'PROTO-SCANDINAVIAN' AND COMMON NORDIC

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1. In tracing the historical development from Proto-Germanic to the attested stages of the Scandinavian languages, it is common practice to assume an intermediate stage known as 'Proto-Scandinavian' or 'Proto-Norse'.* Hreinn Benediktsson, for example, has recently stated that the "Scandinavian, or Nordic, languages [are] generally considered to be a separate, independent branch of the Germanic language family, and therefore to be the modern representatives of a single relatively uniform or homogenous common ancestor—Proto-Scandinavian or Proto-Nordic."[1] This 'Proto-Nordic' ancestor is also generally equated with the language of the early runic inscriptions in the older fuþark, the great majority of which have been found in Scandinavia.[2]

While it is incontestable that the modern Scandinavian languages derive from a common, relatively uniform parent language, the assumption that this parent was a 'Proto-Scandinavian' representing a separate and independent branch of Germanic attested in the early runic inscriptions has undoubtedly led to a fracturing of the historical picture in such a way that developments common to both Scandinavian and West Germanic have consistently been treated as 'einzeldialektisch' or independent. The similar results of these developments have been attributed to a somewhat nebulous 'tendency', 'drift', 'predisposition', or even to borrowing, and have often received variant explanations in the two branches.

A protolanguage is by definition the reconstruction of a parent language on the basis of internal evidence, i.e., evidence provided by those

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[1] H. Benediktsson, "Some Aspects of Nordic Umlaut and Breaking," *Language* XXXIX (1963), 409.

[2] See, e.g., A. Noreen, *Geschichte der nordischen Sprachen*[3] (Strassburg, 1913), §4; A. Heusler, *Altisländisches Elementarbuch*[4] (Heidelberg, 1950), §22; E. Prokosch, *A Comparative Germanic Grammar* (Baltimore, 1938), §4; E. Wessén, *De nordiska språken*[6] (Stockholm, 1960), 26.

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languages considered to have descended from the common parent.[3] Herein lies the weakness of the 'Proto-Scandinavian' theory. A reconstruction based on evidence from medieval and modern Scandinavian does not yield a language comparable to that attested in the earliest runic inscriptions, but is in fact the language which is generally referred to as 'Common Nordic' (*fællesnordisk, samnordisk, gemeinnordisch*), which in turn is a descendant of the language represented in the oldest inscriptions.[4] There can be no doubt, however, that the West Germanic dialects also derive from a language which in all essentials is identical with that of the same inscriptions.[5] The situation, therefore, is identical with the one described by Hoenigswald in which we have three subgroups of a common protolanguage, in our case Gothic (East Germanic), Scandinavian, and West Germanic. If we designate Proto-Germanic by X, Gothic by A, 'Proto-Scandinavian' or the language of the oldest inscriptions by B, and West Germanic by C, we can represent the relationships between the three subgroups as shown in diagram 1.[6]
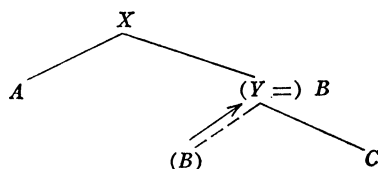
Diagram 1.

[3] See W. P. Lehmann, "A Definition of Proto-Germanic," *Lg.* XXXVII (1961), 67–74, as well as my "On Defining Stages in Prehistoric Germanic," *Lg.* XLI (1965), 19–36.

[4] See Benediktsson, 416, and cf. Noreen, §6: "Die Sprachform dieser [gemeinnordischen] Quellen weicht schon in ältester Zeit in so hohem Maße vom Urnordischen ab, daß wir nicht umhin können, deren Sprache als eine wesentlich andere zu betrachten."

[5] See M. Adamus, "Mutual Relations between Nordic and Other Germanic Dialects," *Germanica Wratislaviensia* VII (1962), 157; and most recently, E. A. Makaev, *Jazyk drevnejšix runičeskix nadpisej* [The Language of the Oldest Runic Inscriptions] (Moscow, 1965), 19–53.

[6] H. M. Hoenigswald, "Criteria for the Subgrouping of Languages," in *Ancient Indo-European Dialects* (eds. H. Birnbaum and J. Puhvel; Berkeley and Los Angeles, 1966), 4–5.

'Proto-Scandinavian' (*B*) as represented in the earliest runic inscriptions is nothing other than Northwest Germanic, (*Y*), the common ancestor of both the Scandinavian and the West Germanic languages.[7]

The common descent of Scandinavian and West Germanic has been obscured over the years by the exaggerated emphasis placed on a relatively small number of isoglosses which supposedly connect Scandinavian more closely with Gothic after the breakup of the Proto-Germanic community and by a corresponding neglect of the numerous and, in many respects, more important isoglosses which clearly link Scandinavian and West Germanic as opposed to Gothic. The most important of these criteria have recently been compiled by Lehmann in his discussion of the subgrouping of Germanic.[8] I would merely like to comment briefly on them and on Lehmann's conclusion that "In the course of time Proto-Germanic split into northeast and (south)-west groups. This initial division was soon modified by subsequent interrelationships. For understanding of the later situation, we must admit considerable contact among the various Germanic areas, often by sea" (25).

The existence of a northeastern group after the breakup of Proto-Germanic is based primarily on five isoglosses.

(1)   The development of a stop in PGmc. -*jj*- and -*ww*-. Whether or not this development is a reflex of a laryngeal plus /y/ or /w/ in Indo-European, as Lehmann holds (16), the fact that Scandinavian displays -*ggj*-, as opposed to Gothic -*ddj*-, is some reason for caution in assigning too much significance to this isogloss as representing mutual influence.[9]

To be sure the graphic representation alone is not certain evidence of the degree—if any—of phonetic dissimilarity of -*ggj*- and -*ddj*-. In any case, this isogloss could very well have been present in Proto-Germanic itself, which must have had certain minor dialect divisions, just as every living language does.

(2)   The presence in Gothic and Scandinavian of the -*īn*- suffix

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[7] See Adamus, 157.

[8] W. P. Lehmann, "The Grouping of the Germanic Languages," in *Ancient Indo-European Dialects*, 13–27.

[9] See W. P. Lehmann, *Proto-Indo-European Phonology* (Austin, 1952), 36–46, and compare Makaev, 23.

in the feminine of the present participle, in contrast to a -jō- suffix in West Germanic, is also of moot value in establishing post-Proto-Germanic relationships. Heusler, for example, considers the two forms to be "urgerm. Parallelbildungen, jene ausgehend von vorgerm. -ī (aind. bhárantī), diese von -jā- (gr. phérousa < -ontjā)" (§279). Once again, the isogloss may be placed prior to the split in the Proto-Germanic community.

