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Vol. 2

Von den Hieroglyphen zur Internetsprache: Das Verhältnis von Laut, Schrift und Sprache

From Hieroglyphs to Internet Language: The Relation of Script, Sound and Language

herausgegeben von / *edited by*
Gaby Waxenberger, Hans Sauer and Kerstin Kazzazi

Reichert Verlag

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unter Mitwirkung von / *with the assistance of*
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The Notation of Umlaut Vowels in the Old Icelandic Grammatical Treatises

FABRIZIO D. RASCHELLÀ

Abstract: In their treatment of the Icelandic alphabet and orthography, three of the four extant Old Icelandic Grammatical Treatises (namely the First, the Second, and the first part of the Third Grammatical Treatise), chronologically placeable in a time span ranging from the mid-12th to the second half of the 13th c., devote extensive and detailed discussion to vowel ligatures (sometimes called 'diphthongs') and other special graphemes denoting umlaut vowels. This is no surprise, indeed, since the traditional Latin alphabet, on which the Icelandic one was based, had no means of its own to represent such Scandinavian (and, more in general, Germanic) sounds and phonemes, although attempts had been made long before by other Germanic peoples – first of all by the Anglo-Saxons – to adapt the Latin alphabet to their vernaculars. The aim of this paper is to investigate, by closely discussing the practical orthographic rules displayed in these works, the principles underlying the grapho-phonemic analysis of umlaut vowels applied in each treatise both individually and in comparison with the other treatises, also in view of a future search for the possible existence of an early common theoretical basis.

In ihrer Behandlung des isländischen Alphabets und der isländischen Orthographie widmen sich drei der vier vorhandenen altisländischen grammatischen Traktate (nämlich das Erste, das Zweite und der erste Teil des Dritten Grammatischen Traktats), die chronologisch in einer Periode zwischen der Mitte des 12. bis zur zweiten Hälfte des 13. Jahrhunderts zu datieren sind, ausführlich und detailliert den Vokalligaturen (manchmal 'Diphthonge' genannt) und anderen besonderen Graphemen für Umlautvokale. Dies ist nicht überraschend, da das traditionelle lateinische Alphabet, auf dem das isländische basierte, keine eigenen Mittel besaß, um solche skandinavischen (und ganz allgemein germanischen) Laute und Phoneme darzustellen, obwohl es schon früher Versuche verschiedener germanischer Völker gegeben hatte – zuerst bei den Angelsachsen –, das lateinische Alphabet an die jeweilige Volkssprache anzupassen. Das Ziel dieses Beitrags ist es, durch genaue Diskussion der praktischen orthographischen Regeln, die sich in diesen Werken zeigen, die Prinzipien zu untersuchen, auf denen die grapho-phonemische Analyse der Umlautvokale basiert, und zwar sowohl in jedem Traktat für sich als auch im Vergleich mit den anderen Traktaten, und dies auch im Hinblick auf das mögliche Vorhandensein einer frühen gemeinsamen theoretischen Grundlage.

~ * ~

1. First Grammatical Treatise[1]

af þvi at tvngvrnar erv vlikar hver annarri [...] þa þarf vlika stafi í at hafa enn æigi ena ǫmv alla i ǫllvm [...]. Hverega tvngv er maðr skal rita annarrar tvngv stǫfvm þa verðr svmra stafa vant af þi at æigi finnz þat hlioð i tvngvnni sem stafirnir hafa þeir er af ganga. Enn þo rita enskir menn enskvna latinv stǫfvm ǫllvm þeim er rettræðir verða i enskvnni. en þar er þeir vin-

[1] For the purpose of the present paper it will suffice to mention that the whole of Old Icelandic 'grammatical' literature (which actually also includes writings on literary rhetoric) is contained in four works, dating from about 1150 to 1350 and traditionally referred to as *First*, *Second*, *Third*, and *Fourth Grammatical Treatises* (henceforth abbreviated *FiGT*, *SeGT*, *ThGT*, and *FoGT*), according to their sequence in the Copenhagen manuscript AM 242 fol (second half of the 14th c.), commonly known as the *Codex Wormianus* of *Snorri's Edda*. This is also the only manuscript in which the four treatises are handed down as a collection.

naz æigi til þa hafa þeir við aðra stafi sva marga ok þesskonar sem þarf en hina taka þeir or er æigi erv rett ræðir í mali þeira. Nv eptir þeira dæmvm [...] til þess at hægra verði at rita ok lesa sem nv tiðiz ok a þessv landi [...] þa hefi{r} ek ok ritað oss islendingvm staf rof bęði latinv stofvm ǫllvm þeim er mer þotti gegna til vaars maals vel sva at rett ræðir mætti verða ok þeim oðrvm er mer þotti i þvrfa at vera en or varv teknir þeir er æigi gegna atkvæðvm vaarrar tvngv (*FiGT*, 84: 3–18).

Because languages differ from each other, [...] different letters are needed in each, and not the same in all [...]. Whatever language one intends to write with the letters of another language, some letters will be lacking, because that sound is not found in the [latter] language which the surplus letters [of the former language] have. And yet Englishmen write English with all those Latin letters that can be rightly pronounced in English, but where these do not suffice, they add other letters, as many and of such a kind as are needed; but they put aside those that cannot be rightly pronounced in their language. Now, following their example, [...] in order that it may become easier to write and read, as is now customary in this country as well, [...] I have written an alphabet for us Icelanders also, using both all those Latin letters that seemed to me to fit our language well – in such a way that they could be rightly pronounced – and those others that seemed to me to be needed, while those were taken out that do not suit the sounds of our language.[2]

