VENNEMANN'S BIFURCATION THEORY OF THE GERMANIC AND GERMAN CONSONANT SHIFTS

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Introduction

Vennemann presents a plausible alternative to Grimm's succession of Germanic and High German sound shifts. As part of his argumentation, Vennemann gives a systematic revision of the Proto-Germanic obstruent inventory which he reconstructs internally from Germanic data. He also looks beyond the Germanic data to posit a Paleo-Germanic obstruent system. While revising Grimm's traditional theory, Vennemann also reformulates Verner's Shift and how it would apply to his alternative glottalic approach.

1.0 Reconstruction of the Proto-Germanic Obstruent Inventory

1.1 Vennemann's Approach to Internal Reconstruction of Proto-Germanic

Unlike Grimm, Vennemann reconstructs Proto-Germanic (PGmc.) from Germanic (Gmc.) evidence itself. His analysis focuses on two extreme examples of Germanic: Strict High Germanic (Alemannic and Bavarian dialects of OHG) and Strict Low Germanic (Old Icelandic). High Germanic (HGmc.) refers to those languages spoken nearest to the Alps and Low Germanic (LGmc.) to those spoken nearest to the seas (North Sea, Baltic Sea, Black Sea, etc.). All other Germanic languages fall somewhere in between these two extremes as (1) indicates:

(1) Strict High Germanic<----------->Strict Low Germanic

Alemannic	Upper German dialects	Low German	Old Icelandic
Bavarian	Middle German dialects	Frisian, English, Gothic, and other Norse lgs.	

By comparing cognates of both Strict High Germanic and Strict Low Germanic, Vennemann determined the correspondences of the obstruents of both extremes and then established the obstruent inventories for each as shown below in (2):

(2) True consonant inventories of Strict High Germanic and Strict Low Germanic at time of the oldest records[1]:

	Strict High Germanic (9th C)	Strict Low Germanic (13th C)
1. a	p^f t^z k^x	p^h t^h k^h
b	f z x	
c	t	
2.a	þ ɡ ǧ	þ ɡ ǧ
2/3.b		v ð ɣ
3.a	y ǧ h	f þ h
4.	ș	s
5.	(r)	z

z = voiceless dentialveolar sibilant
þ, ɡ, ǧ, y, and ǧ = half-voiced consonants

Looking at the correspondences between Strict High Germanic and Strict Low Germanic and the environments in which they occur, Vennemann systematically reconstructed the obstruent inventory of PGmc., the language from which all Gmc. languages are believed to have developed.

1.2 Relating Strict High Germanic and Strict Low Germanic to Reconstruct Proto-Germanic

1.2.1 Position 1

In position 1 of the inventory in (2), the diversity of the Strict High Germanic consonants corresponds to a uniform aspirate series, $^+T^h$ [2], in Strict Low Germanic. The diversity in Strict High Germanic is both orderly and predictable. The Strict High Germanic fricatives occur following a vowel but only when the corresponding Strict Low Germanic forms do not have geminate stops. The /t/ in (1.b) was also originally a predictable positional variant of $^+$/tz/ occurring only before $^+$/r/ where $^+$/tz/ was excluded for phonetic reasons because dental frication was disfavoured before an alveolar trill (p. 10).[3] This orderly and predictable variety in Strict High Germanic can be traced back to a common source according to the principle of reconstruction which states that 'orderly variety points to original uniformity' (p. 10). Since the

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[1] All dates are approximate for AD and are based on Baldi (1983: 127, 129).

[2] In this paper the symbol '+' is used to indicate a reconstructed form.

[3] All references are to Vennemann MS unless otherwise stated. It should be noted that this manuscript was later published in

normal development is from affricates to fricatives, the series $^{+}/p^{f}$ t^{z} $k^{x}/$ or $^{+}T^{s}$ is reconstructed for Strict High Germanic (p. 10). Thus, position 1 has two series, $^{+}T^{s}$ for Strict High Germanic and $^{+}T^{h}$ for Strict Low Germanic, for which the common source must be determined. Since the normal direction of development is from stops to affricates, Vennemann reconstructs an ejective series, $^{+}T'$, from which both $^{+}T^{s}$ and $^{+}T^{h}$ are derived. This series of voiceless fortis plosives, $^{+}T'$, embodies all of the plosion, voicelessness and tenseness of $^{+}T^{s}$ and $^{+}T^{h}$. Ejectives are overwhelmingly voiceless and are produced with the glottalic airstream mechanism (Salmons 1993:2).