(3)   The development of a productive inchoative class of weak verbs with the suffix -na-. The West Germanic languages also show traces of verbs formed with this suffix.[10] The absence of a special inchoative class in these languages may be the result of a fusion with other weak classes, whereas Gothic and Nordic merely retained it.

(4)   The 'retention' in Gothic and Scandinavian of the ending -t for the second person singular of the preterite of strong verbs is also of dubious significance, since it has been postulated that the West Germanic form with -i and the vocalism of the plural is a late innovation of these languages.[11] Even if this should not be the case, i.e., if the West Germanic form is indeed the reflex of a Proto-Indo-European aorist,[12] then the North and East Germanic form could represent a leveling of the vocalism of the first and third persons and the introduction of -t on the model of the preterite-presents. In either case, the criterion is not cogent for positing a period of Gotho-Nordic unity after the Proto-Germanic period.

(5)   The contention that the Scandinavian languages share with Gothic the lack of the so-called contract verbs represented by OHG gān 'go', stān 'stand', and tuon 'do' is contradicted by East Nordic gå and stå.[13] The absence of a verb corresponding to OHG tuon, Eng. do may simply represent a semantic replacement by gøre göra, from which no conclusions of affinity can be drawn. It could be pointed out that

[10] Cf. Prokosch, 156–157.

[11] See E. Polomé, "Diachronic Development of Structural Patterns in the Germanic Conjugation System," *Proceedings of the Ninth International Congress of Linguists* (The Hague, 1964), 870–880.

[12] Cf. Prokosch, §73.

[13] See H. S. Falk and A. Torp, *Norwegisch-dänisches etymologisches Wörterbuch* (Heidelberg, 1910), s.v. gaa and staa; and E. Hellquist, *Svensk etymologisk ordbok* (Lund, 1922), s.v. gå and stå. It should also be noted that English, a West Germanic language, lacks the contract verb for 'stand'.

Eng. *do* and NHG *tun* overlap in only part of their semantic fields, whereby *tun* has been replaced by *machen* in certain contexts.

On the other hand, those isoglosses which connect Scandinavian closely with West Germanic, including the lowering of PGmc. $\bar{e} > \bar{a}$, the change of $z > r$, the presence of $\bar{e}^2$ in the preterite of verbs which reduplicate in Gothic (a distinction which may antedate the breakup of Proto-Germanic), the lack of *-t* in the third person singular present of the verb 'to be', the laws of final syllables, the phonemicization of [o] $> /o/$, and the lexical unity of the North and the West[14] can all be drawn upon as evidence of a first division of the post-Proto-Germanic period into two groups, Northwest Germanic and East Germanic. The contact over the sea referred to by Lehmann was undoubtedly more important in sustaining the linguistic unity of the Northwest than in creating it.

Further support for the existence of a Northwest group after the decline of the Proto-Germanic linguistic unity is provided by the early runic inscriptions. Makaev considers the language of these inscriptions to be a kind of runic koine,[15] but such an assumption is unnecessary if we agree with him that the older fuþark was established during a period of Northwest Germanic unity. Makaev points out that

After the separation of the East Germanic area from the Common [i.e. Proto-] Germanic unity, which may be placed approximately in the first century B.C., or, at the latest, in the first century A.D., two areas developed: East and West [i.e. Northwest]. In about the 4th and 5th centuries, the breakup of the [North-] Western area begins in connection with the separation and stabilization of the Ingvaeonic linguistic group. It is precisely the appearance and formation of the Ingvaeonic area which simultaneously designated the split of the Western and Scandinavian areas. Thus, one can speak of a Scandinavian linguistic area only from the 5th–6th centuries A.D. It is in this period that the processes so characteristic of the Scandinavian development begin to appear, partially expressed in the runic inscriptions of the transitional period: in the inscription from Eggjum, in the inscription from Setre, in the inscriptions of the Björketorp-Stentofta group.[16]

On two counts, then, the term 'Proto-Scandinavian' with the mean-

[14] See Lehmann, "Grouping," 19–20.

[15] See E. A. Makaev, "Ponjatie obščegermanskogo jazyka i ego periodizacija [The Concept of Common Germanic and Its Delimitation]," in *Sravnitel'naja grammatika germanskix jazykov* I (Moscow, 1962), 122.

[16] Makaev, *Jazyk drevn. run. nadpisej*, 43.

ing usually ascribed to it must be rejected as not conforming to the linguistic criteria for the establishment of diachronic stages: (1) it is not attainable through internal reconstruction, and (2) its 'attestation' in the earliest runic inscriptions is not peculiar to Scandinavian, but is shared equally well by the West Germanic languages. The only true 'Proto-Scandinavian' in the strict sense is the language attested in the runic inscriptions beginning with about the sixth century, a stage which is properly termed 'Common Nordic'.

The point at issue here, of course, is not merely one of terminology. The matter is of fundamental importance to a better understanding of the historical developments from Proto-Germanic to the modern Germanic languages. By recognizing the fact that North and West Germanic actually passed through a stage of common development subsequent to the first division of the Proto-Germanic community, it is possible to avoid what I have referred to above as the fracturing of the historical picture.

2. In discussing the Common Nordic vowel system ("during the earliest postumlaut period"), Benediktsson terms "quite fallacious" the arguments presented by a number of scholars for more than nine phonemes, i.e., for additional units representing the u-umlaut of PGmc. /i/ and /e/ and the combined umlaut of PGmc. /a/, and maintains that "the requirement of simplicity permits the introduction of an additional unit into the system only if there is relevant evidence to support it. Such evidence would have to be contemporaneous—like the evidence, however vague, of the loanwords in Old Irish . . . or from the later development of the Nordic languages. There is no such evidence" (419). Strangely, the best contemporary evidence for Common Nordic, the only direct evidence available to us, has been overlooked, namely the testimony of the runic inscriptions since the sixth century.

Because of the nature of the younger fuþark, which was not only a conservative, but actually a reactionary alphabet, we cannot expect to find special graphemes to represent any phonemes which arose from the phonemicization of umlaut variants. There is, however, other evidence to be gleaned from the inscriptions which is equally eloquent.