The passage quoted above is from the introductory section of the Icelandic *FiGT*, an orthographic work composed some time between the second and third quarters of the 12th ca. by an anonymous Icelandic scholar and handed down in a single manuscript (*Codex Wormianus*) from about two centuries later. I thought it suitable to put it at the beginning of my paper because it offers a particularly meaningful summation of both its author's aim to set up an alphabet which could represent the Icelandic phonological system of his time in an adequate and exhaustive way and, more generally, the leading principle at the basis of all of the Icelandic grammatical treatises dealing with orthographic matters, that is, to restrict the number and the shape of the letters to a set of units strictly necessary for correct reading and understanding of an Icelandic text. In this regard it should also be noted that only three of the four Icelandic grammatical treatises are concerned with letters (with regard to both their shapes and sound values), namely the *FiGT*, the *SeGT*, and the *ThGT*, and the latter only in its first section, as we will see below.[3]

Immediately after this passage, the author of the treatise goes on to state which kinds of letters he has retained from the Latin alphabet, which he has added, and which, on the contrary, he has rejected:

---

2 Both the Icelandic text and the English translation are largely in accordance with Hreinn Benediktsson (1972, 206–209), but Einar Haugen's translation (1972, 12–13) has also been taken into account where it seemed more fitting. Textual references are to page and line numbers of *Codex Wormianus* (see note 1 above). The same criteria will be adhered to for further quotations from the *FiGT*. With regard to the passage in question, it should be noted that the sentence "Hverega tvngv ... af ganga" is probably corrupt or defective. Emendations and completions have been suggested by some editors, but are not taken into consideration here (see, for a discussion, Hreinn Benediktsson 1972, 207 fn 84: 7–9); instead, some interpretative words are added within brackets in the English translation.

3 A fifth writing concerning grammatical matters – or, rather, the remnants of it – contained in the early-14th-c. manuscript AM 748 I b 4to (Stofnun Árna Magnússonar í íslenskum fræðum, Reykjavík), which consists of a small fragment of a treatise on skaldic rhetorical figures, is sometimes associated with these works and therefore referred to as the 'Fifth Grammatical Treatise'. Mention should also be made of the fragment of a Latin grammar in Icelandic preserved in the Reykjavík manuscript AM 921 III 4to (ca. 1400). Both texts are edited and briefly discussed in Ólsen 1884, xliv–xlv, xlvii, 156–159.

> Or erv teknir samhlioðendr nokkvrir or latinv stafrofi enn nokkvrir i giorfir raddar stafir e⟨rv⟩ ǫngvir or teknir enn i giorfir miǫg margir þviat vaar tvnga hefir flesta alla hlioðs ęða raddar. (*FiGT*, 84: 18–20).
>
> Some consonants of the Latin alphabet are left out, and some [new ones] put in. No vowels are left out, but a good many put in, because our language has almost all vowel sounds.

Then, a few lines later, he enumerates and briefly describes, giving reasons for their shapes, the four 'new' vowels which, according to him, should be added to the five basic Latin vowels in order to achieve an effectual and consistent writing of the Icelandic language. All of these letters in fact represent umlaut vowels (both short and long, and both oral and nasal), for which the Latin alphabet obviously had no symbols:[4]

> Við þa hlioð stafi .v. er aaðr vorv i latínv staf rofi. a e i o v. þar hefi ek við giorfa þessa stafi fiora er her erv ritnir nv. ǫ.ę ø y. Ǫ hefir lykkiv af ae en hringinn af oe þviat hann er af þeira hlioði tveggia saman blandinn kveðinn minnr opnvm mvnni enn a. enn meirr enn o. Ę er rítinn með lykkiv as enn með ollvm vexti es sem hann er af þeim tveim samfelldr minnr opnvm mvnni en a en meirr enn e. Ø hann er af hlioði es ok os felldr saman minnr opnvm mvnni kveðinn en e ok meirr enn o Enda ritinn af því með kvisti e⟨s⟩ ok með osens hring. Y er af roddv is ok vs gorr at æinni rǫddv kveðinn minnr opnvm mvnni enn i ok meirr en v. ok skal af því ena fyrri kvisl af hǫfvð stafs ve ⟨***⟩ (*FiGT*, 84: 24–32).
>
> To the five vowels that already were in the Latin alphabet – *a*, *e*, *i*, *o*, *u* – I have added these four letters that are written here: *ǫ*, *ę*, *ø*, *y*. *Ǫ* has the loop from *a* and the circle from *o*, because it is a blending of the sounds of these two, pronounced with the mouth less open than *a*, but more than *o*. *Ę* is written with the loop of *a*, but with all the shape of *e*, since it is composed of the two, [pronounced] with the mouth less open than *a*, but more than *e*. *Ø* is composed of the sounds of *e* and *o*, pronounced with the mouth less open than *e* and more than *o*, and therefore in fact written with the cross-bar of *e* and the circle of *o*. *Y* is made into a single sound from the sounds of *i* and *u*, pronounced with the mouth less open than *i* and more than *u*, and therefore it shall [have] the first branch of capital *U* ...[5]

Leaving aside any other theoretical and historical phonological consideration, we can just note the essential and 'primitive', albeit not banal and perfectly rational, way in which the author defines the relationship between each new vowel letter and the basic Latin letters it is composed of, which is consistently maintained all through the passage.

A question that has generated much scholarly discussion, especially among the earliest editors and commentators of the treatise, is to what extent the only manuscript in which it is preserved reflects the original shape of the four letters in question; in particular, whether "the loop of *a*" was originally traced as a real loop on the left side of the letters, – viz. *ǽ*,

---

4 It is important to note that in the present discussion the term 'umlaut vowels' refers only to those Old Icelandic vowel phonemes, originating from the mutation of primary vowels, which had no phonetic equivalent in Latin and therefore could not be adequately represented by any of the standard vowel graphemes of the Latin alphabet.

