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[0929] Unstressed Vowels in Runic Frisian

The History of Frisian in the Light of the Germanic
Auslautgesetze

Arjen P. Versloot

*The unaccented syllables of Runic Frisian (sixth-ninth century) have been studied on several occasions (e.g. by Nielsen and Nedoma), but such studies have failed to offer a comprehensive analysis and reconstruction of the phonological system as a whole. Building upon the insights gained in earlier studies, all unstressed vowels are investigated here in a coherent treatment. The article analyses groups of words that may shed light on the development of various unstressed Proto-Germanic vowels in Runic Frisian, where individual interpretations can enhance the understanding of other items in the group. It is hypothesised that Runic Frisian had four unstressed vowels /i, æ, ā, u/ just as the nearly contemporaneous Old Saxon and early Old English. However, Runic Frisian additionally possessed a /ə/ < Proto-Germanic *-a-, rendered as -u, e.g. in **ka[m]bu** ‘comb’ < Proto-Germanic *kambaz. This relatively late attestation of Proto-Germanic unstressed *-a- is supported by recent runic findings from Pre-Old High German. Together with the lacking apocope of -u < Proto-Germanic *-ō after heavy syllables, a revision of the chronological order of the Auslautgesetze will be required.*

1. Introduction

The runic inscriptions from the southern North Sea littoral, dated from the sixth to the ninth century, are the earliest direct evidence of what is later known as the Frisian language. Although often described as “problematic”, the corpus of twenty inscriptions offers various relatively unambiguous attestations, which, coupled with a careful evaluation of other, more ambiguous witnesses, provide a wealth of information about the earliest history of Frisian and the grouping of the West Germanic languages. The most recent overviews of this Frisian runic corpus are offered by Looijenga (1996, 2003, 2013), and Quak (2010).

Note that the fifth-century inscription on a footstool found in Wremen (Land Wursten, near Bremen), is in general not included in the Runic Frisian corpus. The Wremen area was settled by Frisians from the west in

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the eighth century after a period when the region had been abandoned in the sixth century. The Frisians, however, are believed to originate from the same Weser-Elbe-triangle in the fifth century (Heidinga 1997, 36). Therefore, there is no reason to label the inscription “Saxon” (as in Findell 2012, 487) because such labels are entirely ambiguous in the fifth century. The inscription does not contain specific Anglo-Frisian runes, because those are the result of later linguistic innovations. The inscription is an early representation of the language of the North Sea littoral, related both to Old Saxon and to Old Frisian.

In Versloot (2014), I made an attempt at reconstructing the vowel system of stressed syllables in Runic Frisian. Here I extend this research to the vowels of unstressed syllables. They have previously been the subject of discussion by Nielsen (1984a, 1984b, 1994, 2000) and, more recently, by Nedoma (2007, 2014) and Schuhmann (2014).

The recent decades have witnessed an impressive number of treatments of runic material where the data is presented as a corpus. The combination of evidence from various attestations in the corpus can lead to more conclusive interpretations. Although many inscriptions have their own specific complications, the probability that almost all runic finds excavated at random in the Frisian regions contain scribal errors or are forgeries or imports from elsewhere is quite small. Therefore we may assume that at least most of the surviving inscriptions are authentic, are Frisian in origin and without scribal errors, even if we cannot say beyond all doubt which inscriptions in our corpus really do meet these criteria. From a purely philological perspective, uncertainty about individual cases may seem unsatisfactory, but in a corpus the total is more than the sum of the individual parts. Examples of such approaches are presented by Syrett (1994) and Nielsen (2000) for Early Runic and Findell (2012) for Continental Runic. For Early Runic, i.e. the language found in the oldest runic inscriptions from Scandinavia, some older comprehensive studies are available: Krause (1971) and Antonsen (1975), while Euler (2013) attempts a synthesis for Proto-West Germanic.

The aim here is to reconstruct the system of unstressed vowels in Runic Frisian and to position Runic Frisian among the other early forms of older Germanic languages. In my article on the vowels in stressed syllables in Runic Frisian (Versloot 2014, § 2), I discuss several methodological aspects of the Frisian corpus and explain the choices I made in the use of the material. In compliance with my approach there, I stick to the geographical principle as the dominant criterion for the composition of the corpus. I rely

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basically on Looijenga's readings (not always on her interpretations though) as they are based on the physical re-examination of almost all the objects. In contrast to Quak (1990) and Page (1996), who leave most readings open to interpretation, Looijenga is less reluctant to offer an interpretation of even obscure texts. In the present study, I often follow the interpretations given by Looijenga, who takes earlier discussions and opinions into account, but in various instances I rather follow suggestions made by Nedoma (2007) and Findell (2012). All the material in this study and its interpretations are discussed in the relevant sections. All the Runic Frisian material has already been given detailed coverage in Versloot (2014). A special status is taken by the Westeremden B inscription, which is relatively long, with twelve words (in the interpretation I follow), with eight instances of (historical) unstressed vowels. The inscription contains some deviant runes and its interpretation is not straightforward. I rely here on the analysis presented by Seebold (1990), which was followed and refined by Looijenga (2003).