In the absence of newly devised graphemes, the umlaut phonemes would have to be designated by the grapheme for the phoneme from

which they derived, i.e., /y/, /ø/, /æ/, and /ɑ/ by the runes **u, o, a,** respectively. The phonemes /ɯ/, /ɣ/, and /ə/ (reflexes of the *u*-umlaut of /i/ and /e/, and of the combined umlaut of /a/) would have to be designated by **i, e,** and **a,** respectively. We find, however, that the runes **e** and **o,** originally found in the older fuþark, have disappeared from the younger. Since the phonemes /e/ and /o/ could not have lost their distinctiveness at that time, the loss of the corresponding runes can only be explained on the basis of a reorganization of the orthography as a result of some significant innovation in the phonological structure of the language. I have explained this reorganization to be the reflection of the appearance of new phonemes which rendered the five-vowel orthographic system of the older fuþark completely inadequate. The vowel phoneme inventory had increased from five to twelve.[17] In such a situation, the users of the alphabet faced two possibilities: (1) They could continue to make-shift with the old alphabet (as was the case in Old High German[18]), or (2) they could innovate. The innovation, however, could follow two lines of development: (1) It could result in the introduction of new symbols, perhaps from digraphs (as in Old English[19]), or (2) it could establish a new set of correspondences between the symbols already available and the new phonological system. The users of the younger fuþark took the latter alternative. Instead of adding symbols, or even continuing the use of those already available, they eliminated the runes for the mid vowels **e** and **o,** just as in the consonantal system separate symbols for voiced obstruents (except /z/) were discarded.[20]

The Northwest Germanic obstruent system displayed the distinctive features indicated in Table 1 (+ indicates the presence of the first of the paired features, – the presence of the second, and 0 the absence of

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[17] "The Proto-Norse Vowel System and the Younger Fuþark," *SS* XXXV (1963), 195–207. In view of my remarks in §1, above, I would now substitute 'Northwest Germanic' for 'Proto-Norse' and 'Common Nordic' for 'late Proto-Norse'; cf. *SS* XXXV, 207, fn. 30.

[18] See my "Zum Umlaut im Deutschen," *Beiträge zur Geschichte der deutschen Sprache und Literatur* LXXXVI (Tübingen, 1964), 177–196.

[19] On the origin of the English digraph spellings, see fn. 50, below.

[20] See P. Diderichsen, "Runer og runeforskning i nordisk belysning," *Nordisk tidskrift för vetenskap, konst och industri* (1945), 321.

TABLE 1:   The Northwest Germanic Obstruent System and the Older Fuþark

	/p	b	f	t	d	þ	k	g	h	s	z/
Diffuse/Compact	+	+	+	+	+	+	–	–	–	+	+
Acute/Grave	–	–	–	+	+	+	0	0	0	+	+
Tense/Lax	+	–	+	+	–	+	+	–	+	+	–
Continuant/Interrupted	–	0	+	–	0	+	–	0	+	+	+
Strident/Mellow	–	–	–	–	–	–	–	–	–	+	+
	p	**b**	**f**	**t**	**d**	**þ**	**k**	**g**	**h**	**s**	**z**

the distinction). As can be seen by comparing the runes at the bottom of the table with the phonemes at the top, the correlation between the orthographic and phonological systems was 1 : 1.

In Northwest Germanic, the phonemes /b d g/ were realized in the allophones [b ƀ], [d, ð], and [g ǥ], so that the contrast continuant/ interrupted (stop : spirant) was irrelevant here. When the voiceless spirants /f þ h/ became voiced in intervocalic position in Common Nordic, their voiced allophones coalesced with the spirant allophones of /b d g/, producing the new phonemes /ƀ ð ǥ/. These new phonemes came to be designated with the symbols **f**, **þ**, **h**.[21] Since the distinction tense/lax (voiceless : voiced) had been obscured for the spirants, i.e., the distinctive orthographic feature was now continuant versus interrupted, the same orthographic distinction was also done away with in the case of the stops, resulting in the spellings **b** for both /b/ and /p/ (the choice of the symbol **b** over **p** is undoubtedly a reflection of the rarity of initial /p/ in Germanic), **t** for /t/ and /d/, and **k** for /k/ and /g/.[22] At this stage of development, the correlation between the younger fuþark and the obstruent system of Common Nordic can be represented as in Table 2.

[21] See L. Jacobsen and E. Moltke, *Danmarks runeindskrifter* (Copenhagen, 1942), cols. 952–954, 956–957, and 975–977 (hereafter cited as *DRI*).

[22] The **k**-spellings for initial /g/ are a good basis for positing the same distribution of stop and spirant allophones for PGmc. /g/ as for PGmc. /b/ and /d/, i.e., stop initially and after homorganic nasal, but spirant elsewhere; cf. W. Moulton, "The Stops and Spirants of Early Germanic," *Lg.* XXX (1954), 1–42.

TABLE 2:   The Common Nordic Obstruent System and the Younger Fuþark

	b	**f**	**t**	**þ**	**k**	**h**	**s**	**ʀ**
Diffuse/Compact	+	+	+	+	–	–	+	+
Acute/Grave	–	–	+	+	0	0	+	+
Tense/Lax	+ –	+ –	+ –	+ –	+ –	+ –	+	0
Continuant/Interrupted	–	+	–	+	–	+	+	–
Strident/Mellow	–	–	–	–	–	–	+	+
	/p b	f ƀ	t d	þ ð	k g	h ɡ	s	ř/

The sibilants /s/ and /z/ were unaffected by the reorganization since they differed from the other obstruents in being the only strident members.[23]

From the foregoing, it is obvious that with respect to the obstruent system, the younger fuþark reduced the number of graphemes from eleven to eight, even though the number of phonemic units had increased from eleven to fourteen.

In attempting to determine the phonological values of the runes, the linguistic historian must take not only contemporary and later evidence into consideration, but also evidence obtained by considering the development of the phonological and orthographic systems from an earlier stage (in this case Northwest Germanic) to the stage under investigation. As Penzl has stressed, all phonological changes are ultimately traceable to the development of allophonic variants.[24] It should be added that once a relatively adequate orthography has been established, changes occur only after phonological innovations render the correlation between the two systems obsolete and difficult to maintain.

In order to establish the allophonic variants of Northwest Ger-

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[23] The change of PGmc. /z/ to Common Nordic /ř/ is placed by Steblin-Kamenskij before 700 A.D. This phoneme was no longer the voiced correlate of /s/, since it had become a vibrant. It still shared the feature of stridency with /s/, but also that of vibrancy with /r/, and therefore can be considered a new phoneme, normally indicated in transliterations by ʀ, although as would be expected, the old runic symbol was retained; see M. I. Steblin-Kamenskij, "The Scandinavian Rhotacism and Laws Governing the Change of Distinctive Features," *Philologica Pragensia* VI (1963), 362–367. Cf. also *DRI*, col. 968–971.

[24] H. Penzl, "Phonem, Allophon und Sprachlaut in der historischen Sprachwissenschaft," *Proceedings of the Fifth International Congress of Phonetic Sciences* (Basel, 1965), 458–460.