5 The passage is clearly defective in at least one place: there is an apparent lacuna after the words "af hǫfvð stafs ve", for which no conjectural restoration has been proposed so far; another possible lacuna is generally assumed to involve the immediately preceding words ("ena fyrri kvisl"), and has been tentatively restored by several editors (see Hreinn Benediktsson 1972, 211–213 fn 84: 31–32, for discussion). As for the sound values denoted by the four additional vowels described by the author of the treatise, the following correspondences may safely be posited: *ǫ* = [ɒ], *ę* = [æ], *ø* = [ø], *y* = [y].

ꝏ – or as a *cauda* ('tail') under their body, as it actually appears in the manuscript. As a matter of fact, both letter types are attested in medieval Icelandic script, especially at an early stage. It is quite likely that the loop was the earliest form used, yet there is no clear evidence of this.[6]

The presentation of the four new letters is followed at a short distance by a series of illustrative examples intended to prove the suitability and the necessity of such letters to represent the Icelandic vowel system in a complete way:

> Nv mvn ek þessa stafi aatta [...] a meðal enna sǫmv tveggia samhlioða setia sitt sinn hvern. enn syna ok dæmi gefa hve sitt mal giori hverr þeira við enna sǫmv stafa fvllting i enn sama stað settr. hverr sem annarr [...] Sar sǫr ser sær sor sør svr syr. (*FiGT*, 85: 12–17).

> Now I shall place these eight letters [...] between the same two consonants, each in its turn, and show by examples how each of them, with the support of the same letters [and] placed in the same position of the others, makes a discourse of its own (i.e. produces a different meaning) [...]: *sár* ('wound'), *sǫ́r* ('wounds'); *sér* ('[he] sees'), *sær* ('sea'); *sór* ('[he] swore'), *sør* ('fair'); *súr* ('sour'), *sýr* ('sow').[7]

The same type of contrasting analysis is maintained throughout the section of the treatise devoted to vowels – that is, it is also applied to the oral vs. nasal and to the short vs. long oppositions – and is extended to the consonants as well (in a subsequent section of the treatise), to illustrate the simple vs. geminate opposition.

2. Second Grammatical Treatise

Like the *FiGT*, this second testimony of Old Icelandic grammatical scholarship is also an anonymous work, but, unlike the former, it is handed down in two manuscripts, each presenting a different version: Uppsala DG 11 4to, or *Codex Upsaliensis* of *Snorri's Edda* (first quarter of the 14th c.), and AM 242, fol, i.e. the already mentioned *Codex Wormianus* of *Snorri's Edda* (second half of the 14th c.).[8] In my critical edition and study of this text I have tried to demonstrate that the so-called *SeGT* was in all likelihood composed between the third and the last quarter of the 13th c.,[9] a dating which, as will be discussed below, is based among other things on the vowel system emerging from the analysis of certain vowel graphemes described in the treatise. If this thesis of mine – which, to my knowledge, has

---

6 Cf. Hreinn Benediktsson (1965, 45). The question also applies to the description of the same letters in the *SeGT*, which will be discussed below. As regards possible shape variants of *ø* and *y*, the other two letters denoting umlaut vowels, essential information can be found in Haugen (1972, 59–60) and Hreinn Benediktsson (1972, 109–111, and 211–212 fn 84: 31–32).

7 One may note that all illustrative examples show long vowels (although these are not specially marked as such; the notation of long vowels will be discussed further on in the treatise), while short vowels would be expected in this context. This is nevertheless not relevant for the author's purpose here, which is to emphasize a *qualitative* difference among the vowels in each contrastive example.

8 Both manuscripts (henceforth abbreviated as *U* and *W*, respectively) are available in facsimile reproductions: Grape 1962 (for *U*) and Nordal 1931 (for *W*). There are several editions of the *SeGT*, all, with the exception of the latest one (Raschellà 1982), from the 19th c., yet the oldest ones can hardly be called 'critical', because they fail to consider the Uppsala witness or assign it a secondary importance (cf. note 11 below). For quotations from the *SeGT* in the following discussion I will draw on Raschellà's critical edition (1982, 48–75).

9 See Raschellà (1982, 126–130).

yet to be disputed – is correct, it implies that the treatise is considerably later than traditionally thought (early 13th c.)[10] and, in particular, some decades later than the *'Third' Grammatical Treatise*, which immediately follows it in manuscript *W*.

The discussion of letters in the treatise is introduced by a figure, made up of five concentric circles (Figure 1 below), in which letters are grouped according to a criterion which is neither phonological nor strictly orthographic, but mainly based on the position letters may occupy within a word or syllable. This is in fact a peculiarity of this treatise, for which no parallel has been found to date in other grammatical works, either Icelandic or from other traditions. Moreover, it should be noted that the figure occurs in only one of the two versions in which the treatise is preserved, that in manuscript *U*.[11] Since the author's treatment of each group of letters, or, occasionally, of single letters, is invariably made with reference to the circular figure, we must first examine the figure before considering what the author states about the writing of letters and, in particular, the letters denoting umlaut vowels in the subsequent sections of the treatise.

