs are considered valid, which rules out examples like *Kuchen* vs *Kuhchen*. The overwhelming majority of modern phonological studies of the voiceless velar fricative in Modern Standard German concludes that what are known as the *ich-* and *ach-Laut* are allophones of one phoneme, usually considered to be /x/. Wiese remarks that the pair [x, ç] "constitute the best (though disputed) example for complementary distribution of two or three allophones" (1996: 210). Wiese's point that there is an opposition not just between two but three, i.e. palatal [ç] , velar [x], and uvular [χ] seems to have little bearing on this discussion. Despite the consensus on the solution of the problem, and while generative approaches to German phonology have all but obliterated dissent on the notion that [ç] derives from an underlying /x/ when it appears after front vowels, there is as yet no agreement on what phonetic or phonological rules operate in this instance. The most usual analysis,

which is based on the historical derivation of these sounds, is that the underlying phoneme is /x/, which has velar allophones after back vowels and palatal allophones after front vowels. Though some have posited that the shift from [x] > [ç] is part of a universal change [x] > [ç] > [h] > ∅ (e.g. Vennemann 1972: 875 n. 31), Russ (1978) rejects that claim, since it is contradicted by Dutch and German dialects, which show no evidence of shifting according to that scheme. In terms of distinctive features, Generativists have described the alternation between [x] and [ç] as one of assimilation, with the feature [-back] spreading to the voiceless velar fricative /x/ if it appears after a [-back] segment, a phonetic rule.

One notable exception comes from the generative phonologist Hall (1992), who argues that German has a rule turning all dorsal fricatives into palatals. Hall tries to take into account the multiple origins of [ç], i.e. including such examples as *gewaltig* where final [ç] derives, according to generative theory, from underlying Standard German /g/. He argues that Dorsal Fricative Assimilation (DFA) spreads the feature [back] from a vowel onto a following dorsal fricative. DFA only applies when /x/ and the preceding vowel are tautomorphemic, since a word like *Chemie* is not affected by preceding back vowels. Also, since generative rules must be ordered, Hall comments that DFA must precede a rule for umlaut in this system, because otherwise (underlying) unumlauted back vowels (but which ought to appear umlauted) will produce the wrong result. Finally, because of words like *gewaltig* with [ç] from /g/ by a rule of "g-Spirantization," Hall notes that DFA must follow this rule or else the suffix *-ig* would yield [x] (after devoicing).

Hall's solution is unconvincing because it is not well-suited to explain the products of diachronic shifts. In order for Hall's proposal to work, he assumes, without adequate foundation, that German umlaut is entirely phonological. He decides that the morphological umlaut alternation *Mann ~ Männer* is a part of the synchronic phonological system. Illustrative of the haphazard application of this assumption are older umlaut products, such as *Mädchen*, which receive no discussion and are considered to be integrated as underlying umlauted phonemes,

despite their identical phonological ancestry (all from WGmc. */ɑ/ by Old High German umlaut). Equally, though Hall claims that "g-Spirantization" is widely recognized, there is something awkward about respirantizing the velar plosive in order to produce the correct surface form, when a model taking the history of the voiced velar plosive in Modern Standard German into account could avoid the detour by positing the continued fricative nature of the Germanic voiced velar, from which it derives. Considering the linguistic geography of [k] versus [ç] in the suffix *-ig*, there are reasons to conclude that the voiceless plosive [k] derives from High German dialects, while the fricative [ç] is the palatalized and devoiced reflex of */ɣ/ from Low and Middle German dialects where it has survived to the present day. Zhirmunski supported this view and commented that fricative [-iç] in the suffix has spread further southward than in other contexts, stretching into the northern part of Swabian (1962: 313). Therefore, rather than posit a rule of "g-Spirantization" in the phonological system, it would be more natural to consider the fricative version of the suffix *-ig* as a lexicalized import from dialects with fricative *g*. It would simplify the phonological models, which would no longer need to provide for a plosive versus fricative alternation in this instance.

This discussion demonstrates considerable disagreement about the history of the variation between [ç] and [x] (and /k/), that is to say, of the rise of [ç]. Russ suggests that it is a recent development, "since it does not exist in all German dialects" (1982: 85; cf. also Russ 1978). This argument ignores several factors including the possibility that [ç] has receded, a possibility that is even greater if one views it as allophonic. Russ is also mistaken that palatal [ç] does not occur in South Bavarian (1982: 86), a notion that Kranzmayer (1956) disputed; it is, in fact, widespread.

The variation between the *ich-* and *ach-Laut* parallels the wider trend in West Germanic of palatalization of velars. Just as Gmc. */g/ and */k/ developed palatalized counterparts, at least in northwestern dialects, so also did OHG */x/ (< Gmc. */h/). This situation could only have arisen after OHG */x/ had become an independent phoneme from /h/ which, due to its nature,

appears to be incompatible with palatalization. An alternation due to place assimilation ([ç] after front vowels, [x] after back vowels) may not be universal in modern dialects, but it is more widespread than Russ admits. Not only do some Dutch dialects have [ç], and even a distribution of [ç] and [x], English also has [ç], as in most pronunciations of words like *huge*.

His other objection, that [ç] also appears after "back consonant [r]," is equally unconvincing. The same applies to the appearance of [ç] after /n/ and /l/. It is a misconception to consider either [r] or [ʀ] as an 'underlying' phoneme in Standard German. Alternation between these two variants of the rhotic consonant does not take place on the basis of assimilatory phonetic rules. Native speakers of German have either /r/ or /ʀ/ (and possibly other variants) as their base phoneme, depending not only on extensive dialect variation but even on ideolectal factors. One might go so far as to say that German has an underspecified /R/ and that the phonetic appearance of this phoneme can depend even on physiological factors in the individual speakers. In view of these considerations, attempts, e.g. by Wurzel (1970: 234f), to solve the problem of [ç] after /r/ ([r]) by means of a further rule converting "dental /r/" into a "uvular /R/" in words like *durch* are misguided. Russ's alternative, which circumvents the phonetic problem by positing *svarabhakti* between *[r] and *[χ] in Old High German (Russ (1978: 89-90), does not work either. While it is not impossible that *svarabhakti* existed this does not address the phonetic problem. The notion that a word like *furuh* would have led naturally to Modern Standard German *Furche* 'furrow' with [ç] is insupportable. Not only does Russ ignore other aspects of the phonological history of this word—final *-e* in the Modern German word suggests a different origin than the Old High German form he cites—the *svarabhakti* can only have been a back vowel, which would not have been able to produce a palatalizing effect on the following *[χ]. The proposition that all words with the sequence /R/ + /ç/ derive from forms with original *svarabhakti* is wrong. The same objection goes for Russ' comments about clusters /n/ + /ç/ and /l/ + /ç/ (e.g. *Fenchel*, *Milch*). We must conclude that German /R/, /n/, and /l/ cannot have [back] as a feature. In the pronunciation of many Germans a word like *durch* is

[dʊˈç], with /R/ reduced to a (palatal) offglide. Even if this is not universal—and acknowledging the possibility that this palatal quality of the glide derives from [ç]—it demonstrates that a feature [back] plays no role.

In this discussion the origin of /ç/ in the German diminutive suffix has never been included. According to the phonetic rules of the Second Consonant Shift, the result ought to have been /x/, since the Germanic suffix was *-*ikīn* with Gmc. */k/, which shifted to OHG */x/. This leaves two possible sources for palatalized /ç/: either /i/ before the consonant or /i:/ after it would have caused palatalization. The fact that we have no reliable evidence of this suffix still keeping the full vowels from Old or Middle High German indicates that palatalization and the phonemic split took place very early, *before* the loss of full vowels. Since the early history of the diminutive suffix is obscure, it is hard to pinpoint the period when this would have happened.

With respect to the development of the adjective suffix *-ig* in Modern German, Russ remarks correctly that the present morphonological alternation between [g] and [ç] (e.g. *Könige* vs *König*) is due to a compromise between northern and southern forms (1978: 95). The forms with [g] derive from southern dialects, while the forms with [ç] come from the northern dialects. Therefore, it is unnecessary to posit a phonetic spirantization rule to derive a fricative [ç] from an underlying plosive /g/. Rather, this alternation, which does not appear elsewhere in German phonology, has been morphologized; that is, it is encoded as part of the morphonology of the suffix *-ig*.

3.6 Palatalization of Alveolars in Modern German

In addition to the palatalized velars, the existence of which in the history of German has been more or less accepted, fewer scholars are aware that in many German dialects alveolars have also been subject to palatalization. The products of these palatalizations remain in existence in present-day dialects. One important type of alveo-

lar palatalization (alveolar cluster palatalization or ACP), which we have discussed for Dutch in chapter 2, also exists in German dialects and is related to velar palatalization. We will discuss ACP in German below (section 3.6.2). Apart from that type of cluster palatalization, many dialects also exhibit a phenomenon called *l*-vocalization, which is in effect the palatalization of *l*, usually under the influence of neighboring *i*.

3.6.1 Palatalization and Vocalization of /l/

Vocalization of *l* is well known in the European languages (cf. Italian *piazza* < Latin *platea*) but there is little research on the topic in relation to Germanic, though it is common in Bavarian dialects (esp. in Austria) and is also found in some Thuringian dialects. It is described in more detail in Selmer (1933, 1935) and Kranzmayer (1956). A more recent description is found in Scheuringer (1990: 252ff.). In essence, it is a form of palatalization because it turns a non-palatal consonant into a palatalized consonant or even into a front vowel. From Bavarian we have examples such as *muja* (for the name *Müller*), *wojn* (for *wollen* 'to want, desire'), *hojfa* (for *helfen* 'to help'), *wujd* (for *wild* 'wild'), *füj* (for *viel* 'much, many'), and *Zuj* (for *Ziel* 'goal'; Selmer 1935: 126). Scheuringer's examples from the area around Braunau am Inn (Austria) include [khēi^{-a}] for *Keller* 'cellar, basement,' and [hōi^{-a}] for *Holunder* (*Holler*) 'elderberry' (1990: 254). Kranzmayer connected this type of *l*-vocalization to velarization of *l*, which is another type of *l*-vocalization (Kranzmayer 1956: 119-21). He believed that velarization is an old phenomenon that could still be found in many parts of continental West Germanic, especially in Dutch and Rhine Franconian dialects. In other dialects, however, velarization and palatalization of *l* alternate, e.g. in Tyrol, where *ǫlt* 'old' (velar) and *eltar* 'older' (palatalized) alternate. Kranzmayer argued that the palatal variant of *l*-vocalization developed after AD 1200 and went through an intermediate period during which *l* was palatalized as */ʎ/.