TABLE 3:   Northwest Germanic Vowel System

/i/ [ɯ]			[y] /u/	/ī/ [ɯ̄]		[ȳ] /ū/
/e/ [ɤ]			[ø] /o/	/ē/		[ø̄] /ō/
		[ə]				
	[æ]	[ɑ]			[ǣ]	[ɑ̄]
	/a/				/ā/	

manic, it is necessary to compare the development of the phonemes
of this stage (which themselves are determined on the basis of com-
parative evidence) into the various descendants, i.e., into both Scandi-
navian and West Germanic. The assumption that the Scandinavian
languages derive from a 'Proto-Scandinavian' has sometimes led inves-
tigators to ignore the evidence in West Germanic, particularly Old
English. From the comparative evidence it is possible to postulate
for Northwest Germanic five-phoneme short and long vowel systems
with *i*- and *u*-umlaut, as well as combined *u*- and *i*-umlaut, allophones
as represented in Table 3.[25]

Axel Kock demonstrated that the reduction of weakly stressed
vowels proceeded in the same order in Scandinavian as in West Ger-
manic.[26] This is in accord with the view that both groups shared a
common development in Northwest Germanic, and it would not be
surprising to find close parallels in the vowel systems of Old English
and Common Nordic. To establish such a parallel, however, we must
have evidence from within Scandinavian itself.

The question is then, for the earliest postumlaut period (i.e., after
the reduction or loss of weakly stressed /-i/ and /-u/ in certain posi-
tions), do we have any justification for positing independent phonemes

[25] See *Lg.* XLI, 19–36. In spite of Benediktsson's assumption to the contrary
(409), *u*-umlaut must have resulted simply in the retraction of the root vowel, and
the rounding found in the later reflexes is a secondary development; see *SS*
XXXV, 198 and 204. It is also incorrect to assume, as Benediktsson does, that
u-umlaut "has a much more restricted distribution within the Germanic area
than *i*-umlaut" (416). Numerous reflexes of *u*-umlaut (including those caused
by "*u* of any origin") are found in Old English (see fn. 50, below), and even in
Old High German (see *Beiträge* LXXXVI, 177–196).
[26] A. Kock, "*I*-omljudet och den samnordiska förlusten af ändelsevokaler,"
Arkiv för nordisk filologi IV (1888), 146–149.

TABLE 4:   Common Nordic Vowel System

/i/		/y/		/ɯ/		/u/	/ī/		/ȳ/		/ū̄/		/ū/
/e/		/ø/	/ə/	/ɤ/		/o/	/ē/		/ø̄/				/ō/
	/æ/		/a/		/ɑ/			/ǣ/		/ā/		/ā̄/	

for those allophonic variants I have postulated for Proto- and North-west Germanic? Since it is generally agreed that the *i*-umlaut variants of /u/, /o/, and /a/ and the *u*-umlaut of /a/ became phonemes, we can limit our discussion to the *u*-umlaut of /i/ and /e/ and the combined *u*- and *i*-umlaut of /a/. I have assumed phonemic status for all of them in Common Nordic, yielding a twelve-phoneme short vowel system and a ten-phoneme long vowel system, as in Table 4.[27]

If we take this system as a working hypothesis, assuming that all the umlaut allophones of Northwest Germanic have been phonemicized, we arrive at the distinctive feature analysis presented in Table 5.[28] Since our only direct evidence for Common Nordic is to be gleaned from runic inscriptions, it is of some importance to compare those

TABLE 5:   Common Nordic Vowel Distinctive Features

	/i	e	a	o	u	ɯ	ɤ	ɑ	ə	æ	ø	y/
Diffuse/Compact	+	±	−	±	+	+	±	−	±	−	±	+
Flat/Plain	−	−	0	+	+	−	−	0	0	0	+	+
Acute/Grave	+	+	±	−	−	−	−	−	±	+	+	+

[27] In contrast to my presentation in *SS* XXXV, I now believe that we must consider /ə/ to have been phonemically a mid central vowel rather than higher-low central. Such an assumption makes it possible to operate with only three tongue heights and seems to accord better with the further development of this phoneme to /ø/. In the long vowel system, there was no */ə̄/ or */ɤ̄/ in consequence of the fact that Proto-Germanic lacked */ā/, making it impossible to assume a combined umlaut. PGmc. /ē/ became NwGmc. /ā/, and its back allophone [ɤ̄] became NwGmc. [ā], Common Nordic /ā̄/ (see *Lg.* XLI, 25–28). There were therefore two 'holes in the pattern' in the Common Nordic long vowel system.

[28] The features within the solid line represent those which were relevant in Northwest Germanic, those outside it were nondistinctive or redundant in North-west Germanic, but became distinctive in Common Nordic. A ± indicates the presence of both paired features, i.e., /e/, for example, was both diffuse and compact, since it was a mid vowel.

TABLE 6: The Older Fuþark and the Northwest Germanic Vowel System

	i	e	a	o	u
Diffuse/Compact	+	±	−	±	+
Flat/Plain	−	−	0	+	+
Acute/Grave	0	0	0	0	0
	/i	e	a	o	u/

features which could have been expressed in the older and younger fuþarks with the features assumed to have been present in the language.

From Table 6, it will be seen that all the phonological contrasts of Northwest Germanic were adequately represented by the five vowel symbols of the older fuþark, since the contrast acute/grave (front : back) was not distinctive. The phoneme /a/ contrasted with the other four by being the only compact (low) vowel. The contrast flat/plain (rounded : unrounded) was irrelevant here, i.e., /a/ was neutral in this regard. The priority of the contrast flat/plain over acute/grave is adequately demonstrated by the fact that /o/ and /u/ must have had nondistinctive front variants [ø] and [y].

In the next stage, represented by Table 7, orthographic conservatism has retained the spellings of the older fuþark even though the phonological system has undergone a profound change marking the beginning of the Common Nordic period. The loss of the conditioning elements /-i/ and /-u/ in certain positions has caused the phonemicization of the umlaut allophones of Northwest Germanic and rendered the contrast acute/grave distinctive. The failure to develop new graphemes for the new phonemes means that they continue to be designated with the rune for the phoneme from which they derive historically. Therefore, u stands not only for /u/, but also for /y/, o for /o/ and /ø/, and a for /a/, /æ/, and /ɑ/, which is indicated in the table by placing under the appropriate rune both a + and a − for the acute/grave contrast. Under a, we find not only + for /æ/, − for /ɑ/, but also ± for /a/, which now must be considered a low central vowel. Since it is generally agreed that o and u have both plus and minus values, while a also has the additional ±, formalistic reasoning requires that we investigate the possibility that i and e might also represent both acute and grave vowel phonemes. By

TABLE 7: The Older Fuþark and the Common Nordic Vowel System

	i	e	a	o	u
Diffuse/Compact	+	±	- - - ±	±	+
Flat/Plain	-	-	0	+	+
Acute/Grave	+ -	+ -	+ ± - ±	- +	- +
	/i ɯ	e ɣ	æ a ɑ ə	o ø	u y/

looking beyond the evidence found in Scandinavian, it becomes apparent that we must posit for Northwest Germanic grave (back) allophones for these two phonemes. Evidence for the actual presence of /ɯ/ and /ɣ/ in Common Nordic will be considered below. For the time being, let us assume that the back allophones became phonemes upon the loss of /-u/ and place both plus and minus values under **i** and **e**. At the same time, the combined umlaut variant [ə] of NwGmc. /a/ must also be accorded phonemic status. It was a central vowel and therefore will be represented by a ± under **a** in the acute/grave row. If we consider /ə/ to have been a mid vowel, we must add a ± under **a** in the diffuse/compact row to indicate that fact.