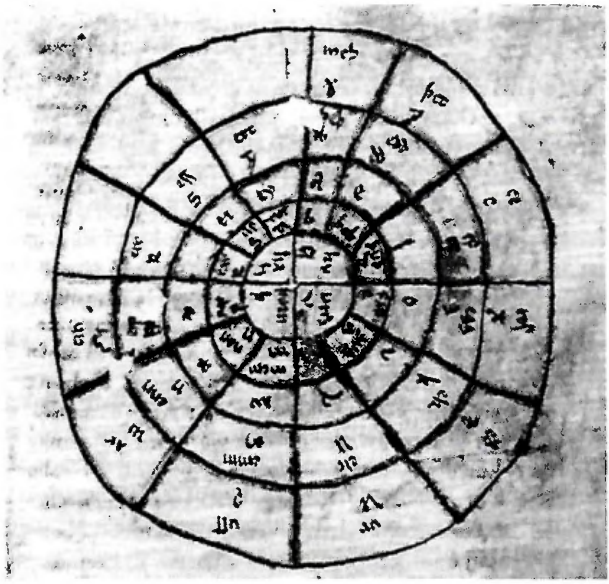

Figure 1: The circular figure in the *SeGT* (*U* = *Codex Upsaliensis* (DG 11), p. 89)

Disregarding, for the sake of brevity, the other letters contained in the figure, we can note that all letters denoting vowels or vowel combinations are placed in the third circle from the centre. Their sequence, starting from the upper right quadrant and proceeding clockwise, is the following: a, e, i; o, v, y; av, æ, ɐ; —, ei, ey.[12]

10 See, for example, Nordal (1931, 13).

11 That the version of the treatise contained in this manuscript is the more complete and close to the original has long been acknowledged by all editors and commentators of the treatise, and is therefore beyond all doubt. On the relationships between the two witnesses of the *SeGT*, see Raschellà (1982, 16–20).

12 'ɐ' is one of the possible notations for the ligature 'a+v', as will be explained below.

The empty square between 'ɔ' and 'ei' is virtually occupied by a repetition of the letter 'i'.[13] Actually, according to the author's remarks in the subsequent description of the figure, this vowel is capable of three different sound values: a properly vocalic one (when it stands alone or between consonants), a semivocalic one (as the second element, or off-glide, of the diphthong /ei̯/), and a 'consonantal', i.e. approximant, one (before a stressed vowel, as in /i̯a/, /i̯ǫ/, /i̯u/ etc.). For this reason, this letter is also given a name of its own: *skiptingr*, i.e. '(the) variable (one)'. Its absence in the figure is in all likelihood due to a scribal oversight at some point of the manuscript transmission, so the letter has to be restored to this place.[14]

The circular figure is immediately followed by a paragraph in which all the letters displayed in the figure are presented and analysed by the author. For our purposes, only the discussion of the third circle, which contains the vowel letters, is relevant. Since, as stated above, the treatise has been handed down in two manuscripts which do not show exactly the same text, in this case I will not draw on a transcription of the manuscripts' readings but on the restored text (and the attendant English translation) in my critical edition of the treatise, where a normalized spelling is applied. At any rate, the notation of vowel letters in either manuscript will be reported when necessary.

The author's commentary on the letters in the third circle reads as follows:

> Í þriðja hring eru tólf stafir, er hljóðstafir heita. Þessi grein er þeira stafa. Fyrst heita stafir, ok skal svá rita: *a*, *e*, *i*, *o*, *u*, *y*. Önnur grein er sú, er heita límingar, ok skal svá rita: *æ*, *ǫ*, *au*; þessir eru þrír; hér eru tveir hljóðstafir saman limðir, því at þessi stafrinn hverr hefir hvern hlut af hljóði hinna, er hann er af gerr. Lofat er þat í ritshætti at rita af límingum heldr *a*-lykkju en fullt *a*, ok er þá svá: *ǫ*, *ǫ*. En þriðja grein er þat er heita lausaklofar, ok skal svá rita: *ei*, *ey*; þessir tveir stafir eru ritaðir óbreyttir í hvárum stað ok gerr einn af, því at hann tekr hljóð hinna beggja, en fyrir ritsháttar sakir er þessa stafi óhægt saman at binda. (*SeGT*, 60: 31–62: 39; references are to page and line numbers in Raschellà 1982).
>
> In the third circle there are twelve letters, which are called vowels. These letters are divided as follows. First [come those which] are called [simple] letters and [which] must be written thus: *a*, *e*, *i*, *o*, *u*, *y*. The second kind is that [of those letters] which are called ligatures and [which] must be written thus: *æ*, *ǫ*, *au*. These are three; here two vowels are linked together, because each of these letters has every part of the sound of those [letters] it is made of. It is allowed in writing practice to write, of the ligatures, [only] the loop of the *a* rather than the whole *a*, and then it is thus: *ǫ*, *ǫ*. The third kind is that [of those letters] which are called digraphs and [which] must be written thus: *ei*, *ey*. These two letters are written unchanged in each part and made into one [letter], because this [letter] takes the sound of both those [it is made of]; but for writing reasons it is impractical to bind these letters together.

It is important here to point out that the two simplified ligatures mentioned in this passage (*ǫ*, *ǫ*) are used, instead of full ligatures, in a second figure contained in the treatise, this time a rectangular figure (Figure 2)[15], in which vowels and consonants are likened to the strings and the keys, respectively, of a musical instrument.[16] The letters in question are the last but four and five.

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13 Cf. Raschellà (1982, 57; notes to the circular figure).

14 See Raschellà (1982, 92–94) for a thorough discussion.

15 For practical reasons, only the upper part of the figure is reported here, as it is sufficient to illustrate the author's purpose in this regard.

16 The *symphony* (MS: *simphonie*) or *organistrum*, a primitive kind of hurdy-gurdy. For detailed information, see Raschellà (1982, 104–105).

Figure 2: The rectangular figure in the *SeGT* (*U* = *Codex Upsaliensis* (DG 11), p. 91)

The writing of the vowel ligatures in the commentary on the circular figure, although not perfectly identical in the two manuscripts of the treatise, does not pose particular problems of comparison.

U (89: 8)[17] has the following symbols: æ, ꝏ, ꝑ, which, apart from their order of succession, do not differ substantially from those in the circular figure (av, æ, ꝏ). The corresponding passage in *W* (92: 4)[18] shows the following notations: æ, ꝏ, ꝏ.