Selmer's explanation of *l*-vocalization as part of a substrate development is not cogent, especially as it relied on the then-popular notions about genetic articulatory tendencies of dif-

ferent ethnicities of the 1930s (Selmer 1935: 1206). The idea of general articulatory or ethnolinguistic tendencies has long been abandoned. In this instance Selmer rejected *Erweichung* or "weakening" of the articulation as a non-Germanic feature, but this statement is circular. On the contrary, the phonological connections between *l*-vocalization and ACP, both in the consonantism and the vocalism, across many German and Dutch dialects, support the idea that palatalization was a common Germanic phenomenon and not imported from some other language. Vocalization of *l* is similar to ACP, and it may well be part of the same development. An important feature the two share is a tendency to have similar vowel developments in the stem. Dialects with *l*-vocalization favor back vowels in the stem or umlaut blocking/reversal. The appearance of front or umlauted vowels combined with *l*-vocalization is rare, as is the case with palatalization of *l*, though epenthetic vowels or diphthongs, i.e. *i*-glides are not unusual. This suggests that *l*-vocalization was part of the same phonological conditioning as ACP and probably developed at around the same time.

A different variety of *l*-vocalization or palatalization of Gmc *l* has been observed in some Valaisian dialects in Switzerland and in some of the medieval colonies in northern Italy. Wipf (1910) and Bohnenberger (1913) describe a type of palatalization of OHG *l* that occurs in several morphological categories: (1) plurals of masculine nouns in *-ill* (*xenja*, sg. *xenill* 'kennel'; *leffja*, sg. *leffill* 'spoon'); (2) feminine nouns from ohg *-ila* (*blatja* < **blatila* 'tonsure'; *dischtja* 'thistle'); (3) OHG verbs in *-ilon* (*xistju* = MHG *kitzeln* 'tickle'); and (4) diminutives in OHG *-ilin* (*lammji* 'lamb'; *meitji* 'girl'). Wipf considered it typical for Valaisian (Walser) dialects. As the data illustrates, this type of vocalization is a type of assimilation, whereby the cluster *-il-* became automatically reanalyzed as *j*, but only in heavy final syllables. The singular *xenill* was not affected because the final syllable is light. This argues in favor of the notion that palatalization here worked in conjunction with prosodic factors, appearing as a device to shorten the syllable (cf. the discussion of the Dutch diminutive suffix, section 2.3 above).

3.6.2 Alveolar Cluster Palatalization (ACP)

In chapter 2, we have seen that many southern Dutch dialects underwent a change I have called alveolar cluster palatalization (ACP). Keymeulen (1991), who describes the dialect of Aalst where it is still a living process, calls it "Zuidwestbrabantse mouillering" (Southwest Brabantic palatalization). The phenomenon was at one time widespread in West Germanic, and remnants of it can also be found in German. Above (section 3.2) I argued that there is evidence from suggesting Old Saxon also had an incipient tendency towards ACP. The phenomenon, though losing some ground in the twentieth century as the result of the loss of a number of colonial dialects in Eastern Europe, remains common in German, in particular in the Middle German dialects immediately bordering on the southern Dutch dialects of Brabant and Limburg, as well as the colonial dialects of German settled by speakers from these areas. What is more, there are also reasons to believe that velarization, sometimes referred to as Rhenish Velarization, is related to ACP and below (section 3.6.3). The dialects of German currently marked by velarized alveolar clusters must once have had ACP; some still have both phenomena at work simultaneously.

ACP can still be found in some small dialects of Ripuaria and the area between the Rhine and Meuse rivers as well as in several Austrian dialects. It may yet survive in some rural parts of Brandenburg (Teuchert 1907, 1908) and Mecklenburg (cf. Jacobs 1925-26, 1926-27), but no recent data is available. All other dialects with the phenomenon have almost died out since the middle of the twentieth century as the result of the political changes following Germany's defeat in World War II. Until then it was a common phenomenon in several so-called colonial dialects in Bohemia (near Großschönau, south of Dresden on the Czech border), Silesia (esp. the area around Posen, modern Poznań, Poland), Hungary (also known as the "Zips" area around Hobgarten, now Chmel'nica in Slovakia), the Bavarian enclave in Slovenia around Gottschee (modern Kočevje) and most notably in the Siebenbürgen dialects (modern Transylvania, Rumania). These dialects are even now not extinct. Thudt (1966) described a living di-

alect in Rumania and, according to the *Neue Zürcher Zeitung* of October 29, 2007, there are still a few speakers of the German dialect of Hobgarten (Chmel'nica).

Not all dialects have or had ACP in the same way, but there are enough similarities to conclude that the homeland of all forms of ACP must be the northwest Franconian dialects located in what is now Belgium and Ripuaria (around Cologne). ACP is possibly old in view of the related phenomena in North Frisian and Middle English. The phenomenon, as well as other types of palatalization (especially palatalization of Gmc. **g*), was taken eastward during the colonial expansions of the eleventh to thirteenth centuries into Thuringia, Brandenburg, Bohemia, Silesia, and Prussia. It is now accepted, based on the similarities between their dialect and the Rhine Franconian dialects, that the so-called Siebenbürger Sachsen (Transylvanian Saxons) came from the same homeland around Cologne. Schwarz (1957) argued in favor of Trier as the point of origin for the Transylvanian colonists and those of Hobgarten, and he dated their departure to around *ca.* AD 1150. According to Schwarz, the evidence of the Transylvanian dialects suggests that velarization had already started in the Rhenish dialects of the time, a view that is not widely accepted in light of the more plausible alternative that velarization developed separately at a later stage. Yet the appearance of velarization in the same contexts in early Middle English (see chapter 1) provides support for Schwarz's theory. The earliest evidence for velarization of alveolar clusters in German is from 1345, which means that German ACP must predate it if we accept that velarization developed from ACP (Frings and Schmitt 1942).

The dialects spoken in the supposed homeland of ACP retain few remants of it, having given way to velarization practically everywhere. Still, it was the description of the Lower Rhenish dialect of Düsseldorf-Aachen by Frings (1913) that first made the hypothesis that velarization arose from an earlier stage of palatalization widely known. Teuchert (1907, 1908) had proposed this for the Brandenburg dialect of Neumarken, though he believed that the neighboring Slavic dialects were the origin of the palatalization that led to velarization in that

dialect. At the extreme western edge of the Lower Renish dialect, on the border with Dutch Limburg, ACP and the epenthetic regression stage survive in clusters that are velarized in the remainder of the dialect, e.g. *puɲt* 'pound,' *hoʲɲt* 'dog.' Considering the proximity to the Limburg dialects in the Netherlands and Belgium and to the German dialects around Eupen (cf. Welter 1929), where ACP is also still alive, we can assume that those three different areas were once part of one much larger area. Combined with Frings's cogent arguments that the velarization of the remainder of the dialect he describes developed from palatalization, we can further enlarge the original area of ACP in German and Dutch.

As a result of the fascination of German dialectologists in the nineteenth and early twentieth century with the peculiarities of the distant colonial dialects, ACP has been much better described there than at 'home.' Transylvanian dialects have been discussed in some detail (e.g. Scheiner 1887, 1896; Huß 1910; Hofstädter 1924; Klein 1927; Schwarz 1957; Klein 1959; Klein and Schmitt 1961-64; Thudt 1966). In his two publications listed here, Scheiner provided the clearest record of consonant palatalization in the Transylvanian dialects, with the first focusing on the dialect of Mediaş and the second providing a more comprehensive look at all of Siebenbürgen as it was known then. Palatalization and velarization are in competition with each other in the dialects, with some towns having both, depending on contexts (velarization after back vowels, palatalization after front vowels), though many towns had either one or the other, a further indicator that the two phenomena are related. In the dialects with palatalization, all alveolars after Gmc. **ī* are palatalized (Scheiner 1887:139; 1896: 44). These need not be in clusters: cf. /ʃveɲ/ 'pig, swine' (NHG *Schwein*), /fɑɲdn̩/ 'to find' (NHG *finden*). However, *l* is never palatalized in Mediaş, unlike in other Transylvanian dialects. The related dialects of Hobgarten (Chmel'nica) have the same distribution of palatalization (and velarization) as the Transylvanian dialects (Gréb 1921).

More remnants of ACP have been recorded across the German-speaking countries. It has been described well in dialects of Mecklenburg. Jacobs (1925-26) remarked that in some towns

west of the Lewitz River (southwestern Mecklenburg) retained the pronunciation [ɲ] for the sequence *-nd*, a phenomenon which older people in the city of Lübz reported as having been much more widespread in the region until *ca.* 1860. According to Jacobs, it is also found in the early modern Rostock Wedding Poems (*Rostocker Hochzeitsgedichte*). This and other related phenomena were receding at the time of Jacobs' writing. The modern dialect of Rostock does not have any remaining consonant palatalization, though Beckmann (1928) pointed out that the dialect exhibits the umlaut of *u* > *ü*, which may be attributable to the once-palatalized cluster *-nd*. More remnants of ACP in Mecklenburg were recorded by Teuchert (1934) who described the area around the southeastern city of Stargard (modern Burg Stargard). In addition to the fact that the dialect exhibits the 'Ingvaeonic' loss of nasals before a fricative (*gaus, gōs* 'goose', cf. NHG *Gans*) and the sporadic survival of /j/ for Gmc. **g* (including the extraordinary confused forms such as *gezus* for *Jesus*), Teuchert found some informants who spelled the word *Hund* 'dog' on his questionnaire as *Huind, Hujnd, Hunjd* or *Hundj*, indicating the palatalization of the cluster. Overall, the dialect velarization of these clusters predominated but some remnants of ACP survived. Teuchert connected this phenomenon also with the unusual umlauted *ü* in words with alveolar clusters, e.g. *Münd* 'mouth' (NHG *Mund*).