As can be seen from a glance at Table 7, the correlation between the orthographic and the phonological systems is extremely tenuous. A reorganization took place, whereby only the crassest oppositions found expression in the orthography. These oppositions can be readily identified in Table 7 by the presence of single features, +, -, or 0, i.e., flat (rounded) vowels versus plain (spread) vowels versus vowels which do not enter into that opposition. Again, conservatism plays a role in that **a** is retained to designate all the neutral vowels. Undoubtedly the presence of the mid vowel /ə/, which continued to be written **a** as a neutral vowel, contributed to the elimination of the symbols for the other mid vowels **e** and **o**, whose functions are now taken over by **i**, the symbol for all spread vowels, and **u**, the symbol for all rounded vowels. The result is the system depicted in Table 8, the younger fuþark as applied to the Common Nordic vowel system. The oppositions expressed in this orthographic system are clearly those found in the flat/plain row, i.e., spread, neutral, and rounded. In this sense, then, the younger fuþark is indeed a reactionary alphabet.

TABLE 8:   The Younger Fuþark and the Common Nordic Vowel System

	i				a				u			
Diffuse/Compact	+	±	+	±	–	–	–	±	+	+	±	±
Flat/Plain		–					0			+		
Acute/Grave	+	+	–	–	+	±	–	±	–	+	–	+
	/i	e	ɯ	ɣ	æ	a	ɑ	ə	u	y	o	ø/

In spite of this reorganization, however, points of strain still remained, particularly with regard to /ə/, which was isolated in the orthographic system. It was the only mid vowel designated by a, and therefore stood in opposition not only to the compact vowels with the same designation, but also to /e/, /ɣ/, /ø/, and /o/. It was therefore a prime candidate for a symbol of its own. The conservatism of the orthography prevented the rise of a special grapheme, however, until historical accident in the form of a further phonological change made available the digraph spelling au, which we find in 'Old Danish' inscriptions as indicated in Table 9.[29]

The foregoing deliberations undoubtedly fall under the category of formalistic speculations. We cannot hope, however, to recover prehistoric languages or even historically attested but faultily recorded languages without ample use of the techniques made available to us by modern insights into the nature of phonological change and the

TABLE 9:   The Younger Fuþark and the 'Old Danish' Vowel System

	i				a			u				au
Diffuse/Compact	+	±	+	±	–	–	–	+	+	±	±	±
Flat/Plain		–				0			+			0
Acute/Grave	+	+	–	–	+	±	–	–	+	–	+	±
	/i	e	ɯ	ɣ	æ	a	ɑ	u	y	o	ø	ə/

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[29] A parallel is found in the use of ai to designate /æ/, the i-umlaut of /a/ after the monophthongization of Common Nordic /æi/; see K. M. Nielsen, "Til runedanskens ortografi," *Arkiv* LXXV (1960), 7–15. This use of ai has no connection with the onset of umlaut, but simply represents the application of a distinctive spelling, which arose in the long vowel system, to the corresponding short vowel phoneme which had hitherto had no distinct designation. Cf. also *DRI*, col. 852–854, and *SS* XXXV, 201, fn. 15.

relationships between orthography and phonology. It must always be borne in mind that there is often a wide schism between language and writing. In spite of this schism, which is unusually wide in the case of the younger fuþark and the phonological system it had to represent, there is decisive internal evidence to prove that the presentation of the development of the orthographic and phonological systems given above must correspond rather closely to the historical facts.

3.   As we have seen, we should expect a phoneme /ə/ to be designated by the rune **a**, since it derives from NwGmc. /a/. Given the course of development of the younger fuþark, the only manner in which a distinctive designation could arise would be through further phonological developments leading to a coalescence with this phoneme of some other unit or cluster with a variant orthographic representation.[30]

In the older literature on the problem of the combined *u*- and *i*-umlaut of PGmc. /a/, e.g., in forms such as OIcel. *øþle* 'nature, character' and *øx* 'axe', the development is considered to have proceeded in two stages, whereby *øþle* was derived from an older **ǫðli*, which in turn was derived from PGmc. **aðulia*; *øx*, on the other hand, was considered to come from **ækusi*, an earlier development from PGmc. **akwisi*.[31] The different chronological order assumed for *øþle* and *øx* is based on the assumption of 'older' and 'younger' stages for both *i*- and *u*-umlaut.[32] This period theory of umlaut has now been generally abandoned, and there remain no cogent reasons for postulating an *i*-umlaut of *ǫ* and a *u*-umlaut of *æ* with different chronologies. Indeed, on the basis of the development in Old English and Old High German, it is necessary to posit for Proto- and Northwest Germanic a special allophone—[ə]—for the combined umlaut of /a/,[33] so that *øþle* derives

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[30] Similar developments are also observable in other Germanic languages using the Latin alphabet. Compare, for example, the use of *iu* for /ü/ in Late Old High German. This spelling became possible only after the monophthongization of OHG /iü/ > /ǖ/. Until this phonological change had taken place, /iü/ and /ü/ were consistently written *u*. See *Beiträge* LXXXVI, 191, fn. 50, and see fn. 50, below.

[31] See Noreen, §26–27.

[32] See my "Germanic Umlaut Anew," *Lg.* XXXVII (1961), 221, fn. 18a, and most recently my review of A. Szulc's *Umlaut und Brechung* in *Lg.* XLII (1966), 115–122.

[33] See *Lg.* XLI, 26.

from PGmc. */adulja/ = [əðulja], just as *øx* derives from PGmc. */akwisi/ = [əkwisi].

Also in the older literature, the result of the so-called *i*-umlaut of *ǫ* and of the *u*-umlaut of *æ* was considered to be an 'open *ø*', i.e., a phone different from the *i*-umlaut of NwGmc. /o/, which was thought to have been a 'close *ø*'.[34] Benediktsson questions the validity of positing for Common Nordic a phonemic unit corresponding to this 'open *ø*' because there is no long counterpart for it, and because "the reasoning behind this theory is a highly formalistic one . . . based primarily on the external, nonlinguistic, purely geometrical properties of a tri- or quadrangular diagram representing the relations within a vowel system" (418–419).[35] It is possible to demonstrate, on the basis of Scandinavian evidence, that a phoneme derived from the combined umlaut of /a/ and differing from the *i*-umlaut of /o/ must have been present in the Common Nordic vowel system.