Regrettably, a circumstantial and exhaustive analysis of the phonemic values that actually underlie each of the three ligatures represented in the treatise would require a long and elaborate discussion, which is obviously impossible here. I will therefore limit myself to few essential remarks, referring readers to my critical edition and study of the treatise for a detailed examination of this topic.[19]

It should first of all be observed that in early Icelandic script no functional distinction was made, as a rule, between 'u' and 'v' (either symbol was used for both the vocalic and the consonantal values of these letters) and that a y-like symbol – the so-called 'insular v', having its remote origin in the Old English letter ƿ 'wynn', in turn derived from the rune-row – was quite commonly used from the very beginning as an alternative to 'v' where this letter assumed a consonantal or semivocalic value.[20] This also applied when the two graphic variants were combined with other vowel symbols in ligatures. From this point of view, the notation of the ligatures in *W* is not problematic, for only one ligature, 'ꝏ', is formed by means of 'u/v'. On the contrary, *U* shows two ligatures which, theoretically at least, could have one and the same phonological referent: 'ꝏ' and 'ꝑ'.

In order to establish the actual phonemic value of each of the two ligatures under discussion it would be necessary not only to compare them with the ligatures in both the circular and the rectangular figure, but also to carry out a detailed and careful examination of all

17 Cf. Raschellà (1982, 32: 5).

18 Cf. Raschellà (1982, 33: 5).

19 See Raschellà (1982, 84–91).

20 The question is in fact more complex than it may appear from my brief description. A detailed discussion of this topic can be found in Hreinn Benediktsson (1965, 24–28) and, with special reference to a passage in the *FiGT* concerning the use of "Greek *y*" as a notation for /v/, in Hreinn Benediktsson (1972, 92–97).

vowel graphemes recorded and described in the treatise and infer from them the overall vowel system they refer to. But, as already mentioned, this is impossible to do here, so I must ask the reader to rely 'sight unseen' on the results achieved in my previous investigation of this subject.[21] The outcome of my analysis is that the ligature 'ɐ' (or 'ɐ', according to *W*) denotes the monophthong /ö/, a vowel resulting from the merger of earlier /ǫ/ and /ø/), while the ligature 'ɣ' (or 'ɐ', according to *W* and to both figures in *U*) stands for the diphthong /au/. No problem is posed with regard to the third vowel ligature, 'æ', which obviously denotes the phoneme /ǣ/.

From the above considerations it becomes apparent that two of the vowel ligatures represented in the *SeGT*, 'æ/ę' and 'ɐ/ǫ', denote two of the three umlaut vowels belonging to the vowel system that can be inferred from the set of vowel graphemes described in the treatise, viz. the long low front vowel /ǣ/ and the short mid central vowel /ö/, respectively. The third umlaut vowel, /y/ (both short and long), is, according to long-established tradition (cf. *FiGT* above), denoted by 'y'. This situation is in fact referable to the typical vowel system of mid/late-13th-c. Icelandic, the most recent innovation of which is the unrounding and lowering of earlier /ǿ/ and its consequent merger with /ǣ/.[22]

As previously mentioned, this inference has, among other things, a significant consequence on the dating of the treatise, which, precisely (but not solely) on the basis of the vowel system it refers to, appears to be later by about half a century than has generally been thought.

3. Third Grammatical Treatise

Written around the middle of the 13th c., this is the only Icelandic grammatical treatise for which we know the name of the author: Óláfr Þórðarson (ca. 1212–1259), nicknamed *hvítaskáld* 'the white poet', one of Snorri Sturluson's nephews. It would therefore seem more appropriate to call this work *Óláfr Þórðarson's Grammatical (and Rhetorical) Treatise* rather than *Third Grammatical Treatise*, and all the more so given that, as asserted above, it is in all likelihood earlier than the *SeGT*. In fact, the work is divided into two main sections, of which only the first (traditionally known as *Málfræðinnar grundvöllr* 'The foundation of grammar') is devoted to properly grammatical topics, such as the sound, the letter, the syllable, and the parts of speech, while the second one (called *Málskrúðsfræði* 'The discipline of language ornamentation') deals with the elements of poetic composition such as the permissive and prohibitive rules of verse-making and rhetorical figures. It has been handed down in three principal manuscripts: AM 748 I b 4to (dated ca. 1300; Stofnun Árna Magnússonar í íslenskum fræðum, Reykjavík), AM 242 fol (again, the *Codex Wormianus*, or manuscript *W*, of *Snorri's Edda*, from the second half of the 14th c.), and AM 757 a 4to (ca. 1400; Stofnun Árna Magnússonar í íslenskum fræðum, Reykjavík).[23]

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21 See note 19 above for references.

22 Cf., among others, Hreinn Benediktsson (2000, 60–62 [1959, 295–298]) and the relevant discussion by Kjartan Ottosson in the introduction to the volume containing the reprinted version of Hreinn Benediktsson's article (2002, xxxii–xxxiii). The relationship between /ǿ/ and /ǣ/ is of central importance also in connection with the *ThGT*, as we will see below.

23 A fourth extant manuscript, AM 757 b 4to, is an apparent copy of *W* and is therefore not relevant for the *constitutio textus*. A careful and up-to-date description of the four manuscripts and of their mutual relation-

AM 748 I b 4to, the oldest of the three, generally provides the best readings; it is therefore regarded as the closest to Óláfr's original and has long been used as the basis for critical editions, in which it is conventionally referred to as manuscript *A*.[24]

The letters are dealt with in a chapter of the first section in which a comparison between the runic and the Latin alphabets is drawn. The discussion of letters denoting vowels starts with the following 'statement':

> Í norænu stafrófi eru fimm hljóðstafir svá kallaðir: úr ᚢ, óss ᚬ, íss ᛁ, ár ᛅ, ýr ᛦ, ok er íss stundum settr fyrir e, þá er hann stunginn" (*ThGT*, 84: 3.6; references are to page and paragraph numbers in Wills 2001).
>
> In the Norse alphabet there are five vowels, so called: 'úr' ᚢ [*u*], 'óss' ᚬ [*o*], 'íss' ᛁ [*i*], 'ár' ᛅ [*a*], 'ýr' ᛦ [*y*], and 'íss' is sometimes put for *e*: then it is dotted [ᛏ].