The now extinct Silesian dialects of German also had palatalization of alveolar clusters. The historical dialect did not codify palatalized consonants explicitly, but Jungandreas (1937) pointed to the consistent presence in fifteenth-century texts of an epenthetic vowel after short *ĕ* before alveolar clusters as well as before *-ng* in contexts where the vowel could not be long (i.e. diphthongized): *feild* 'field' (NHG *Feld*), *geildin* 'to be valid' (NHG *gelten*), *eynde* 'end' (NHG *Ende*), *ȷeindin* 'to send' (NHG *senden*), *keyntenis* 'knowledge' (NHG *Kenntnis*), *Eyngel* 'angel' (NHG *Engel*), *breyngen, breynghen* 'to bring' (NHG *bringen*). Jungandreas argued that this epenthetic vowel indicates rather the palatalized quality of the following consonant or consonant cluster, a likely conclusion in view of the living ACP in the Silesian dialects in the early twentieth century, where NHG *Feld* was rendered [fɛʌtʲ], and NHG *Bild* 'picture' [bɪʌtʲ]. Jungandreas con-

cluded, however, that palatalization of *l* and *n* appeared much less common in the modern dialect than the historical evidence seems to indicate for the older stages of the dialect.

Because ACP is associated with *Rückumlaut* and with blocking of umlaut, it is instructive to look at the vocalism in words with alveolar clusters (see Figure 3.1 below). The maps of the KDSA show a clear band of umlaut blocking in words like *Feld* 'field' (map no. 296) and *bestellt* 'ordered' (map no. 294) stretching eastward from the Rhenish Franconian dialects into Hessen, Thuringia, and the former German territories of Bohemia and Silesia (incorporating data predating World War II), and into the Zips dialects (Chmel'nica). We find these pronunciations also in two other contiguous areas: southward along the Rhine river in Alsace-Lorraine and western Austria, and along the Main river around Würzburg. In these areas it is common to find *fald, faald* or *fahd* for *Feld* and *bestallt* or *bestahlt* for *bestellt*. Additionally, the pronunciation *feild* and *fäid* for *Feld,* which illustrate the epenthetic stage of depalatalization of consonant clusters, also appears in several linguistic islands in Germany, e.g. south of Duisburg in West-

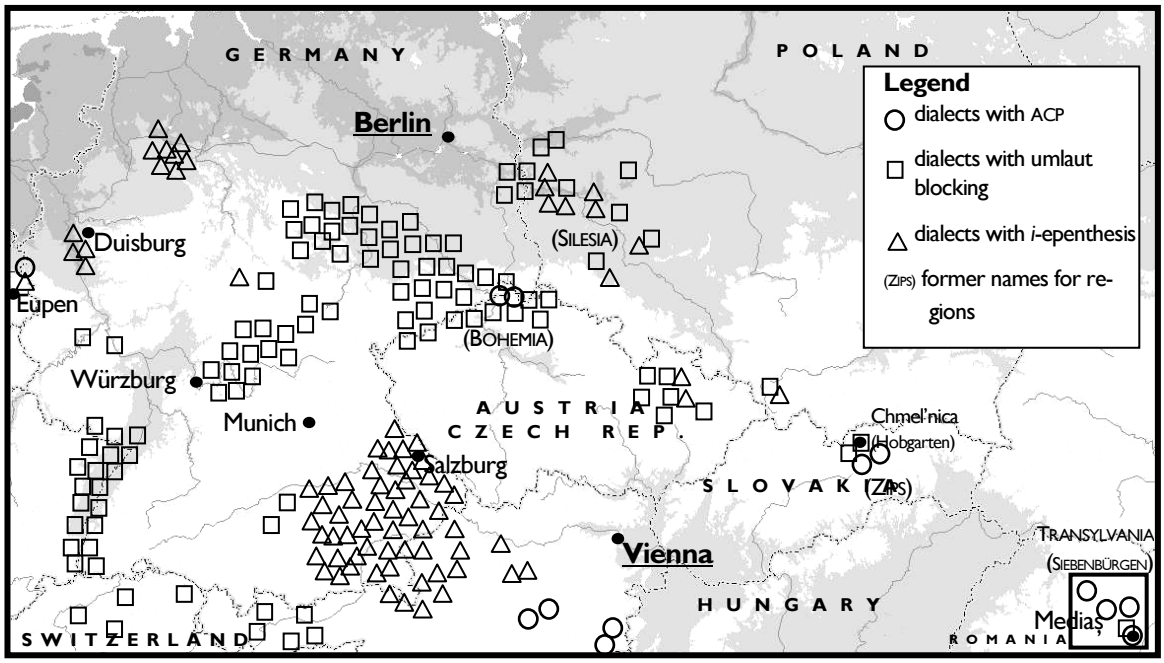


Figure 3.1 German dialects with alveolar cluster alatalization, umlaut blocking or *rückumlaut* (*fald* for *Feld*), and *i*-epenthesis (*faild* for *Feld*). Data from KDSA. Now extinct ACP in Kočevje (Gottschee), Slovenia is just off the map area.

phalia, in Eupen (Belgium), around Hannover, (formerly) southern Silesia, and again in southern Bavaria and around Salzburg. This distribution, which can hardly be considered coincidental, suggests not only that ACP was at one point widespread in German dialects but also that it was a phenomenon that was carried along migration and trade routes. The northern band represents approximately the areas settled during the eastward expansion of the German lands in the twelfth to fourteenth centuries, while the presence of umlaut blocking in Alsatian and Würzburg, appearing along two important rivers connecting those areas with the Rhenish and Ripuarian dialects around Cologne, also suggests exportation of the feature from that 'homeland' of ACP.

3.6.3 Velarization and Its Relation to Alveolar Cluster Palatalization

Related to ACP, both in the linguistic conditioning and in the geographical distribution is the phenomenon known as velarization, sometimes referred to in shorthand as Rhenish Velarization after the more widely distributed form of this phenomenon in the Rhenish dialects of Ripuaria. Velarization is found in a large number of German and southern Dutch dialects (Frings and Schmitt 1942). Two main types exist. The first velarizes single final *-n* in words like *Wein* 'wine' producing [wɪŋ] and the second affects alveolar clusters such as *-nd* in *Hund* 'dog' resulting in [hɔŋk]. In older literature this has been called gutturalization, in German *Gutturalisierung* or, confusingly, *Mouillierung* (Frings 1913). The phenomenon stretches eastward in a narrow band from the Ripuarian dialects across most of the southern half of the Low German dialect area and into the Middle German dialects of the former East Germany. It also appears in small pockets along the west bank of the Rhine into western Switzerland and Lake Constance, and in some colonial dialects that were spoken in Eastern Europe, most notably in Transylvanian German (Siebenbürgen; cf. Schwarz 1957; Werlen 1983). Bertram (1935) provided compelling evidence that there is an organic link between the velarization of alveo-

lar clusters in southern Alemannic dialects and that in Ripuarian, against the objections of Lessiak (1933: 128).

Our main interest is in the second type of velarization because of the parallels with ACP. It is by no means widely accepted that any sort of connection between palatalization of consonants and velarization in German dialects exists. Zhirmunski (1962) rejected Frings' proposal that velarization developed from earlier palatalization because of the latter's unfortunate insistence on a Gallo-Romance substrate as the ultimate source of the phenomenon. Zhirmunski favored the theory also advanced by Welter (1929, 1933, 1938) that velarization arose spontaneously in Middle Franconian as a byproduct of the tone accents common to those dialects. According to this hypothesis, under the influence of these accents certain vowels developed glottal stops, which then became velars. Another proposal, by Hofstädter (1924), is that velarization developed from nasalization. Yet all attempts to explain the origin of velarization in German dialects have been criticized as having problematic aspects, as Werlen (1983) shows, all being *ad hoc* explanations for individual dialects.

That Frings, notwithstanding some erroneous details in his theory, was correct in seeing a connection with the palatalization of alveolars is made more plausible by several factors that have rarely been considered. First, there is an important overlap in the type of clusters affected, with *-nd-* and *-nt-* susceptible to both ACP and velarization. In view of the distinctive features of the consonants involved, *l* and *s* cannot be affected by velarization. But the alveolar, the palatal, and the velar nasal have sufficient features in common to make a phonological explanation for the relationship between the two phenomena. What is more, they are practically always found together, either in neighboring dialects or even in the same dialect, suggesting not only a typological relationship but a genetic one also. Frings (1913) described the presence of velarized alveolar clusters in the area around Düsseldorf and Aachen but in a small area on the westernmost edge he found a reduced type of ACP that involved only clusters of *n* plus dental. In the colonial dialect of Hobgarten (now Chmel'nica in Slovakia) alveo-

lar clusters are palatalized after front vowels but velarized after back vowels: *ôntseŋ* 'to ignite' (NHG *anzünden*) vs. *ônditsoŋ* 'ignited' (past part.) (Gréb 1921: 73; Van Ginneken 1935). That palatalization preceded velarization receives additional support from the forms of the diminutive suffix in Lower Rhenish dialects, which typically has palatalized consonants, even in dialects with velarization, e.g. Krefeld (Heinrichs 1955). Heinrichs also takes this situation to prove that the suffix is indigenous and not imported from Dutch, a language that dominated the area in the seventeenth and eighteenth centuries.

Because of the disagreement about the phonetic factors behind the rise of velarization, there is no consensus regarding its history and geographical spread. Werlen (1983) concludes that a relationship between the High German and Ripuarian instances of *-nd* velarization is improbable because of the chronology, but this objection is unfounded. It must be accepted that velarization in the Middle Franconian or Ripuarian dialects had come into existence by the twelfth or early thirteenth century, because the Transylvanian dialects exhibit velarization. But if we are right in assuming that velarization did not arise spontaneously and was not imported from some other language, but was a further development of ACP, the earlier stages of the change as a whole can be much older. This means that chronology can be no objection to a spread of the feature from Middle Franconian to the High German dialects, the more so as they are located along the Rhine, a major trade route.