In East Nordic, PGmc. /au/ (except in positions before /h/ or original /r/) became a uniform long monophthong /ø̃/, whether or not it was followed by /-i/, e.g., */laukaz/ > /lø̨k-/ 'onion, leek', */hauzjan-/ > /hø̨ra/ 'to hear'. In West Nordic, this monophthongization did not take place, and PGmc. /au/ not followed by /-i/ yielded /ɑu/ (OIcel. *au*, ONorw. *ou*), while a following /-i/ produced the reflex ONorw. *øy*, OIcel. *ey*. If the East and West Nordic reflexes derive from a Common Nordic prototype, as they must, then we can postulate for Common Nordic, the period after the phonemicization of *i*- and *u*-umlaut, two phonemically distinct clusters which we may represent by /ɑu/ and /əy/, since the diphthongs in both Proto-Germanic and Northwest Germanic were vowel clusters in which the components developed in the same fashion as the corresponding unit phonemes, i.e., /a/ before /-u/ was realized as [ɑ] (PGmc. /au/ = [ɑu]), while

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[34] See K. J. Lyngby, "Den oldnordiske udtale oplyst ved den ældste afhandling om retskrivningen i Snorra-Edda," *Tidskrift for Philologi og Pædogogik* II (1861), 289–321; and L. F. A. Wimmer, "Småbidrag til nordisk sproghistorie I," *Det philologisk-historiske Samfunds Mindeskrift* (Copenhagen, 1879), 1–23.

[35] The absence of a long counterpart has no bearing on the presence of such a phoneme in the short vowel system (cf. NHG /ā̈/, which has no short counterpart). Indeed, the absence of the long vowel is completely comprehensible if umlaut is placed in its proper chronological perspective; see fn. 27, above.

TABLE 10:   'Old Danish' Runic Spellings

PGmc.	Written	PGmc.	Written
/au/ = [ɑu]	au, u	/ō/ = [ō]	u
= [əy]	au, u	= [ø̃]	u
/a/ = [ɑ]	au, u	(NwGmc.) /o/ = [o]	u
= [ə]	au, u	= [ø]	u

/a/ before /-u-/ followed by /-i/ was realized as [ə] and /u/ before /-i/ as [y] (PGmc. /au/ before /-i/ = [əy]).[36] The point at issue is, do we have the right to posit /ə/ as an independent phonemic unit in Common Nordic, or should we assume that PGmc. NwGmc. [ə] co-alesced with [ø] during the phonetic stage of umlaut (which would mean in late Northwest Germanic)?[37]

In the 'Old Danish' runic inscriptions,[38] as Nielsen has demon-strated,[39] there is a strictly maintained distinction in the designation of the reflexes of PGmc. /au/ and of PGmc. /ō/. There is also a similar distinction between the representations of reflexes of PGmc. /a/ before /-u/ (= [ɑ]) and before /-u-/ + /-i/ (= [ə]), on the one hand, and the designations of NwGmc. /o/ and its i-umlaut (= [ø]), on the other. The situation is illustrated in Table 10, where it will be seen that the runic spelling **au** stands for PGmc. /au/ and its i-umlaut as well as for the u-umlaut and the combined umlaut of /a/. It never, however, represents PGmc. /ō/ or its i-umlaut, nor NwGmc. /o/ or its i-umlaut, all of which are written consistently as **u**. The **au**-spellings, on the other hand, can be replaced by **u**-spellings.

From this state of affairs, it is evident that the monophthongization of Common Nordic /ɑu/ and /əy/ has taken place, since they can be designated by **u**. The product of the monophthongization, however,

[36] See *Lg.* XLI, 33.

[37] Cf. Benediktsson, "there is nothing to prevent the assumption that these . . . changes took place during what was termed the phonetic period of umlaut" (419).

[38] Although the early inscriptions in the younger fuþark found in Denmark are generally referred to as being 'Old Danish', it remains to be ascertained whether such a designation is linguistically defensible and preferable to 'East Nordic'.

[39] See Nielsen, 39 and 71.

must have been distinct from /ø̄/, which is apparent from the fact that the latter can never be spelled **au**. Noreen assumes that the monophthongization produced two long vowels, a 'close ø̄' (the *i*-umlauted vowel) and an 'open ø̄'.[40] Such can not have been the case, however, since the 'close ø̄' would have coalesced with the *i*-umlaut of /ō/.

On the basis of the 'Old Danish' spelling **au** for PGmc. /a/ = [ɑ] and [ə], we must conclude that the reflex of these vowels was considered to be the short counterpart of the long vowel which resulted from the monophthongization of PGmc. /au/ = [ɑu] and [əy]. As the spellings indicate, neither the short nor the long vowel was immediately identified with the *i*-umlaut of /o/ or/ō/. Since Common Nordic /ā/ does not coalesce with /ø̄/, whereas both PGmc. [ɑ] (in certain environments) and [ə] eventually do fall together with /ø/, Common Nordic /ɑ/ must first have coalesced with /ə/ before the latter became /ø/. Such an assumption permits us to postulate a change of Common Nordic /ɑu/ > /əu/, which could not maintain itself as a distinct cluster in contrast with /əy/. Their coalescence was either prior to, or contemporaneous with the monophthongization to /ə̄/. This new long vowel had its own place in the phonological system, since it filled a 'hole in the pattern' corresponding to the already present short vowel /ə/. It is now understandable why short /ə/ comes to be spelled **au**. The conservative orthography retained the digraph spelling after the monophthongization had produced /ə̄/. Inasmuch as /ə̄/ was the long counterpart of /ə/, which as I have pointed out, was long a candidate for a distinctive designation, the representation of the long vowel could be, indeed almost had to be, carried over to its short counterpart. What then is the significance of the **u**-spellings found for these phonemes? A number of scholars consider the appearance of these spellings to be the first heralds of the monophthongization of PGmc. /au/.[41] From the internal symmetry of the runic alphabet, however, it is unlikely that such is really the case. The spelling **au** could not be applied to /ə/ until the monophthongization had produced /ə̄/. On the other hand, **u** could not be used to designate any vowel other than those which were characterized by rounding. The

[40] See Noreen, §156–157.
[41] Cf. *DRI*, col. 852–854, and Noreen, §155–157.

appearance of the **u**-spellings must therefore indicate something other than the monophthongization. They can only be interpreted as an indication that /ə/ has coalesced with /ø/ and /ɔ̃/ with /ø̃/. The monophthongization of PGmc. /au/ in East Nordic therefore antedates the appearance of the first **u**-spellings by some time and must also be dated before the earliest occurrence of **au** as the spelling for reflexes of PGmc. /a/ = [ə] or [ɑ].