Later, after introducing what he refers to as a sentence or formula (*orðtæki*) compiled by the Danish king Valdemar II (1202–1241) and supposed to contain all the letters of a 13th-c. *fuþark*, the author goes on to comment on the single letters in the sentence. In doing so, he uses the description of a vowel ligature included in this sentence to extend his discussion to all "combined letters" (*límingarstafir*), i.e. vowel ligatures and digraphs, in both the runic and Latin alphabets. The passage reads as follows:

> Þar næst stendr ᛆ, þat hljóðar fyrir tveim raddarstǫfum ⟨ᛅ⟩ ok ᛏ, ok kalla Girkir þann staf diptongon, þat er tvíhljóðr á noræna tungu, ok eru fjórir diptongi í látínustafrófi en fimm í rúnum. Diptongus er samanlíming tveggja raddarstafa í einni samstǫfu, þeira er báðir halda afli sínu. Þessir eru límingarstafir í rúnum: ᛆ fyrir ae; ᛅᚢ fyrir au; ᛏᛁ fyrir ei, ok er sá diptongus ekki í látínu; ᚮ fyrir ey; ᚯ fyrir eo ⟨ok⟩ ǫ. oe er hinn fjórði diptongus í látínu, ok er hann ekki í rúnum. (*ThGT*, 88: 4.12–4.14).
>
> Next stands ᛆ [æ]; it has the sound of two vowels, ᛅ [*a*] and ᛏ [*e*]; the Greeks call this [type of] letter *diptongon*, that is 'double sound' (*tvíhljóðr*) in the Norse language. There are four *diptongi* in the Latin alphabet, but five in runes. *Diptongus* is the combination of two vowels in one syllable, both of which retain their value. These are the combined letters in runes: ᛅ for *ae* (æ); ᛅᚢ for *au* (*a*); ᛏᛁ for *ei*, and this *diptongus* is not found in Latin; ᚮ for *ey*, ᚯ for *eo* (ø) and ǫ; *oe* is the fourth *diptongus* in Latin, and it is not found in runes.[25]

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ships can be found in Wills (2001, 41–56). Two of the manuscripts have been published in facsimile editions: AM 748 I b 4to (Wessén 1945) and AM 242 fol (Nordal 1931; cf. note 8 above).

24 The treatise was edited for the first time separately from *Snorri's Edda* by Björn Magnússon Ólsen in 1884, who also presented in the same volume the first independent edition of the *FoGT*. A second critical edition, by Finnur Jónsson, followed in 1927. Two further editions have appeared in recent times: one by Thomas Krömmelbein, in 1998, which reproduces Ólsen's text practically unchanged, and one by Tarrin Wills, in 2001. The latter, an unpublished PhD thesis, is limited to the first section of the treatise (*Málfræðinnar grundvöllr*). Both of the latter editions include a modern translation of the treatise, in German and in English respectively. The quotations from the *ThGT* in the following discussion are, except for a few details, in accordance with Wills's critical edition (Wills 2001, 76–100), which "provides a normalised text of MG [= *Málfræðinnar grundvöllr*] based on A and new readings of all the medieval manuscripts of 3GT [= *ThGT*]", as well as the only complete English translation to date. Wills's introduction contains, among other things, a useful critical survey of the editions of the *ThGT* prior to his own (*ibid.*, 35–37).

25 The passage presents several obscure and controversial readings, which editors have variously explained and emended by conjecture. The following should be noted in particular: (1) The runic symbol for 'ey' (ᚮ) is here reproduced consistent with *A*, the only manuscript in which this ligature occurs. The same is true of Wills (2001, 88: 4.14) and Ólsen (1884, 48: 35), while Finnur Jónsson (1927, 30: 8) emends it by introducing a new

As is evident, this passage is characterized by a certain degree of terminological confusion: the terms 'diphthong' (in various hybrid Greek-Latin forms), its Norse calque *tvíhljóðr* 'double sound', and 'ligature' (*límingarstafir*, literally 'conglutinated letter') are used, here as elsewhere in the treatise, interchangeably to express both the proper concept of 'diphthong' – viz., according to traditional Latin grammar, two adjacent vowels belonging to the same syllable and each retaining its own sound (as recalled by the author himself in the above passage) – and those of 'digraph' and 'ligature', which have a purely graphic connotation, in that they can refer to both diphthongs and monophthongs expressed by the combination of two vowel letters, either separate or merged together.[26] This, of course, makes it difficult for us to immediately and unequivocally recognize which of the letter combinations mentioned in the passage at issue denote actual diphthongs and which, on the contrary, denote simple vowels – in particular, umlaut vowels. Moreover, the picture is further complicated by the combined treatment of runic and Latin writing: while the runic notations, with the sole exception of ᛏᛁ, are represented by ligatures, the corresponding Latinized notations are expressed – again with only one exception (*ǫ*) – by digraphs.

Here, too, as for the *SeGT* above, a thorough discussion of both internal and external evidence would be necessary in order to achieve a clear picture of the relationships between the notational and the phonological planes of the vowel system underlying this passage of the treatise; but, regrettably, space limitations once again preclude such an analysis. Still, I shall try to sketch a possible reconstruction of the notation of umlaut vowels according to the relevant data provided by the *ThGT*, again asking the reader's indulgence for the lack of a thorough explanation.