The unstressed vowels in older Germanic are mostly inflectional endings, which can vary according to categories such as gender, case, number, or the particular paradigm to which a word belongs. Therefore, a proper syntactic interpretation of the inscriptions is crucial. My preferred interpretations of the longer inscriptions are presented in the next section near the beginning of the subsection on "The Runic Frisian material". The complications and alternatives to these interpretations will be discussed with individual words. The interpretation of endings, especially of vowels, in early Germanic is fraught with difficulties (see e.g. Boutkan 1995 for a comprehensive approach). Therefore, I deemed it most productive to discuss some of the endings in direct relation to each other. One such complex of sounds are the endings of the \bar{o} -stems and n -stems, extensively discussed in Boutkan (1995, 97-166), which all contain $*\bar{o}$ in Proto-Germanic. These endings will be discussed in section 2. Unstressed vowels in Runic Frisian (or their absence) originating from other Proto-Germanic long vowels or diphthongs are treated then in the following section 3. Another outstanding set of endings in Runic Frisian is to be found in the nom./acc.sg. of $-a$ -stems, to be discussed in section 4. Section 5 deals with the fate of some other Proto-Germanic short vowels, while the following is devoted to vowels that appear in (alleged) compounds. The detailed treatment of all these vowels is summarized in the discussion section, § 7.

Three technical remarks should be made here for the reader. In the first place, similar to Nedoma (2007, 300), I employ a system for transliteration that is consistent and does not differ per inscription or interpretation. The

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assumed sound values are based on the analysis of the stressed syllables (Versloot 2014). I use the following key: **F** = **æ:** this runic character is solely used for a long vowel *[ɛ:] in stressed syllables; **†** = **ǣ:** this character, which appears only twice in the whole Runic Frisian corpus, is used to render *[ɛ], the result of Anglo-Frisian fronting of short Proto-Germanic (hereafter PGmc) *a (see the discussion of **jibāda** further on); **Ʒ**, **Ʒ** = **ā:** this character denotes fairly open long and short vowels, *[æ(:)], which later merged with /ɛ/, /a/ and /a:/ in Old Frisian; **F** = **a:** it is the common character for short *[a] and for *[a:] < PGmc *au. The second remark concerns the definition of Proto-Germanic. Theoretically, it stretches from a moment where the Germanic branch split off from the Proto-Indo-European until the final split up into the later branches and languages (see Euler 2013, 39, for further subdivisions, with further references to Mottausch 2011). In the present article, Proto-Germanic is rather considered to represent any early stage common to the attested forms in the older Germanic languages, not necessarily the oldest reconstructable form. Finally, examples will be given from various older language stages, which may be abbreviated as follows: ER = Early Runic, the language attested in the Scandinavian older futhork inscriptions (see Nielsen 2000), ON = Old Norse, OE = Old English, OF = Old Frisian, OS = Old Saxon, OHG = Old High German.

2. The ending of the \bar{o} - and n-stems in Runic Frisian

This section aims to find interpretations for unstressed vowels in the Runic Frisian attestations that may be traced back to a long unstressed * \bar{o} (-) in Proto-Germanic. There is some discrepancy between the possible reconstructed forms in Proto-Germanic and the patterns attested in the older Germanic languages: no theory can be made to fit without assuming that some endings were levelled from other paradigm forms. The subsection below sketches the main outlines of the Germanic context, but does not aim to make new contributions to any of the controversies (see for an extensive discussion of the complex issues and many of the suggested solutions, Boutkan 1995, 97-166). It is relevant for the current discussion that I assume that Runic Frisian started from a similar configuration as its closest relatives, Old English and Old Saxon.

2.1 The Germanic context

According to the standard theory, as mentioned in e.g. Krahe and Meid (1969a, 133), the Proto-Germanic vowel * \bar{o} appears in three different phonological contexts:

1. * \bar{o} in word-final position;

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2. * $\bar{o}n$ with *Stoßton* (= acute accentuation);
3. * $\bar{\bar{o}}n$ with *Schleifton* (= overlong syllable with circumflex intonation).