Lyngby and Wimmer were therefore correct in postulating a different intermediate stage in the development of PGmc. /a/ to later East and West Nordic /ø/ by combined umlaut as compared to the development of NwGmc. /o/ to East and West Nordic /ø/ by *i*-umlaut. The difference in the phonemes in the Common Nordic stage was not one of tongue height, however, but of a central neutral vowel versus a front rounded vowel. Benediktsson's contention that "None of the sources of evidence support the assumption of two ø-phonemes" (419) is accordingly invalid. The absence of distinct reflexes in texts from the twelfth century and later cannot dissuade us from positing more than nine vowel phonemes for Common Nordic, which antedates those texts by some six hundred years.

4.   Common Nordic /ɯ/, the *u*-umlaut of /i/, finds no expression in the younger fuþark until the tenth century.[42] In other words, three hundred years or more have elapsed since the syncope of /-u/ removed the conditioning factor,[43] and yet this vowel was consistently designated by **i**. When the *u*-umlaut of /i/ finally coalesced with /y/ in certain environments, this fact is indicated by **u**-spellings, e.g., **nukʀ** = /nykř/ (339 Stora Köpinge) and **sustiʀ** = /systiř/ (230 Tryggevælde).[44] In spite (or perhaps in view) of all the inadequacies of the runic alphabet, it is inconceivable that its users could have maintained the distinction between /y/ derived from [y] and /y/ derived from [ɯ] for some 300 years. It is evident that the *u*-umlaut of /i/ did not coalesce with the *i*-umlaut of /u/ during the phonetic stage of umlaut and that a phoneme /ɯ/ must be postulated for Common Nordic.

[42] See *DRI*, col. 872.
[43] See Noreen, §50, and *DRI*, col. 1008–1010.
[44] Examples are from *DRI*.

In addition to the direct testimony of the runic inscriptions, a further indication of the presence in Common Nordic of two phonemes, /y/ and /ɯ/, is found in the Scandinavian loans in Old Irish, where the former is written *ui*, while the latter is rendered by *iu*.[45]

5.   There remains for consideration the phoneme /ɤ/, the *u*-umlaut of PGmc. /e/. Benediktsson has stated that "There is not the slightest relevant evidence for positing the new unit" (420). The difference of opinion revolves, of course, about the nature of relevant evidence. In seeking to establish the phonological system of a language such as Common Nordic, it is quite impossible, in my opinion, to insist on contemporary evidence with distinctive spellings, since the texts available are written in an alphabet which obviously was not intended to record more than the barest minimum of distinctive features. The chances of finding evidence in foreign languages are even slighter when one considers the barriers of sound substitution. As for later evidence within the language, certainly the distribution of phonemes in comparison to the phonemes and allophones of earlier stages deserves to be accorded the status of valuable testimony.

As was the case with /ɯ/, an already present /ɤ/ in Common Nordic would have been written **i** in the younger fuþark until phonological developments led to its coalescence with another unit with a divergent representation. Eventually, this is just what happened. In period 2.2 (900–1050), we find PGmc. [ɤ] represented by **u** in 'Old Danish' inscriptions, e.g., **laikfruþ** = /lægfrøþ/ (282 Hunnestad 1).[46] Again, some three hundred years have passed since the loss of the conditioning /-u/. It is clear that [ɤ] had not coalesced with /ø/ before the beginning of period 2.2, since it would have been written **u**. Between the syncope of /-u/ and the appearance of **u**-spellings, /ɤ/ must have been an independent phonemic unit designated by **e** in the older fuþark and by **i** in the younger.

The history of the *u*-umlaut of /e/ is further complicated, however,

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[45] See C. J. S. Marstrander, *Bidrag til det norske sprogs historie i Irland* (Oslo, 1915), 72–73, and cf. Benediktsson, 418.

[46] See *DRI*, col. 872.

by the fact that later reflexes of this phoneme appear as diphthongs in environments different from those in which it eventually coalesced with /ø/. There can be no doubt that breaking was initially an umlaut phenomenon, i.e., the broken vowel is ultimately traceable to a *u*-umlaut allophone of /e/.[47] In this instance also, however, the conditioning factor disappeared about 650 A.D. at the latest, but diphthongal spellings for the broken vowels are not found in the Danish inscriptions until ca. 750 or 800 (period 2.1).[48] To account for this discrepancy, it is sometimes assumed that the initial result of breaking was a level diphthong which was not expressed in the orthography until it had developed further into a rising diphthong. Benediktsson assumes the initial stage was [eʌ], i.e., a nucleus /e/ plus a "nonfront or more precisely central" round offglide, "different from all other allophones of the back vowel phonemes *a, ǫ, o, u*. Then, with the shift of stress to the second element . . . [ʌ] might be regarded as a member of any of the three nonfront round vowels *ǫ, o,* or *u*, since it did not contrast minimally with any of them" (429). However, on the basis of the evidence presented above, we must posit for Common Nordic a phoneme /ɤ/, the reflex of PGmc. /e/ before /-u/. Breaking is best explained as being a secondary development of this phoneme in the environments in which it did not eventually coalesce with /ø/. When the breaking occurred (ca. 750), the result was a diphthong consisting of a palatal onglide and a nucleus [ə], which of course was identified with the phoneme /ə/, so that the new diphthong came to be written **iau**, e.g., **-biaurn** = /bjərn/ (80 Skern 1). After the coalescence of /ə/ with /ø/, the spelling **iu** becomes possible, e.g., **-biurn** = /bjørn/ (279 Sjörup, 297 Hällestad 3).[49]

6.   The phonological system of Common Nordic consisted of the units and clusters presented in Table 11.

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[47] See, e.g., Heusler, §76, and compare H. Andersen, "Er Brydningen et Omlydsfænomen?" *Arkiv* LXI (1946), 157–170.

[48] See *DRI*, col. 794.

[49] The breaking of Common Nordic /e/ (the reflex of PGmc. /e/ before /-a/) represents a parallel to that of /ɤ/. They may be considered together as a diphthongization of the mid spread vowel phonemes of Common Nordic.