Before attempting to formulate a hypothesis, one more point deserves careful consideration in connection with the treatment of vowel ligatures in the *ThGT*. After explaining the various ways in which vowels combine with each other to form diphthongs, the author goes

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symbol, ᛦ, apparently obtained by superimposing the symbol described in *A* onto ᛦ, the most common variant of the *ýr*-rune (denoting /y/) outside Iceland. None of the editors, however, gives reasons for either the preservation or the substitution of the symbol occurring in the manuscript. To be exact, Ólsen, in a previous work of his (1883, 83–84), had raised doubts about the original shape of this ligature and the correctness of its representation in *A*, yet no trace of his discussion emerges from his edition of the *ThGT*. Although it cannot be excluded that the symbol appearing in the manuscript preserves its original shape (as occurs, for example, in some Norwegian and Orcadian runic inscriptions from the High Middle Ages, where it may denote the diphthong /øy/; cf. Spurkland 1991, 143–146), there are several elements which seem to suggest the contrary; in fact, according to Bæksted (1942, 20 and 39–40), the symbol ᛏ in Icelandic runic inscriptions invariably represents /e/ or /ē/. (2) An 'ǫ' is added, apparently by the same hand, above the digraph 'eo' – the Latin notation for the runic ligature ᛏᛁ – in *A*, which is absent in *W* (the third manuscript, AM 757 a 4to, omits the whole passage concerning the runic pangram). Although appearances may lead us to believe that the letter was added by the copyist of *A* to indicate an alternative and more usual spelling for 'eo' (which is in fact restricted to the earliest Icelandic manuscripts; cf. Hreinn Benediktsson (1965, 28 and 58)), it is, on the contrary, very likely that it was found in the original of the treatise *beside* 'eo' (hence my conjectural addition of *ok* 'and') and that the copyist had first simply omitted this letter and then restored it by writing it above the line. The reasons behind this surmise are clarified further on in this paper in the discussion of the relations between the runic vowel symbols described in the treatise and the Icelandic vowel system at the time in which the treatise was composed. (3) Both *A* and *W* have the abbreviation for *ok* 'and' in place of the Latin digraph 'oe' ("the fourth Latin diphthong"); this is easily explained as a misreading of the original 'oe' as 'oc', and the correct reading is accordingly restored by most editors. An extensive and detailed discussion of the passage concerning the comparison between the runic and the Latin alphabets in the *ThGT* can be found in Raschellà (2016).

26 Essential information on the technical vocabulary used in Old Icelandic grammatical literature and its relations with Latin grammatical terminology is found in Raschellà 2004.

on to list the (alleged) reasons for the very existence of *diptongi* – i.e. any kind of combination of vowel letters – in both Latin and Norse:

> Á látínu er diptongus fyrir þrennar sakir fundinn: fyrir hljóðfegrð ok sundrgrein ok samansetning, en í norænu fyrir tvennar sakir: fyrir grein ok hljóðfegrð. Fyrir greinar sakir er diptongus fundinn í norænu sem í þessum nǫfnum: m⟨æ⟩r ok s⟨æ⟩r, at greina þau frá fornǫfnum sér ok mér ok ǫðrum þvílíkum, en fyrir hljóð{s}fegrð er diptongus fundinn sem hér: løkr, øgr, þvíat fegra þykkir hljóða heldr en lækr, ægr. (*ThGT*, 88: 4.16–17).[27]
>
> In Latin, the *diptongus* is found for three reasons: euphony, distinction, and composition, but in Norse for two reasons: distinction and euphony. For reasons of distinction the *diptongus* is found, in Norse, in nouns like *mær* ('maid') and *sær* ('sea'), to distinguish them from the pronouns *sér* ('to oneself') and *mér* ('to me'), and [in] other such [cases]. For [reasons of] euphony the *diptongus* is found [in words] like *løkr* ('brook') [and] *øgr* ('awful'), because it seems to sound finer than [when the same words are pronounced] *lækr* and *ægr*.

As I have argued elsewhere,[28] the passage in question is particularly important for its implications concerning the stage of development of the Icelandic vowel system at the time of writing of the treatise.[29] In fact, this passage contains an indirect but unmistakable indication that Óláfr was living in a time in which the confluence of the long rounded front vowel /ø̄/ into the corresponding unrounded vowel /ǣ/ was still under way. Reversing the reasoning, this means that this crucial development in the Icelandic vowel system was not yet fully accomplished by the middle of the 13th c., and that the two vowels were, for some speakers at least – as for Óláfr –, still in phonological opposition.

In consideration of the clues we can derive from the author's statements in the above two passages, and on the basis of our knowledge of the overall Icelandic vowel system at the time of writing of the treatise[30] – which, as we have seen, is reinforced by internal evidence from the treatise itself –, we may reasonably set up the following picture of umlaut vowels and their notations according to the intentions of the author the *ThGT*:

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27 The text is from *W*; in *A*, a whole leaf which should contain this passage is missing.

28 See Raschellà 2000.

29 Incidentally, it should be mentioned that the author's remarks concerning the 'raisons d'être' of the *diptongus* are likely attributable to some medieval Latin grammatical source, which, however, has not yet been identified (cf. Raschellà 2000, 386 fn 13).

30 In the present case we are fortunate to know the name of the author, as mentioned above, and to be well-informed on some events of his life. This is possible due to the fact that he was a member of the eminent family of the Sturlungar, the same to which Snorri Sturluson belonged. More precisely, Óláfr – a poet, grammarian and lawspeaker –, was Snorri's nephew on his father's side.

Runic notation	*Latin notation*		*Phonemic value*
ᛅ	ae	(æ)[a]	/ǣ/
ᛅᚢ	au	(aɹ)[b]	/au/
ᛅᛁ	ei		/ei/
ᛅᛄ	ey		/ey/
ᛅ̨	eo	(ø)[a]	/ǿ/
	ǫ	(ɔ)[b]	/ö/

Table 1: Phonemic-graphemic correspondences in the *ThGT*
[a] Common variant
[b] Possible variant

Although a detailed discussion of the above diagram cannot be given here, a minimum of commentary is nonetheless necessary.