More complicated is the existence of velarization in Austrian dialects, especialy in Middle Styria (Mittelsteiermark), and parts of the Burgenland and Carinthia (Kärnten), which are not on major trade routes with Middle Franconian or even Switzerland. The existence of velarization in Austria is not widely known. Kranzmayer (1956) demonstrated the relationship of this phenomenon with surviving ACP and he argued that Bavarian once had much more common palatalization, which the dialects largely lost *ca*. AD 1300. From that moment on, the records start showing peculiar velarized spellings, e.g. *Hunger-* for *Hunder-* in place names.

Therefore, the theory that velarization spread from a central point of origin (whether Middle Franconian dialects or elsewhere) seems less attractive. That hypothesis overlooks an important possibility, namely that the dialects developed velarization from palatalization independently of each other at different times and with slightly different rules of internal distribution. As has been argued above, palatalization in Germanic is old and an inherited feature of Proto-West Germanic developed from West-Germanic gemination (Liberman 2007). This means that all German dialects would have had palatalization with more or less the same, or at least similar distributions, and therefore the potential to develop velarization in roughly the same way if similar factors obtained. Such questions of relative chronology are hard to answer, as can be seen from the debate regarding the Anglo-Frisian hypothesis (see chapter 4). For that question as for the argument regarding the date of velarization from palatalization, especially if we take Transylvanian German as an important litmus test, both alternatives are possible: either the similarities are due to a time of shared development or they arose independently as a result of similar phonological conditioning.

If we put together the areas with velarization and those with surviving ACP, we arrive at an enormous area where the palatalization of alveolar clusters must once have been operative. This area becomes larger still if we take Dutch into consideration, which is historically a Low German (Low Franconian and Saxon) dialect, and add the velarization observed there (see section 1.4.2).

Chapter 4
Palatalization in Frisian

4.1 Introduction

WITHOUT AN OVERVIEW OF THE PALATALIZATION PROCESS IN FRISIAN, a study like this would be incomplete. The Frisian propensity for palatalization has been so well known for such a long time that to attribute to Frisian influence the appearance of any palatalizing tendency in the surrounding Germanic dialects was until fairly recently a standard theory in many studies. But the study of Frisian palatalization is almost inextricably bound up with Old English palatalization, a topic that brings with it such complications and controversy that it is no easy task to disentangle the history of Old Frisian from the mass of arguments over relative chronology. I can address these issues in passing only and will touch on the Anglo-Frisian connection only insofar as it sheds light on Frisian.

Frisian went through two separate periods of palatalization, both of which appear at first glance to have affected only the velars. Yet North Frisian dialects have remnants of palatalization in other consonants. We will consider both of these waves of palatalization.

4.1.1 Frisian Linguistics in the Context of Frisian Studies

Frisian as a Germanic language remains somewhat of a stepchild in Germanic philology and linguistics. Even the recent 800-page *Handbook of Frisian Studies* (Munske 2001) and the steadily growing number of special issues of *Amsterdamer Beiträge zur älteren Germanistik* devoted to Frisian studies cannot disguise that, especially in the field of historical linguistics, Frisian can

seldom escape the role of tributary to Anglo-Saxon, Dutch, or Old Saxon studies. This is a lamentable state of affairs but not completely avoidable, given the dearth of evidence for the earliest stages of Frisian, even up to the time of the Renaissance. This problem is described in detail in Bremmer's study on Frisian literacy (2004). Bremmer argues that literacy was a relatively late acquisition outside of the restricted realm of inscriptions (certainly not before the eleventh century, and not flourishing until the thirteenth). In addition to regular wear and tear, Frisian books suffered more than might be expected from the elements and from political struggles and violent uprisings. Bremmer contends that the traditional early dating, on the basis of historical arguments, of two important legal texts in Old Frisian, the *Seventeen Statutes* and the *Twenty-four Land Laws*, contained in the First Riustring Codex and the First Hunsingo Codex, is insupportable due to the lack of literacy in Frisia during the proposed period. Bremmer does not believe that any of these texts are older than the mid-thirteenth century. This discussion is beyond the scope of this dissertation, but it highlights the difficult situation for linguistic evidence from the earliest periods.

Other factors also complicate matters for Frisian. The status of Frisian in the present day is similar to that of the Celtic languages. Although three separate main dialects are still recognized as being in existence—West Frisian, East Frisian, and North Frisian—only West Frisian seems to have any future. As reported in the *Handbook,* East Frisian has almost died out; of the few thousand speakers in the three diminutive villages in the Lower Saxon region of Saterland most only know it as a second language (Fort 2001). On the island of Wangeroog the last speakers of the local East Frisian dialect died half a century ago (Versloot 2001). The same situation exists for North Frisian, which is only spoken by eight to ten thousand people along the west coast of Schleswig-Holstein (Walker 2001). Current speakers of North Frisian, especially the youngest generation, show signs of very strong influence by both the neighboring Low German dialects and the High German standard language (Parker 1985). Both East and North Frisian are expected to become extinct within a few generations. With some 400,000

speakers, West Frisian has better perspectives, although all of these people, or nearly all of them, are bilingual in Frisian and Dutch.

Århammar (2001) points out that the linguistic situation of North Frisian is disputed. Some differences between the insular and the continental dialects of North Frisian almost certainly reflect two separate waves of settlement, the North-Frisian islands having been settled several centuries earlier than the continental dialects. Both waves originated in roughly the same area around the mouth of the River Ems, though it has been objected that the true origins of the first-wave island settlers may be obscured by their later adoption of the Ems-Frisian dialects spoken by the second-wave immigrants.

4.1.2 The Phonology of Modern Frisian

The prevailing opinion is that the consonant inventory of Modern West Frisian, summarized below in table 4.1, is the same as in Dutch (cf. table 2.1). However, as Hoekstra (2001) points out, consonants are distributed differently, with onset clusters of up to four consonants allowed in Frisian. Handbooks on Modern West Frisian phonology claim that the language is deemed to have no palatal or palatalized consonants apart from /j/. The standard view is that the assibilation products of Gmc. **k*, i.e. /tj, sj, zj, nj/ etc., are all biphonemic entities which obscures the history and extent of Frisian palatalization. Cohen et al. (1972) specify this position explicity in their chart of phonetic and phonological symbols where their palatalized consonant allophones "[ʃ, ʒ, ɲ]" correspond to biphonemic entities "/sj, zj, nj/." In their discussion there is no trace of /tj/ or /tsj/ as in *tsjerke* 'church,' which presumably indicates that the authors consider them sequence of two or three independent phonemes /t (+ s) + j/. It may be an accurate portrayal of the phonology of Modern West Frisian but if so West Frisian must have abandoned palatalization as a feature of the phonological system. This development is not described in any treatment of the history of Frisian.

Table 4.1 – The consonants of Modern West Frisian (based on Cohen et al. 1972, Tiersma 1985, and Hoekstra 2001)

	Bilabial	Labio-dental	Alveolar	Palatal	Velar	Glottal
Plosives	p, b		t, d		k, g	
Fricatives		f, v	s, z		χ, ɣ	h
Nasals	m		n		ŋ	
Liquids			l, r			
semivowels		ʋ		j		

However, Van der Veen allows for the presence of a series of palatal consonants in the dialects of Hindeloopen, Ameland, and Het Bildt. He describes them as "/t, ~ ʃ ~ n, ~ l,/," given in parentheses in his overview, since he notes that "minimal pairs for the opposition dental - palatal probably do not always (still) exist" (2001: 103). The most convincing example he cites is that of Ameland *gas* [gas] 'gas' and *gas* [gaʃ] 'grass.' There is no voice distinction for these palatals.

The scanty East Frisian dialects that survived long enough to be described in the twentieth century have, for all intents and purposes, the same phoneme inventory as in West Frisian. The North Frisian dialects show a more pervasive presence of palatal and palatalized consonants. There is considerable variation between the dialects of three main Frisian-speaking areas, i.e. (1) the island Sylt, (2) the islands Föhr and Amrum, and (3) the area Bökingharde on the German mainland. Frisian is still spoken on some of the other islands, but these three areas represent the main dialects or types of North Frisian. All have palatalized /tʲ, ɲ, ʎ, ʃ/ and the latter two also add /dʲ/ (Walker-Wilts 2001). A distinction between reflexes of Gmc. **þ/ð* and **t/d* has also survived into the twentieth century as an opposition between dental and alveolar plosives, though this distinction is disappearing among speakers of the younger generation (Parker 1985: 162; Walker-Wilts 2001). Parker also found that in the North-Frisian dialect of Föhr the consonants /ɲ/ and /ʎ/ are merging with /n/ and /l/ respectively, and he contends that many of the changes are due to contact with High German.

Jensen's study of the mainland dialect of Wiedingharde (1925) shows a rich system of palatalized consonants. He described both "palatalisiertes [*l͡i*]" initially and "mouilliertes [*l'*]" finally as a result of the merger of *l* + *d*. The former, by the terminology of the day, was considered to be a superficial palatalization (see chapter 1). The latter was considered a more thorough palatalization. By standards of modern phonological theory, both phenomena should be included in the same category. For instance, the distinction between ("palatalisiert") [*n͡i*] and ("mouilliert") [*n*'] is artificial, though it is perhaps comparable to the distinction sometimes maintained by the IPA between e.g. /c/ and /kʲ/. Both phones are *allophones* of palatalized /ɲ/. If we reanalyze Jensen's data according to this phonological standard, the consonant inventory of Wiedingharde can be represented as follows:

Table 4.2 – The consonants of the North Frisian dialect of Wiedingharde (adapted from Jensen 1925: 45 §96)

	Bilabial	Labio-dental	Alveolar	Velar	Palatal	Glottal
Plosives	p, b		t, d	k, g	pʲ, bʲ, tʲ, dʲ, c, ɟ	
Fricatives		f, v	s, z	χ	fʲ, vʲ, ʃ, ʒ, ç	h
Nasals	m		n	ŋ	ɲ	
Liquids			l, r		ʎ	
semivowels	w				j	

Exactly what status the palatalized labial and alveolar plosives have is unclear. They may be allophones of their non-palatalized counterparts. The same goes for /fʲ/ and /vʲ/. However, they may have been propped up by the presence of /c, ɟ, ɲ, ʎ/ in the system, which are ancient sounds, the first two dating back to the common West-Germanic period.