1.2.2 Position 2

In position 2, the uniform plosive series of Strict High Germanic corresponds to an orderly variety of plosives and fricatives in Strict Low Germanic. 'Frication is more normal than occlusion' (p.11), thus, a series of plosives must be reconstructed for PGmc. which can account for both the fricatives and stops. Vennemann posits, a series of 'lenis stops lacking full voice' (p.11) from which both the Strict High Germanic and Strict Low Germanic consonants developed. Since this series lacks full voice, it can easily lenite to become the fully voiced Strict Low Germanic fricatives following either vowels or liquids.

1.2.3 Position 3

The diversity of the Strict Low Germanic fricatives corresponds well with the series of fricatives in Strict High Germanic. The voiced Strict Low Germanic fricatives occur systematically following either vowels or liquids which typically constitute voicing environments. Vennemann also adds that '/h/ has positional velar and postvelar fricative variants and can be traced to a voiceless velar fricative $^{+}$/x/' (p.12). Thus, Vennemann posits a voiceless fortis fricative series, $^{+}$þ, since he can account for voicing in Strict Low Germanic.

1.2.4 Positions 4 and 5

The Strict High Germanic postalveolar fricative /s/ of position 4 is due to the development of a second voiceless dentialveolar sibilant /ʐ/ (p.12). Thus, as a common source of both Strict High Germanic /ʂ/ and Strict Low Germanic /s/, Vennemann simply posits the fortis fricative, $^{+}$/s/. For position 5, Vennemann traces the common source of LGmc. (Gothic) /z/, Runic /R/ and HGmc. /r/ back to the lenis fricative, $^{+}$/z/.

1.3 The 'New Theory's' PGmc. Inventory

After tracing the origins of the Gmc. obstruents to their PGmc. origin, the PGmc. obstruent inventory takes on the appearance in (3):

(3)	1.	$^{+}$T'	fortis plosives
	2.	$^{+}$	lenis plosives
	3.	$^{+}$	fortis fricatives
	4.	$^{+}$/s/	fortis fricative
	5.	$^{+}$/z/	lenis fricative

Vennemann indicates that all oppositions between the first three elements in (3) are neutralised after fricatives throughout the history of Gmc. (p.13).

1.4 Lenis vs. fortis

The lenis-fortis opposition proposed by Vennemann replaces the voiced-voiceless distinction of Grimm's traditional theory. The terms lenis and fortis refer to the degree of 'pulmonic' pressure used in articulating the sound, where fortis indicates a heightened subglottal pressure in comparison to lenis (Ladefoged 1971:24).

2.0 Reconstructing Paleo-Germanic

Vennemann looks beyond the Gmc. evidence to reconstruct the stage preceding PGmc. which he calls 'Paleo-Germanic'.

2.1 Beyond Gmc. Evidence

Both $^{+}$T' and $^{+}$Ḍ have plosive counterparts in most other IE languages, cf. for $^{+}$T' OE ***tōð***, OS ***tand*** vs. Lt. ***dentem*** and Skt. ***dántam*** and for $^{+}$Ḍ OHG ***beran, peran*** Olcel. ***bera*** vs. Skt. ***bhárāmi***. Vennemann thus maintains both $^{+}$T' and $^{+}$Ḍ in his Paleo-Gmc. obstruent inventory.

The fricative series +þ, however, corresponds with plosives rather than fricatives in other IE languages, cf. OE, OHG ***faran***, Olcel., OFris. ***fara***, but Lt. ***perītus, portāre***, OInd. ***píparti*** and ***pārāyati***. Since 'frication is more normal than occlusion' (p.13), one can assume that the PGmc. fricatives and non-Gmc. plosives developed from a plosive series. Vennemann states that the voiceless plosives most prone to frication are aspirates. He thus assumes the common source of both the Gmc. fricatives and non-Gmc. IE plosives to be a series of voiceless aspirated plosives, $^{+}$T^{h}. The voicelessness of this series is common to both the Gmc. and non-Gmc. IE examples.

The PGmc. sibilants $^{+}$/s/ and $^{+}$/z/ can be traced to Paleo-Gmc. $^{+}$/s/ through Verner's Shift. Thus, the Paleo-Gmc. inventory at which Vennemann arrives is outlined in (4):

(4)	i)	$^{+}T^{h}$	voiceless aspirate fortis plosives
	ii)	$^{+}T'$	voiceless non-aspirate fortis plosives
	iii)	^{+}D	lenis plosives
	iv)	$^{+}/s/$	fortis fricative

This inventory is not uncommon in the world's languages. Korean is cited as the closest match with the same three plosive grades, although its voiceless non-aspirate fortis plosives do not seem to be ejectives as Vennemann proposes them to be in Germanic.