The overall picture of vowel ligatures and digraphs and their phonemic values that can be derived from the author's account is clear enough. The only points that pose some difficulties concern the phonemic values to ascribe to the runic ligatures ᛅᚢ and ᛅ̨.

The ligature ᛅᚢ is rendered in the treatise by the Latin spelling 'au', which in writing practice was often contracted to the ligature 'ꝏ'. Icelandic manuscript evidence shows that the ligature 'ꝏ' could be used for both the diphthong /au/ (in place of the more frequent digraph 'au') and the low back vowel /ǫ/ (and, after the merger of the latter with /ø/, for the mid central vowel /ö/).[31] However, it is quite improbable that the ligature would be used with both values in one and the same orthographic system, least of all in one described by a diligent grammarian like Óláfr. Thus, as far as the *ThGT* is concerned, it denoted *either* the diphthong /au/ *or* the vowel /ö/. That said, since it is equally unlikely that the author of the treatise failed to mention one of the diphthongs found in his own language, we are led to infer that the ligature in question denoted precisely that diphthong, i.e. /au/. On the other hand, it seems that the runic ligature ᛅᚢ was rarely used with a monophthongal value in runic inscriptions, while there are several instances of its use as a variant of the common digraph ᛁᚢ for the notation of the diphthong /au/, at least in medieval Norwegian inscriptions (where the diphthong is phonemically identifiable as /ɔu/).[32]

If my inference concerning ᛅᚢ is correct, we are left only with the problem of establishing the phonemic value of the ligature ᛅ̨. For this purpose, we have an important clue given to us by the treatise itself, provided that manuscript *A* reflects the original reading. As

31 Cf. Hreinn Benediktsson (1965, 70–71). As argued above, the monophthongal value /ö/ is precisely that represented by this ligature, in the two variants 'aɹ' and 'ꝏ', in the *SeGT*.

32 See Spurkland (1991, 153) for the Norwegian records. There seems to be no attestation of ᛅᚢ or ᛁᚢ in medieval Icelandic inscriptions; in any case, I have not been able to find any instance of them in Bæksted 1942, the chief reference work on this subject. See also Raschellà (2016, 164–165).

pointed out above, the letter 'ǫ' added by *A*'s scribe above the digraph 'eo' (an early variant of 'ø') is in all likelihood intended to signify that the runic ligature ᚼ should represent two distinct phonemic values. As a matter of fact, 'ǫ' is one of the letters – certainly the most frequent one – still used in the 13th c. to denote the vowel /ö/ (resulting, as has been repeatedly mentioned, from the merger of earlier /ǫ/ and /ø/). From this we may infer that in the *ThGT* the ligature ᚼ actually represents two different vowel phonemes, viz. /ǣ/ (in the long subsystem) and /ö/ (in the short subsystem), which correspond to two different notations in Latin writing.[33] Contrary to what is assumed above for ᚿ, in the case of ᚼ the possibility of confusion in reading was in fact very limited, firstly because the two vowels it presumably represented rarely occurred in the same phonemic contexts, and secondly because one of them, /ǣ/, was, as mentioned above, about to disappear from the Icelandic vowel system.

4. Conclusions

To conclude, I present in Table 2 a summarizing sketch of all the relevant correlations between the graphemic and phonemic entities that have emerged from my analysis of the notation of umlaut vowels according to each grammatical treatise as well as between one treatise and the others with regard to the orthographic pattern represented in each of them, in a combined synchronic-diachronic perspective:

	/æ/?[a]	/ǣ/	/ǫ/	/ǭ/	/ø/	/ǣ/	/ö/	/y/	/ȳ/	Phonemic units
FiGT (1125~1175)[b]	ę		ǫ		ø		–	y		Graphemic units
ThGT (ca. 1250)[c]	–	æ = ᚼ	–	–	–	ø = ᚼ	ǫ = ᚼ	y		
SeGT (1270~1300)[d]	–	æ, ę	–	–	–	–	ǫ, ǫ	y		

Table 2: Phonemic-graphemic correspondences in the first three Grammatical Treatises

[a] The presence of /æ/ as a phoneme distinct from /e/ in the short vowel subsystem is not sufficiently supported by the evidence produced by the *FiGT*, nor by 12th-c. manuscript evidence in general.[34]

[b] The treatises are listed here according to their presumable chronological order.

[c] Phonological changes from ca. 1150 to ca. 1250: /ǭ/ > /ǣ/ or /ö/; /ǫ/ + /ø/ > /ö/.

[d] Phonological changes from ca. 1250 onwards: / ǣ / > /æ/.

33 It should be further observed that the notation of the phoneme /ǫ/ seems to have been rather unstable from the very beginning in high medieval runic script, where it tended to overlap especially with the notations for /ø/. Cf. Spurkland (1991, 150–153) with regard to the runic inscriptions from Bryggen in Bergen. For more detailed information, see Raschellà (2016, 165–166).

34 Cf. Schulte (2002, 885) with references to Hreinn Benediktsson's relevant studies.

The above diagram is strongly summarizing and limited to the essential data, but I hope it will help, for the time being, to provide an overall view of the main points that have been touched upon in the present discussion.

As a final consideration, I would like to note that it would be extremely interesting and illuminating to extend our reasoning and investigate the possible presence of a common theoretical basis for the orthographic rules represented in the three grammatical treatises, trying to locate its origin by examining the interplay between the acquired Latin grammatical scholarship and the autochthonous Norse literacy, intimately intertwined with runic lore. This was in fact part of my original intention, shelved when I realized that much of the space at my disposal for the present paper would necessarily have gone to presenting and describing the primary data, as I have done. I cannot but fervently hope to be able to broach this topic in my future research.

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