The scholarly literature does not make clear the relationship of West Frisian /g/ and /ɣ/. The topic is of some importance as it has repercussions for our understanding of Old Frisian palatalization of the voiced velar (see below). Scholars (Sipma 1913; Cohen et al. 1972; Tiersma

1985; Hoekstra 2001; Walker-Wilts 2001; Fort 2001) have different ways of describing how these phones interact. Sipma comments that the "voiced velar explosive" appears only initially and that the voiced velar fricative does not appear there. Tiersma similarly does not go beyond describing the different distribution of the two sounds, though his consonant inventory chart (p. 24) seems to suggest that he considers both the plosive and the fricative independent phonemes. That he does is confirmed by his section on "the nature of /g/" (p. 36) in which he describes the "voiced velar fricative [ɣ]" as the "basic form" for all fricative forms of West Frisian /g/. The terminology remains unclear and sheds little light on what relationship exists between the plosive and the fricative, if any. His notation "/g/" vs. "[g, ɣ, x]" suggests that he considers the three latter phones (voiced plosive, voiced and voiceless fricative) allophones of an underlying plosive /g/, but phonological terminology is avoided, perhaps in an attempt not to confuse interested lay readers of his introductory grammar. Hoekstra takes /ɣ/ as the underlying phoneme, while an ambiguous "g" appears in parentheses in his table of West Frisian consonant phonemes, a notation he does not motivate further. He remarks that "[t]he plosive [g] can be derived from the underlying /ɣ/ by a strengthening rule" and that "[t]here is no evidence for the distinction of two phonemes /g/ and /ɣ/" (2001: 86).

Cohen et al. comment (1972: 122-23) that there must be one underlying phoneme, but they do not commit themselves to either a plosive or a fricative and designate the voiced velar /ɡ/, a symbol they describe as a phoneme that is neutral regarding the manner of constriction. At the same time, however, they comment that this analysis is based on something they call "het meest gebruikelijke Fries" ('the most usual type of Frisian') as one would teach it to foreigners, whereas some speakers do not have the same distribution of plosive and fricative realizations. Some use the plosive also word-medially, others use the fricative also word-initially. Their model is a compromise system, based on regional and even idiolectal variants and thus represents an artificial standard. Siebs (1901: 1296) already remarked that he was loath to give a general rule for initial **g* in Modern West Frisian. However, he noted that on the islands of

Schiermonnikoog and Terschelling the voiced velar or guttural fricative was nearly exclusive, with only a few instances of the voiced plosive recorded. At the same time, the plosive was dominant in the northwestern dialects of the Frisian mainland, though with considerable alternation with fricatives in the morphological paradigm. He suggested that "ein gut Teil" of this alternation can be ascribed to the influence of Dutch—an argument that, considering the immense impact of Dutch on other aspects of Modern West Frisian, ought not to be dismissed too lightly—but that it is also possible that it represents a remnant of an older language-internal alternation based on the quality of the following vowel.

Walker-Wilts (2001) list a voiced velar plosive for all three dialects of North Frisian but no voiced velar fricative, though a voiceless velar fricative is included in the consonant inventories. According to Willkommen (1991), Sylt only has a plosive reflex /g/ for Gmc. **g*. Parker (1985) describes allophonic variation between [g], [ɣ], [ɪ] and [j] in the dialect of Föhr and takes /g/ as the underlying phoneme. The allophone [ɣ] appears medially between vowels and word-finally, while the same allophone is in free variation with [ɪ] and [j] word-finally after /ɪ/. The same distribution exists in the dialect of Helgoland (Århammar 1987), except that word-finally Gmc. **g* is apocopated. Århammar notes (1987: 138) that the fricative allophone [ɣ] is no longer alive among "younger speakers." In light of Parker's study on the influence of German on North Frisian it can be supposed that [ɣ] once enjoyed a more widespread existence, which weakens the notion that /g/ is the indisputable, ancient reflex of Gmc. **g* in Frisian.

4.1.3 The Phonology of Old Frisian

In comparison with the other Germanic languages we have relatively few phonological descriptions of Old Frisian. The most detailed is the grammar by Siebs (1901), which remains useful today. Both Sjölin (1969) and Markey (1981), though they include some discussion of Old Frisian, do not go beyond stating the received opinions about Old Frisian phonology.

The primary difference between the phonology of Modern Frisian and that of Old Frisian is that Old Frisian is claimed not to have had a voice correlation for fricatives. Thus /f, θ, χ/ are considered to have voiced allophones between voiced sounds (Boutkan 2001: 614).

Table 4.3 – The consonants of Old Frisian (based on Sjölin 1969, Markey 1981, and Boutkan 2001)

	Bilabial	Labio-dental	Dental	Alveolar	Palatal	Velar	Glottal
Plosives	p, b			t, d	c, ɟ	k, g	
Fricatives		f	θ	s	(j)	χ, (ɣ)	h
Nasals	m			n			
Liquids				l, r			
semivowels		w			j		

The consonants added in brackets (j,ɣ) will be discussed below. The palatalization products of the voiced and voiceless velars are not included in any representations of the Old Frisian consonant system.

As noted, the phonological features of the voiced velar are not entirely clear. The situation for Old Frisian is even less clear than for Modern Frisian. Because of the assibilation and development of the voiced velar in Modern Frisian, the standard opinion takes OFr *ᵹ to have been a plosive (Van Helten 1890; Sjölin 1969; Markey 1981; Boutkan 1996, 2001; Nielsen 2001). Only Siebs (1901) and Heuser (1903) believe it was a fricative. Boutkan (2001) comments that voicing does not seem to have been distinctive in Old Frisian fricatives, hence we should expect an opposition between /k/ and /g/ rather than between /χ/ and /ɣ/. But the reasoning by Boutkan as well as by other scholars who favor the plosive interpretation seems overly influenced by the situation in standardized Modern West Frisian. Boutkan's introductory statement to his analysis of OFr *ᵹ suggests that he views the modern distribution of plosive and fricative allophones as an archaic retention of the Old Frisian state of affairs, which is a circular argument. We have seen that the scholarly treatment of the distribution of the allophones

of the voiced velar in Modern West Frisian may be misleading with regard to the historical development of WGmc. *g, and so there is reason to doubt the received opinions and even to propose that the modern distribution is a recent development that can give us no clues to the distribution in Old Frisian. That OFr *g was and remains a voiced velar fricative medially and finally (at least in most dialects) is fairly well established, but the nature of initial OFr *g remains disputed. Siebs's comments on this question are, despite no lack of detail, probably the most humble and prudent, namely that "aus den neufries. Dialekten für das Urfries. keine Sicherheit betreffs der Aussprache des anlautenden g zu gewinnen [ist]" (1901: §129 p. 1296). While the palatalization and assibilation of geminated -*gg*- and of g after nasal makes a strong case for OFr *g as a plosive (since both seem to have developed via */dʒ/ and /dz/), the palatalization of initial g into j <i> speaks against the plosive interpretation.

There is, however, another way in which Boutkan's view concerning the absence of a voice correlation in Old Frisian is problematic. Both in his article on the phonology of Old Frisian (Boutkan 2001) and in his grammar of the Riustring manuscript (Boutkan 1996) he remarked that Old Frisian fricatives seem to have had voiced allophones between vowels but that the language had no voiced fricatives as phonemes. He demonstrated this for /f/ by citing such alternations as N/A sg. *stef* – D sg. *steue* where <f> alternates with <u>. This, he argued, indicates a complementary distribution of [f] and [v]. Yet, /s/ and /θ/ show no such alternation, probably because no symbols were readily available in the Latin alphabet to render a voiced counterpart for /θ/. Also, <z> was unavailable to render [z] because it was in use as a spelling for palatalized *g, as Boutkan noted (1996: 37). The other alternations were thus not indicated. Yet this leads us to the question: Why was the difference between [f] and [v] indicated in spelling (at least in the Riustring manuscript) if this alternation is subphonemic? While it cannot be denied that the two stand in complementary distribution, the fact that the voiced counterpart of /f/ is indicated with some frequency suggests that the scribes were aware of a difference and rendered it with reasonable accuracy. Latin offered a viable alter-

nate spelling and the scribes used it correctly. This usage contradicts the definition of an allophone. In light of what has been said before, the fact that voiced counterparts for /s/ and /θ/ are not recorded need not concern us. Yet this does plead—and quite strongly so—against Boutkan's notion that voice was not distinctive in the Old Frisian fricatives, and by implication significantly weakens his argument that the "expected" phonological opposition for the West-Germanic velar is that between a voiced and voiceless stop rather than a voiced and voiceless fricative.

The scholarly discussion leaves the question of velar palatalization untouched, at least from a phonological point of view. Table 4.3 above includes the palatalization products of */k, g/ as separate phonemes. They are represented as plosives */c, ɟ/ in deference to the received opinions represented by the rest of the table. Based on my arguments regarding the voiced velar, we may need to add the phonemes in brackets to reflect the presence of a voiced velar fricative and its palatalized counterpart. It seems probable that */g, ɟ/ existed in Old Frisian, at least in gemination. However, the rendering of the palatalization products of the velar plosives, even if we accept them as plosives, may not be wholly accurate. In the Old Frisian evidence, which dates to the thirteenth century and after, we find spellings reflecting assibilation, that is <ts, tz, dz> etc, which would reflect */tʃ/ and */dz/ or */dʒ/, respectively. The notation */g, ɟ/ is to underscore the fact that a pre-assibilated stage is likly for Old Frisian, as it is for all languages as a matter of phonological principle, and in this way the development of the system can be made clear visually. We do not know at what point Frisian turned its palatalized velars into assibilated consonants. The question remains a vexed one even in the field of Old English historical phonology (cf. Minkova 1998, 2003).