2.2 Labial Gap

Frequency counts in dictionaries attest to the lexical rarity of $^{+}/p'/$ in early Gmc. reflexes which have correspondences in other IE languages. The same, however, is not true for the other Paleo-Gmc. bilabials, $^{+}/p^{h}/$ and $^{+}/b/$. Vennemann remarks that glottalisation, particularly ejection, 'commonly leaves a labial gap in series of voiceless plosives' (p.14).[4]

3.0 Verner's Shift and 'Rule' Ordering

Since Verner's Shift was proposed to explain exceptions to Grimm's Law, Vennemann reformulates this shift to fit into his new theory.

3.1 Normal Assumption of Order

The rule ordering normally assumed, including by Verner himself, was that the PGmc. consonant shift preceded Verner's Shift which then in turn preceded the accent shift.[5] The disadvantages of this ordering are that it assumes the resulting series of voiced fricatives to then develop into plosives in HGmc. and that it cannot account for the dental in Low German, Frisian, and Old English (p.16). Bearing in mind 'that occlusion is less normal than frication', Vennemann proposes a viable alternative to this troublesome situation (p.16).

3.2 Vennemann's Ordering and Reformulation of Verner's Shift

Vennemann orders Verner's Shift before the PGmc. consonant shift. Moreover, he reformulates Verner's Shift assuming that only the fortis plosive series, $^{+}T'$, is glottalised as well

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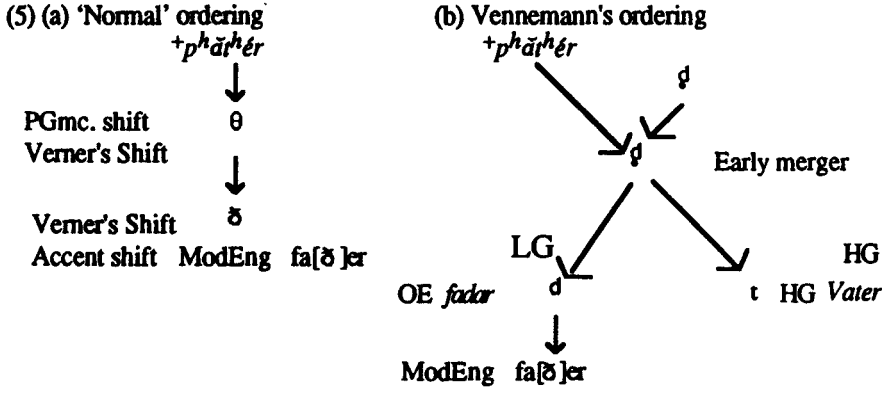
[4] Vennemann also claims that reconstructing an ejective series may prove very beneficial for a phonetic analysis of the consonant shifts.

[5] The Gmc. accent shift placed the stress on the first syllable of the root, cf. Skt. *pitár* Gk. *patḗr* Gothic *faðar* OS *fadar* (Baldi, 1983:133). It also eliminated the conditions for Verner's Shift.

as fortis. The revised rule states that 'non-initial non-glottalised obstruents are lenited in sonorant environments except when immediately following the accent' (p.17). This reformulation of Verner's Shift still applies to the Paleo-Gmc. $^{+}$/s/ which thus enables the development of the PGmc. $^{+}$/z/.

3.3 Contrasting the 'Normal' Ordering Against Vennemann's Ordering and Reformulation

Both orderings can be contrasted using the well-cited 'father' example in (5). The reconstructed form takes on the appearance of $^{+}p^{h}\check{a}t^{h}\acute{e}r$ (cf. Skt. *pitár* and Gk. *patér)* based on Vennemann's PIE reconstruction (cf. p.29).



The traditional application of Verner's Shift can account for the ModEng. *father* with the development from t > θ > ð, but it cannot account for the earlier OE *fadar*. Nor could this ordering account for the significant strengthening of /θ/ to /t/ in HG *Vater*.

Vennemann's reordering accounts for both the developmental stages and the 'final product' in Modern English. He assumes an early merger of $^{+}T^{h}$ and $^{+}Ḍ$ to simply $^{+}Ḍ$ when Verner's Shift was applied. The resulting /ḍ/ in (5.b) then underwent normal development according to the subsequent HGmc. and LGmc. sound shifts. In Low Germanic /ḍ/ lenited further to become fully voiced as in OE *fadar* and then fricated to become ModEng. *faðər*, i.e. ḍ > d > ð. The /t/ in HG *Vater*, however, is still problematic as /ḍ/ strengthens intervocalically where it would be expected to lenite.