TABLE 11:   Common Nordic Phonological System

Stops:	p	t	k	b	d	g							
Spirants:	f	þ	h	ƀ	ð	ǥ	s						
Resonants:													
Nasals:				m	n								
Vibrants:					ř	r							
Laterals:					l								
Frictionless Continuants:				w		j							
Vowels:	i	y		ɯ	u		ī	ȳ			ɯ̄	ū	
	e	ø	ə	ɣ	o		ē	ø̄				ō	
		æ		a		ɑ			ǣ	ā		ɑ̄	
Vowel Clusters:	Iy				Iu								
			Ey		Io								
	Ai				Au								

In the case of the vowel clusters, the conditioning factors (the glides) were not lost as long as they did not undergo monophthongization, so that the nuclei occupied ambiguous positions in the phonological system. They could be assigned to the new phonemes /ɯ/, /ɣ/, /ɑ/, or /æ/, or to /i/, /e/, or /a/. In other words, the contrast between the respective phonemes was absent in these clusters (as also elsewhere before retained /-i/ and /-u/ in following syllables). The nuclei were therefore members of archiphonemes, which we can symbolize as follows: /I/ = /i/ and /ɯ/; /A/ = /a/, /æ/, and /ɑ/; /E/ = /e/ and /ə/ (a synchronic analysis, without regard for the historical development, would have to consider [ə] before /-u/ to be a positional variant of /e/[50]). In the subsequent history of the Scandinavian languages, the clusters appear in the following reflexes:

[50] The Scandinavian reflexes of PGmc. /eu/ indicate that the nucleus [ɣ] coalesced with /I/ at some point. This development is also found in Old English (*iu io ie* = /ɯ/) and Old High German (*iu* = /iu/). Runic **liubu** (Opedal) would seem to place the change as early as Northwest Germanic. However, OE *eo* (= /ɣ̄/) shows that [ɣ] did not become /I/ in PGmc. /eu/ followed by /-a/, so that it is possible to assume that the appearance of /I/ is the result of leveling between NwGmc. /eu/ and its *i*-umlaut /iu/; see *Lg*. XLI, 34.

The development of the Proto-Germanic diphthongs into Old English and the appearance of digraph spellings for short monophthongs can be cited as parallels in support of the phonological and orthographic changes posited above for Scandinavian. The origin of the Old English digraphs for reflexes of PGmc. /a/, /e/,

/Iy/ > /ȳ/, /Iu/ > /jū/, /Io/ > /jō/;⁵¹

/Ey/ > ONorw. /øy/, OIcel. /ey/, OGuth. /oy/, ODan. OSw. /ø̄/;

/Au/ > ONorw. /ou/, OIcel. OGuth. /au/, ODan. OSw. /ø̄/;

/Ai/ > ONorw. /æi/, OIcel. /ei/, OGuth. /ai/, ODan. OSw. /ē/.⁵²

The variant development, actually merely a divergent assignment of the members of the archiphonemes, has been very adequately explained

and /i/ must be sought in conjunction with the history of the diphthongs. OE *ea* (with the early spellings *æo* and *eo*) is the short counterpart of a monophthongized reflex of PGmc. /au/, and represents the *u*-umlaut (as well as the so-called 'breaking') of PGmc. /a/. However, PGmc. /au/ was realized in three variants: [ɑu] in neutral environments, [ɑo] before /-a/, and [əy] before /-i/. As the older spellings indicate, OE *ea* must be a reflex of PGmc. [ɑo] (see *Lg.* XLI, 34, fn. 56). With the fronting of the /a/-phoneme in pre-English, [ɑo] became [əo]. (Synchronically, [ə] in this environment could be considered a back variant of /æ/ after the split in the /a/-phoneme. This is undoubtedly reflected in the early spelling *æo*, which was simplified to *eo*.) Upon monophthongization, which entailed an unrounding of the glide, [əo] became /ə̄/, and the spelling *eo* was replaced by *ea*, since the former digraph also could represent the reflex of PGmc. /eu/.

OE *eo* must derive from PGmc. /eu/ before /-a/ (= [ʀo]). Unrounding and monophthongization produced /ʀ̄/, written *eo*. This spelling was then carried over to the *u*-umlaut (and 'breaking') of PGmc. /e/, which must have been /ʀ/, the short counterpart of /ʀ̄/.

OE *io ie* (older *iu*) is the reflex of PGmc. /eu/ not followed by /-a/ (i.e., in neutral environments or when followed by /-i/, NwGmc. /iu/). As for Scandinavian, we may assume a coalescence of NwGmc. /eu/ with /iu/ through morphological leveling. When the unrounding of the glide and monophthongization took place, the result was /ūu/, written at first *iu*. The *o* of the later spelling *io* must be explained as a diacritic patterned after the model of *eo*, since there can never have been an /o/ in this cluster. The *e* of WS *ie* must represent merely a variant diacritic. After the monophthongization, the spellings *iu, io, ie* were available for use in designating the short counterpart of /ūu/, the *u*-umlaut (and 'breaking') of PGmc. /i/, OE /ʉɪ/. For the traditional interpretation of these developments, see A. Campbell, *Old English Grammar* (Oxford, 1962), §126–156 and 190–221.

⁵¹ With /jō/ often leveled in favor of /jū/; see Nielsen, 29–31.

⁵² See Noreen, §40–45. Noreen's *iɑu* (< PGmc. /eu/) must be rejected on the basis of a reinterpretation of **niɑut** (211 Nørre Nærå), which must represent /njə̄t/ (cf. **niut**, 239 Gørlev, which must be /njø̄t/).

by Benediktsson in his discussion of the development of /A/ (for which he uses the cover symbol $\mathring{a}$) before retained and lost /-u/.[53]

7.   Nielsen has attempted to show that the spellings of the Danish runic inscriptions are not nearly so haphazard as has sometimes been maintained.[54] Linguistic evidence can be culled from runic inscriptions only by meticulous attention to the internal development of the vehicle, the older and younger fuþarks, and of its relationship to phonological developments traceable through comparative studies. When these re-lationships have been established, it becomes clear that the fuþark, like all alphabets, developed in attempting to keep pace with phonological changes which rendered the correlation between orthography and pho-nology too tenuous to be maintained. Makaev has called for more reliance on the internal, linguistic evidence available in the runic in-scriptions for determining the relative chronology of runic monuments.[55] By means of a many-sided analysis of the data, it is within our reach to establish a runic chronology which is far more accurate than the archeological datings upon which runologists have so long depended. At the same time, the testimony of runic forms takes on a linguistic significance which is in no way inferior to the testimony of medieval texts written in the Latin alphabet. Diderichsen's contention that an adequate transcription of runic forms is basically impossible because of the schism between the orthographic and phonological systems also loses much of its validity.[56]

[53] Benediktsson, 421–428 (cf. also 417–418). See now also M. I. Steblin-Kamenskij, "Phonemic Merger and Janus Phonemes (Old Icelandic ϱ Anew)," *Philologica Pragensia* VIII (1965), 370–371.

[54] Nielsen, 71. Nielsen's skepticism concerning the value of the phonological explanation of umlaut is unjustified, since it is based on the false assumption that a phonological change must be immediately reflected in orthographic practices; cf. fn. 29, above.

[55] Makaev, *Jazyk drevn. run. nadpisej*, 96–98.

[56] Diderichsen, 323.