4.1.4 The Problem of Anglo-Frisian

There are so many similarities between Old English and Old Frisian, not in the least with regard to palatalization of velars, that until comparatively recently scholars have postulated a

period of joint development of these two languages, the so-called "Anglo-Frisian" dialect (cf. Siebs 1901; Luick 1914-1940; Prokosch 1939). The concept is contentious. While hardly anyone continues to subscribe to a rigid version of the Anglo-Frisian hypothesis, recent scholarship in Old Frisian studies shows that the notion is far from dead. The similarities and the differences between Old English and Old Frisian are a matter of unresolved debate, a debate that was rekindled by Patrick Stiles' provocative 1991 paper at the first Symposium for Frisian Philology (published in the volume for the second symposium, Stiles 1995). Since then, Fulk (1998), Kortland(1999), and Laker (2008) have responded to Stiles regarding aspects of his reconstruction of the relative chronology. In addition, several contributions regarding Old English palatalization, in particular by Minkova (1998, 2003), challenge our understanding of the dating of English (and thereby, Frisian) palatalization. The main question in this debate is whether some of the sound changes shared by English and Frisian (including palatalization) were completed or at least started during a time before the Germanic tribes who settled in Britain separated from their continental Frisian cousins. Stiles argued that there are too many differences to conclude a common development and that they probably arose separately in the two languages. Fulk, Kortland, and Laker disagreed with Stiles. Fulk (1998) presented several counterarguments that leave the door open for a 'soft' version of the Anglo-Frisian theory. Laker, in an article on English and Frisian palatalization (2008), takes another step towards reviving a certain degree of Anglo-Frisian unity. A good summary of the Anglo-Frisian theory and its history in Frisian scholarship can be found in Nielsen (2001).

Despite the contentions, the fact that Old English and Old Frisian share a number of common developments cannot be denied. Siebs (1901: 1154) lists the following salient characteristics shared by the two languages: (1) Gmc. **ă* in closed syllable is raised to **æ* or **e*; (2) Gmc. **ē²* (=WGmc. **ā*) becomes **o* before nasals; (3) Gmc. **ē²* becomes **ǣ* or **ē* in all other cases; (4) Gmc. **ą̄* becomes **ō* or **ŏ* before nasals; (5) assibilation of Gmc. **k* and **g*; (6) WGmc. **o* in inflectional endings appears as **a*; (7) WGmc. **a* from Gmc. **ōn* becomes **æ* or **e*. Siebs took a

modest position in stressing that the postulated "englisch-friesische Gemeinschaftssprache" (he explicitly disapproved of the term "Anglo-Frisian") is a hypothetical construct based on shared features and should not be interpreted as a claim for a period of cohabitation of Angles, Saxons, Jutes, and Frisians on the continent before the Anglo-Saxon invasion of Britain.

Palatalization of velars plays an important role in the dating of the period of Anglo-Frisian unity, as do *i*-umlaut, fronting and breaking (Campbell 1959: §486, p. 196). The debate about Anglo-Frisian revolves about the matter of relative chronology. Since we are reasoning about the prehistory of these two Germanic dialects, the argument rests on reconstructions of the earlier stages of development based on the phonological features of the recorded forms. It is in this regard that the nature of OFr **g* plays a role of some importance, because there is little agreement on the phonological properties of this phoneme. Most modern scholars of Old Frisian assume that it was a stop in both languages, though Stiles (1995) also comments on palatalization of the "voiced fricative *3*" in Old English, the origin of which he leaves unexplained. The remainder of this chapter is devoted to disentangling the facts about palatalized velars in Frisian and will touch on the similarities and differences with Old English.

4.2 Assibilation of Old Frisian **k* and **g*

Perhaps the feature of Frisian that is best known is the palatalization of the West-Germanic velars in Old Frisian. It is one of the prominent features it shares with Old English and it contributes to the notion of a preliterary Anglo-Frisian stage of common development. But if the debate in recent decades on Old English and Old Frisian palatalization has shown anything, it is that the relative chronology of this and several other sound changes shared between the two languages must remain uncertain for now. There is no consensus on a *terminus ante quem* regarding the onset and phonologization of palatalization in either language. In this section we will look at the different palatalization products of

WGmc. **k* and **g* in Old Frisian. The discussion of the voiced velar is separated into two subsections, because palatalization produces two different reflexes that are motivated by phonological factors.

4.2.1 The Palatalization and Assibilation of Old Frisian *k

Old Frisian **k* was palatalized and assibilated before a front vowel and the palatal semivowel *j*. Since front vowels that have arisen as a result of *i*-umlaut do not cause OFr **k* to palatalize, it is usually assumed that palatalization predated *i*-umlaut, so that it had become inoperative by the time umlauted vowels appeared. Table 4.4 illustrates the reflexes of Gmc. **k* in Old Frisian in a palatal context:

Table 4.4 – Palatalization and Assibilation of Old Frisian **k* (from Laker [2008])

	initial: k + front vowel	medial: -k- + i, j	geminated: -kk- + i, j	final: i + -k
WGmc.	**kin-* 'chin'	**bruki* 'breech'	**þrukkjan* 'press'	**dīk* 'ditch'
OFr	*tsin*	*bretse*	*thrytza*	*dik*

Two things stand out in this chart. First, though Frisian produces assibilation of WGmc. **k* in roughly the same instances as Old English, the shape of the recorded assibilation products is not the same as in English. Modern English has the reflex /tʃ/, and it is argued that this is a retention of an ancient state, though how old is unclear.[6] The Old Frisian evidence seems to suggest a subsequent stage of depalatalization of the affricates. There is nothing against such a proposition, all the more since what we call "Old Frisian" does not survive in records predating the thirteenth century or the twelfth at best. That is considerably later than the lan-

[6] Without going into details, the main point of debate, raised again by Minkova (1998 and 2003), is when the palatalized velars of Old English became assibilated and when they were phonologized. Fulk (1998) argued that palatalized velar phonemes may have existed in Old English long before they became assibilated and this position is tenable.

guage with which it is continually compared. Five to eight centuries separate Old Frisian records from the moment of putative Anglo-Frisian unity, whereas Old English records are closer to this period by four or five centuries, so that the records can hardly be said to be at the same chronological stage of development.

Second, a conspicuous problem when viewed in comparison with Old English, is the lack of palatalization—and assibilation—in the word *dik*. This is a better example than the perennial *church* (OE *cirice*; Frisian *tserke/tsjerke* < OFr *tziurke*), which is a relatively late borrowing from Greek *κυριακόν*. Luick (1914-40: §637.3 Anm. 3, p. 840) explains the assibilation of the second Gmc. **k* in *church* in English as a result of progressive assimilation, i.e. under the influence of preceding *i*. He protested that the word, given its derivation from Greek, could not have had any front vowel or palatal consonant in the suffix, so that palatalization of the second *k* cannot be inherited from pre-Old English. Since Old Frisian is claimed not to have had progressive but only regressive assimilation, a statement contradicted by such forms as OFr *dei* < Pre-OFr **deg-*, it did not assibilate this *k*. Luick's explanation is not satisfactory, since we do not know enough about the time or the route and shape in which the Greek word came into Germanic to make arguments about the presence or absence of palatalizing factors in the morphology. Fulk (1998) explained this situation by proposing that Old Frisian regularized morphonological variation within the paradigm by opting for the velar plosive if it alternated with a palatalized variant. This explanation is not satisfactory, as Fulk admits, because it fails to account for words like OFr *rīke* which should have had no velar plosive anywhere in the paradigm if our reconstructions are correct (all cases having been affected by palatalization) and therefore should have yielded MnFr **riets(e)* or something similar, just as Modern English has *rich*. Nevertheless, his comparative evidence from English makes his solution attractive. Since the same word * *dīk* spawned both MnE *dike* and *ditch*, it is clear that different English dialects opted for different regularizations of the morphonological alternation. The riddle of words like OFr *rīke* should, in Fulk's view, not be exaggerated, as this cate-

gory of words is small. Van Helten's dismissal of this anomaly as "residuum" is not an implausible suggestion (1890: 108).

Modern West Frisian has lost quite a few of the Old Frisian words with palatalized *k* in favor of forms with etymological velar *k*. Loopstra (1935) points to the verb *kieze* 'to choose,' which was uniformly *tzesa* (and some variant spellings) in Old Frisian deeds and charters. He demonstrates that palatalization and assibilation was so strong that analogy was starting to push the forms with velar *k* out of the paradigm, even in contexts where palatalization could not have worked. He ascribes the reversal of this trend and the ultimate demise of assibilated *tz* in this verb to the influence exerted by Dutch *kiezen*.

4.2.2 The Palatalization of Old Frisian *g

Initial OFr **g* was palatalized and underwent a (partial) phonemic merger with inherited Gmc. **j*. This is a sound change Old Frisian has in common not only with Old English but also with a large number of Low and Middle German dialects, and it also survives in some dialects in Dutch (see chapter 2). The product of this palatalization was a palatal fricative (Siebs 1901), which at some point merged with the palatal semivowel. In table 4.5 the palatalization products of Old Frisian are listed. Old Frisian **g*, if followed by *i* or *j* or preceded by a front vowel, has the same reflex as initial **g* in Modern West Frisian (i.e. merger with /j/ or apocope), as is illustrated by the words *hei* and *dei* in table 4.5. Otherwise the reflex of non-initial Old Frisian **g* is a voiced velar fricative.

Table 4.5 – Palatalization and Assibilation of Old Frisian **g* (from Laker [2008])

	initial: g + front vowel	medial: -g- + i, j	geminated: -gg- + i, j	final: front vowel + -g
WGmc.	**gard-* 'yard'	**hugi-* 'mind'	**wiggja-* 'horse'	**dag-* 'day'
OFr	*ierde* 'rod'	*hei*	*widse*	*dei*

The development of **g* to merger with **j* is widespread. Only Van Helten (1890) ignored this aspect of Old Frisian palatalization, commenting in a single sentence that old *g* is sometimes found as *j* (written *i*). Nevertheless, as Siebs pointed out, the merger is not entirely uniform. Although the reflex *j* is found throughout Frisian, in a few exceptions palatalized **g* has developed epenthetic *d*. Siebs lists one example with this development: Saterland (East Frisian): *djêld* 'money.'