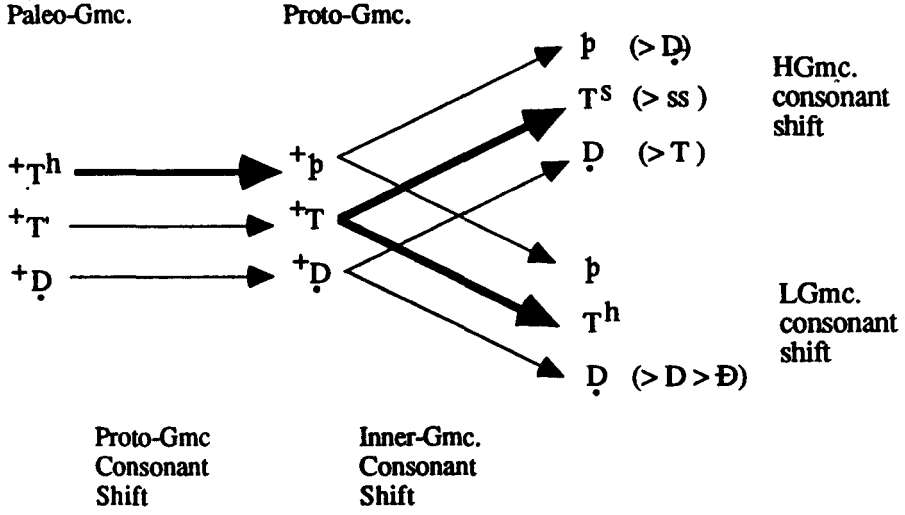
Although Vennemann cannot fully explain the intervocalic strengthening of Ḍ to T, this fact should not discount his ability to account for the LGmc. development. The HGmc. strengthening is problematic in general and has yet to be accounted for. The strengthening required

by Vennemann is significantly less drastic than by traditional theories. That Vennemann can account for what he does is a tremendous improvement upon the Grimmian theories.

4.0 Vennemann's Consonant Shifts

The new theory as presented by Vennemann takes on a different appearance from Grimm's traditional theory as shown below in (6):

(6) Synopsis of consonant shifts as outlined above:



Vennemann's reconstructions of both Paleo-Gmc. and PGmc. are seemingly more phonetically and phonologically plausible than Grimm's earlier reconstruction.

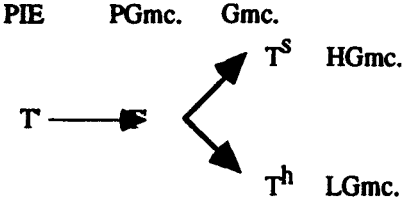
4.1 Vennemann's Bifurcation vs. Grimmian Succession Theories

The bifurcation theory as it applies to the HGmc. and LGmc. split shows that HGmc. affricates did not simply develop from the LGmc. voiceless plosives. Instead, this series evolved in a parallel development with the LGmc. aspirates from a common source, which Vennemann posits as $^{+}T'$. This parallel development which constitutes the bifurcation theory is contrasted against the Grimmian succession theory in (7):

(7) (a) The succession theory

PIE		PGmc.		HGmc.
D	>	T	>	T^s

(b) Bifurcation Theory



The bifurcation theory indicates a more direct development for the HGmc. affricates than Grimm's succession theory. The conservative view of the HGmc. phonological development as proposed by the bifurcation theory is also more in line with the view that OHG is conservative morphologically and lexically.

4.2 Plausibility of Bifurcation with Ejectives

Bifurcation is most plausible if a series of ejectives is postulated. Vennemann gives his subjective impression that 'ejectives sound very much like aspirates or like affricates, depending on their degree of fortisness' (p.18). Based on this impression, he suggests that due to auditory similarity, aspirates or affricates may have been substituted in place of ejectives by new learners of the languages who did not recognise 'the intricate glottal mechanism of ejection' (p.18).

5.0 Conclusion

Vennemann's Gmc. reconstructions are both phonologically and phonetically plausible. His theory assumes only frications and no occlusions. His developments are all short and direct as favoured by Occam's Razor, and his bifurcation theory with ejectives addresses earlier concerns that the conservative OHG had innovative phonology. His reformulation of Verner's Shift is also able to account for the development of the LGmc. exceptions. Simply put, Vennemann's argumentation is convincing and his theory 'makes a lot of sense'.

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