In light of this, initial **g* must have been a fricative rather than a plosive. Only a palatal fricative, by palatalization of a velar fricative, would have become confused with the palatal semivowel. The instances with epenthetic *d* are rare and can be ascribed to later influence from outside sources, in particular from Low German—which is known to have been extensive in the Saterland dialect, or possiby to *Verschärfung*. It would be less probable to argue the reverse, i.e. that the forms with the palatal semivowel were imported, especially since this phenomenon is so common in Germanic, or that they had lost the original epenthetic *d*.

*4.2.3 The Palatalization and Assibilation of Old Frisian *g in Gemination and after* n

Geminated Old Frisian **g* (that is, **gg*), if followed by *i* or *j*, underwent both palatalization and assibilation, as illustrated in table 4.5. The Germanic word **wiggja-* 'horse' appears as *widse* in Old Frisian (OE *wicg*). The Old Frisian data gives the appearance of a process that has not been completed, considering OFr *bregge, brigge* 'bridge' (MnFr *brêge*), which according to the *Old Frisian Etymological Dictionary* (Boutkan 2005; cf. also Siebs 1901: 1299) has all the prerequisites for palatalization and assibilation, deriving from WGmc. **brug(g)jo-* (cf. OE *brycge*, MnE *bridge*, with assibilation), and yet is consistently recorded without it. This and other instances are another reminder that it is perilous to make comparisons between English and Frisian. It is not impossible that an earlier palatalization of *bregge* was undone by some later development. The word's appearance in Modern West Frisian with a simplex consonant and a long vowel (lengthened in open syllable) is also unexpected. Consider in this regard the

common spelling *brucghe* next to *brugghe* for the city of Bruges in Flanders (*Vroegmiddelnederlands Woordenboek*, Pijnenburg et al. 2001), which plead strongly for an assibilated form at some point (especially considering the arguments regarding the phonological nature of the spelling <gh> in Medieval Dutch: cf. chapter 2), but of which nothing remains in Modern Dutch. Siebs noted that all words with the stem vowel **u* resist assibilation, while Van Helten proposed that assibilation did not become established in Old Frisian until after the apocope of final syllables (and loss of the palatalizing factors), a notion that cannot be accepted.

The words for 'bridge,' 'mosquito,' and 'back' appear to have escaped assibilation in Old Frisian, though the North-Frisian dialect of Wiedingharde has *mëž* 'mosquito' with palatalization of geminated *g* (cf. English *midge*, Dutch dial. *mezik*). Jensen (1925: 99) ascribes this shift in North Frisian to Danish influence. Otherwise, the phonological rules for palatalization and assibilation of geminated **g* are similar to Old English. Also, **g* in the cluster **ng* underwent the same type of assibilation if followed by *i* or *j*, both environments producing *ds, dz, z, ts* or *s*, e.g. *onbrense* 'bringing of a legal suit.' This category of assibilated consonants does not survive in Modern West Frisian, except in some place names, the most notable one being *Grins* 'Groningen' (from **greninze* < **groningi*).

The behavior of **g* in this context suggests that it was a plosive rather than a fricative. It is unclear how this plosive came about. It is clear, however, that the fricative allophones predominate, which makes the assumption that this is the original pronunciation attractive. What is more, it is easier to argue from a phonological point of view that an original fricative became plosive than the other way around, since it would involve fewer steps. In that case a geminated **g* (= */ɣj/ > */ɣɣ^{j}/) would have turned into something like */jj̯/, triggering a process like the *Verschärfung* of Gothic *iddja* and *twaddjē* and Old Norse *tveggja*, so that the end result would be the plosive cluster recorded in Frisian. This process may also have been nothing more than dissimilation in light of the inherent impossibility to lengthen /j/ without dissimila-

tion or *Verschärfung*, or a change to vocalic /i/, a view much like that proposed by Hammerich (1955).

4.3 Assibilation of Early Modern West-Frisian **k*

While the influence of Dutch on West Frisian dialects caused a general tendency to oust palatalized and assibilated *t(s)j* in favor of forms with velar *k* (see above, cf. Loopstra 1935), there was a second wave of palatalzation and assibilation of **k* in early Modern West Frisian or late Middle West Frisian (Siebs 1901: 1294). It is almost entirely restricted to several Class II weak verbs (so-called *jan* verbs). In contrast with what Tiersma (1979) claims—that this development is only a few hundred years old—Loopstra (1935) was able to trace the beginnings of the change from the late fourteenth century until completion before the second half of the sixteenth century. Loopstra cited the spelling in Frisian deeds of the Old Frisian verb *makia* 'to make' which was spelled so in AD 1386, but had become *meytzie* by AD 1547. It is *meitsje* in Modern West Frisian (Grou; cf. Tiersma 1979) and retains the phonological alternation between palatalized and non-palatalized forms in the paradigm to this day. Again, the pattern is clear: **k* followed by *i* or *j* was palatalized and assibilated to *t(s)j*.

The timing of this change is conspicuous. It seems to have started around the same time when Dutch establishes dominance over the Frisian regions and around the same time when Dutch was experiencing a reordering of its phonological system, including the assibilation of previously palatalized **k'* in the diminutive suffix (see chapter 2). According to Tiersma (1979), this palatalization is giving way again and remains functional in only a few verbs: *meitsje* 'to make,' *leitsje* 'to laugh,' *koaitsje* 'to cook,' *reitsje* 'to reach,' *smeitsje* 'to taste,' *weitsje* 'to watch,' and *ploaitsje* 'to pick.' Additionally, Tiersma notes that this last verb is now being replaced by the verb *plukke* (borrowed from Dutch *plukken*) and that the dialect of Grou does not

have *koaitsje* for 'to cook' but rather use *siede*. There is little scholarship on this phenomenon apart from Tiersma, who only offers a synchronic analysis of the phonological alternations between palatalized and non-palatalized forms. Tiersma favors the framework of Natural Generative Phonology and comes to the conclusion that this process is no longer productive in Modern Frisian and that the phenomenon should be considered a small group of lexicalized remainders of now lost "phonological tendencies" (1979: 115). Loopstra (1935) commented that some of the palatalized and assibilated forms must have been triggered by the following *i* or *j*, such as in *makia*, but in words like *munken* no such palatalizing factor was ever available, so that some forms must have undergone spontaneous palatalization.

4.4 Palatalized Consonants in North-Frisian Dialects

In contrast to the West-Frisian dialects, North Frisian appears to have a had a rich system of palatal and palatalized consonants until recently, and in some towns this palatalization survives to this day. Parker (1985) has shown that the remaining dialects are changing rapidly as a result of assimilation by the younger generations to the standard language (High German) and—to a lesser extent—the neighboring Low German dialects. The consonant system is undergoing enormous reordering. For instance, speakers who have grown up since the 1960s have lost the distinction between dental and alveolar plosives (the reflexes of Gmc. **þ/ð* and **t/d*, respectively), which is still functional in the speech of their parents' generation. At the same time, the dialects appear to be losing a number of palatal and palatalized consonants. The palatal nasal /ɲ/ and the palatal lateral approximant /ʎ/ have almost completely merged with their non-palatal counterparts /n/ and /l/, though not to an equal degree in all dialects (Århammar 1964; Parker 1985). Thus, Amrum *ljocht* 'to shine' and *Ljocht* 'light (noun)' are homophones, though the dialect retains /ɲ/ in words like *Winj* 'wind.' The position of /ʃ/ is unclear. On the one hand, it may be strengthening its position as a result

of contact with High German, with clusters s+t now being rendered as in High German, i.e. as [ʃt], yet other morphemes that have traditionally been pronounced [ʃt] are now pronounced [st]. Parker notes that these changes are recent and are indirectly the result of the merger of palatal /ʧ/ with alveolar /t/ (1985: 154).

Nothing seems to have been written on the history of the palatalized consonants in North Frisian, so that one may venture to make only a few observations on the subject. The contrast with West Frisian is conspicuous and would tend to lead to the suspicion that the extensive system of palatalized consonants in North Frisian is a later development. However, there appears to be no significant distinction between the island dialects and the mainland dialects, with both areas showing a more or less equal wealth of palatalized consonants. If it is true that the Frisian settlements on the mainland coast of Schleswig-Holstein are of a later date than those on the islands, then it is not unfeasible to postulate that the rise of palatalized consonants in North Frisian dates to a common pre-settlement period. If so, it is unclear why West Frisian should have no palatalized consonants apart from the reflexes of palatalized and assibilated velars. Perhaps this is due to the influence from Dutch.

Several North-Frisian dialects (e.g. Wiedingharde, Amrum, Sylt; cf. Jensen 1925; Århammar 1964; Willkommen 1991) show a preponderance of palatalization in alveolar clusters, i.e. *l+d, l+t, n+d, l+t*, resulting in cluster simplification to /ʎ/ and /ɲ/. This process bears a striking resemblance to alveolar cluster palatalization (ACP; cf. chapter 2). Willkommen remarks that the phonemes /ʎ/ and /ɲ/ in the dialect of Sylt live a precarious existence as "Relikt," with no evidence of minimal pairs with their non-palatalized counterparts /l/ and /n/, and he expects that these phonemes will soon be eradicated from the system. His physiological theory regarding the rise of palatalized /ʎ/ and /ɲ/ is inadequate in the context of modern phonology, as it does not explain how such phones attained phonemic status. Yet he does remark quite plausibly that there seems to be a correlation between preceding /i/ or other front vowel and /ʎ/ and /ɲ/, which in the Sylt dialect, as in the other dialects that retain these phonemes, indi-

cate the loss of a following /d/ (or /t/). The survival of this phenomenon till the present day, even if only barely, suggests that palatalization was well entrenched in North Frisian, since it was able to function as a mark of elision or apocope. Palatalization in North Frisian affected both velars and alveolars to such a degree that both classes of phonemes, when affected by this feature, changed radically: the velars relinquished their velar nature (/k/ by assibilating to /tʲ/, /ɣ/ by shifting to /j/), and alveolar clusters became palatalized simplex phonemes. The two processes are similar in nature, but Keymeulen (1991) is probably right that the latter constitutes a reordering or "reconditioning" (to use her term) of the phonological system. Hence this process is likely of more recent date.

Conclusions

Consonant palatalization can be found over a wide area and throughout the history of the West-Germanic languages. It remains alive today in many dialects of Dutch, German, and Frisian, even if in recent decades the phenomenon has become increasingly threatened as a result of influence from the three standard languages, which have far fewer remnants of palatalization than the dialects. Yet even the standard languages have some remnants.

The broader picture that has emerged from the dissertation is that palatalization is not, as most standard views have claimed, a superficial, marginal, or recent feature of some fringe dialects but rather an old and integral part of West-Germanic phonology. Its existence in marginal dialects of the present is not due to influence from surrounding languages (Slavic or Romance). Both the age and the phonological features in question testify to a once more widely dispersed and native phenomenon of West-Germanic phonology. It is striking that many scholars have theorized about the influence of Old French or modern Slavic dialects on the development of consonant palatalization in Germanic dialects, yet none have considered the possibility that the opposite may have been the case, even as the palatalization in several French border dialects exhibits some peculiar traits that have not always been explained from the internal development of Old French.

Comparative research has almost exclusively focused on the palatalization of velars in the pre-literary languages and dialects on the North Sea coast, especially Old English and Old Frisian. Its existence in other continental Germanic languages has been suggested several times over the past century or so but the implications of historical and dialectological studies

for our understanding of West-Germanic phonology have rarely been considered. Penzl's claim (1949:235-36) that Germanic did not have palatalized phonemes, though he never substantiated it, has been the default position for research in the history of the Germanic consonant system. It continues to haunt current grammars of the historical dialects (e.g. Braune-Reiffenstein 2004). This dissertation has proved that the West-Germanic languages not only have these phonemes now, but must have had them since the pre-literary period.

Though linguistic evidence for Dutch, Frisian, and German from the period before AD 1000 is relatively limited, it is clear that all languages participated in so-called West-Germanic Velar Palatalization (WGVP), sometimes considered an "Ingvaeonic" or "Anglo-Frisian" phenomenon. The distinction between *ich-* and *ach-Laut* in modern High German is ultimately connected to WGVP. There is also considerable evidence from Dutch that its precursor dialects participated on a fairly expansive scale in the palatalization of velars, certainly more so than has been suggested by the scattered studies of a handful of petrified place names and obscure dialect words. The history and linguistic geography of the Dutch diminutive suffix counters the notion that velar palatalization existed only in an Ingvaeonic substrate.

However, palatalization in the history and present of the West-Germanic languages is not restricted to velars. The widely disseminated phenomenon of alveolar cluster palatalization (ACP), best described in Dutch by Keymeulen (1991) but found all over German and also in Frisian, can be seen as a further development of West-Germanic palatalization. It testifies in its own right to the integral nature of consonant palatalization in the phonology of West Germanic, and if Keymeulen is right in attributing its rise to a restructuring of pre-existent WGVP, it also provides secondary evidence for the presence of the latter over a wider area than has hitherto been considered. What is more, the fact that the velarization of the Rhineland (*Gutturalisierung*) and many other Dutch and German dialects is yet a further step in the development of palatalized consonants, we have evidence suggestive of a very broad tendency to-

wards consonant palatalization in all of West Germanic (including English) in the second millennium AD.

These facts have rarely been admitted in current scholarship. It is true that not all forms of palatalization described in this dissertation rest on equal amounts of empirical evidence. For instance, proof for the existence of ACP in Old Saxon is somewhat tenuous but both the comparative evidence from contemporary English and later dialects in the same area, and phonological theory support the hypothesis that the unexpected vocalism is due to to ACP.

A main obstacle to a proper understanding of the history and role of palatalization in the Germanic languages has been phonological theory. The view that consonant palatalization is only a surface assimilation of the feature [PALATAL] from the trigger into the relevant consonant is incorrect for the greater part of the various forms of palatalization described in this dissertation. The most fundamental flaw in this theory, which appears in many guises in the several theoretical frameworks now current (including generative phonology and Optimality Theory), is that they insist on analyzing palatalization as a phonetic phenomenon. While it is true that superficial palatalization can and does occur on a "surface" level — as generative theory calls it — diachronic, phonological change cannot occur in this manner. Twaddell's (1938) notion that *i*-umlaut developed through the phonemicization of umlauted allophones, and which now forms the basis of the theory of phonological change in much of the current scholarship, contradicts the definitions of allophone and phoneme as Liberman (2007) points out.

Phonological change can only happen on a phonological level. Thus, palatalized phonemes arose as phonemes through reanalysis of clusters. Once that principle is accepted, the picture of palatalization across the West-Germanic area becomes much clearer. Only then can one realize that there is a connection between several supposedly disparate and separated palatalization phenomena in Northwestern Europe. One of the most important clues that falls into place is the relationship between *i*-umlaut and consonant palatalization. The age-old de-

bate about distance assimilation or *Mouillierungstheorie* (palatalization theory) in the attempt to explain the rise of *i*-umlaut in Germanic can be laid to rest once the dialectological data of the two phenomena are combined in light of a proper phonological theory of phonemic split. Distance assimilation is ruled out because allophones cannot be reconstructed, while the veracity of the palatalization theory is illustrated by living dialects. Liberman has argued that palatalized phonemes arose as a result of West-Germanic gemination; a Gmc. cluster *Cj became reanalyzed as *CC̆.

Many questions remain for the future. The place of English has been largely ignored in this dissertation, mostly for reasons of time restraints. There is a vast body of literature on the palatalization of velars in Old English; a proper digest of that alone will require several years. But even within continental West Germanic there are several thorny questions that this dissertation does not resolve. For instance, the development of the Gmc. cluster **sk* in the various West-Germanic branches provides several riddles that proved to be so complex that a discussion of the topic in this dissertation was considered unwise.

Beyond West Germanic there are further challenges. What was the role of palatalization in Scandinavian and East Germanic? What about the broader comparative view towards the Slavic, Celtic and Romance languages, which all have or had similar palatalization phenomena? A particular problem is presented by rhotacization, known from Germanic, Slavic, Latin, and Greek. It is virtually certain that it is a form of palatalization (**r* > **ř* > *z)* but exactly how it works on a phonological level is unclear. This question, too, has had to be reserved for further research.

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Bibliographic Abbreviations

ABäG	*Amsterdamer Beiträge zur älteren Germanistik*
CVRM	Corpus Van Reenen-Mulder. Digital corpus of fourteenth-century Middle Dutch charters from the Netherlands, Belgium and French Flanders (unpublished).
DiWA	*Digitaler Wenker-Atlas*
FAND	*Fonologische Atlas van de Nederlandse Dialecten*
IG	*Indogermanische Forschungen*
JGL	*Journal of Germanic Linguistics*
KDSA	*Kleiner Deutscher Sprachatlas*
LB	*Leuvense Bijdragen*
MAND	*Morfologische Atlas van de Nederlandse Dialecten*
MfDU	*Monatshefte für Deutschen Unterricht*
NOWELE	*Northwestern European Language Evolution*
PBB	*Beiträge zur Geschichte der deutschen Sprache und Literatur* (Paul und Braunes Beiträge)
PMLA	*Publications of the Modern Language Association*
RhVj	*Rheinische Vierteljahrsblätter*
TNTL	*Tijdschrift voor Nederlandse taal- en letterkunde*
TT	*Taal en tongval*
VMNW	*Vroegmiddelnederlands Woordenboek.*
WNT	*Woordenboek der Nederlandsche Taal*.
ZDL	*Zeitschrift für Dialektologie und Linguistik*
ZfdA	*Zeitschrift für deutsches Altertum und deutsche Literatur*
ZfdMa	*Zeitschrift für deutsche Mundarten*
ZfMuf	*Zeitschrift für Mundartforschung*

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Appendices
Linguistic Notations and Abbreviations

IPA Notation

In this dissertation I use IPA notation from the 2005 chart whenever I use slants / / (phonological notation) or square brackets [ ] (phonetic notation). These are used whenever it involves arguments about the phonological status of actual or reconstructed phones. Reconstructed phones are preceded by an asterisk *. In general, when palatalized consonants are discussed the following symbols are used:

c	voiceless palatal plosive
ɟ	voiced palatal plosive
ɲ	(voiced) palatal nasal
ç	voiceless palatal fricative
ʝ	voiced palatal fricative
j	(voiced) palatal approximant (semi-vowel)
ʎ	(voiced) palatal lateral approximant
ʃ	voiceless postalveolar fricative
ʒ	voiced postalveolar ficative

In addition, the superscript diacritic ʲ is sometimes used, but only when the discussion hinges on notation in comparison with other traditions or on arguments regarding the degree of palatalization. In general, there is no distinction between phones written with the diacritic ʲ and those represented by the symbols in the chart above, so that preference has been given to the latter, in accordance with IPA notation.

Philological Notation and Other Notations

In addition to the IPA notation I also use *italics* without slants or brackets where the argument involves traditionally reconstructed Germanic or Latin phones and/or their reflexes in later historical dialects and languages, such as WGmc. **g* or **k*, or Latin **g*. Pointed brackets < > are used when transcribing recorded spellings or orthographic conventions, particularly in cases where the argument revolves around the orthographic nature of the form.

Abbreviations

ACP	Aveolar Cluster Palatalization
Du	Dutch
En	English
Fr	Frisian
Gmc.	Germanic
Lat.	Latin
MDu	Middle Dutch
MHG	Middle High German
MnDu	Modern Dutch
MnE	Modern English
MnFr	Modern Frisian
MnGe	Modern German
NHG	New High German (=Modern High German)
OE	Old English
OFr.	Old Frisian
OHG	Old High German
OS	Old Saxon
WGmc.	West Germanic
WGVP	West-Germanic Velar Palatalization