Nielsen (2000, 86-89) discusses the development of PGmc * \bar{o} in Early Runic and concludes that it has -u in the first context, but -o in the other two. However, the contrast between context 2 and 3 is highly relevant for West Germanic, as can be seen in table 1. Boutkan (1995, 97-166) proposes a new reconstruction, based on an earlier hypothesis by Kortlandt (discussion in Boutkan). In Boutkan's final reconstruction, group 1 and group 2 are the same (without the tonal aspect) as in the standard theory, but group 3 goes back to * $\bar{o}(V)C(-)$, which means * \bar{o} in any other non-final position where it was not directly followed by *n* or *n* was immediately followed by another vowel and thus the *n* was heterosyllabic, including the gen.pl. which ended in * $\bar{o}an$ in Boutkan's reconstruction. Since the discussion of the Proto-Germanic or Indo-European origin of these endings lies beyond the scope of the present study, I will concentrate on their continuations in the older West Germanic languages as compared to the Early Runic (ER) evidence. Some examples of the development of unstressed PGmc * \bar{o} in various phonological contexts are given in table 1. The numbers 1, 2 and 3 in the final column of the table refer to the three phonological contexts mentioned above.

Class	Paradigm	PGmc	ER	ON	OE	OF(R)	OS	WGmc
<i>a</i> -stem	n./a.p. nt.	* \bar{o}	*skipu	bōrn	scipu	skipu	fatu	(1) *-u
\bar{o} -stem	n.s. f.	* \bar{o}	la <u>þ</u> u	gjøf	giefu	[sini]	[geba]	(1) *-u
\bar{o} -stem	d.s. (<i.s.) f.	* \bar{o}	solu	Ingibjörgu	[giefe]	[were]	gebu	(1) *-u
<i>n</i> -stem	n.s. f.	* $\bar{o}n$	fino	tunga	tunge	tunge	tunga	(2) *-ā
\bar{o} -stem	a.s. f.	* $\bar{o}n$	runo	starka (adj.)	giefe	seke	geba	(2) *-ā
<i>n</i> -stem	g./d.s. f.	* $\bar{o}n$ -as/-i	Agila- mu[n]don	tungu	tungan	tunga	tungon	(3a) *- \bar{o}
<i>n</i> -stem	g.p.	* $\bar{o}n$ - $\bar{\bar{o}}n$ / - $\bar{o}an$	arbijano	augna	honena	frisona	hanono	(3b) *- \bar{o}
<i>u</i> -stem	g.s. m.	* $\bar{o}s$ < *-aus	magoz	sonar	sunna	sunna	[sunies]	(3b) *- \bar{o}

Table 1. Examples of Proto-Germanic unstressed \bar{o} in various phonological contexts, based on Nielsen (2000, 89). Forms in square brackets are considered not to be the regular phonological continuation of the mentioned Proto-Germanic form. Actually attested word forms have been selected. "OF(R)" means the variety of Old Frisian as attested in the Riustring manuscript, which is the most archaic one in terms of unaccented vowels (see Buma 1961, Boutkan 1996). The Proto-Germanic forms and the West-Germanic (WGmc) vowel qualities are based on Boutkan (1995) and Hogg and Fulk (2011).

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In context 1 (word-final position), $-\bar{o}$ becomes $-u$ in all Germanic languages, but can later be lost through apocope. In Early Runic, this sound is rendered by **-u**. In the contexts 2 and 3b, PGmc $*-\bar{o}$ appears as $-a$ in North Germanic (represented in the table by Old Norse), but in cases where the nasal was preserved in Early Runic (3a), it became $-u$. Early Runic had **-o** in all these words. In North Sea (West) Germanic (represented in the table by Old English and Old Frisian), the development in context 3 is the same as in North Germanic for group 3b (i.e. $*-\bar{o} > -a$), but in group 2, one finds $-e$; early Old English often has $-æ$ in words belonging to group 2. Continental West Germanic (represented in the table by Old Saxon) has the same structural split as North Sea Germanic, but with $-a$ and $-o$ respectively. Old Saxon shows in fact an alternation between the North Sea Germanic and the Continental Germanic systems: $-e \sim -a$ in group 2 versus $-a \sim -o$ in group 3 (Klein 1977). The latter vowel matches the ones used in Old High German (not in the table).

Old English, Old Frisian and Old Saxon preserve word-final $-u$ following a light syllable. In Old Frisian, the ending $-u$ is only found in the Riustring dialect (Boutkan 1996). In all the other Old Frisian dialects, this vowel merged with $-e$. The Riustring manuscript attests the preservation of the $-u$ in the u -stems as well as in the nom./acc.pl. of neuter a -stems. However, examples with $-u$ in feminine \bar{o} -stems or n -stems are lacking. There is a single attested form *sinu* ‘sinew’, but it appears only in a compound. The simplex is attested as *sini* < $*sine$, where the $-i$ is the result of vowel harmony. Moreover, it is a $w\bar{o}$ -stem, which implies that the $-u$ in *sinu* is not necessarily a continuation of the Proto-Germanic case ending $*-\bar{o}$; it could equally stem from $-w-$, as in the $w\bar{o}$ -stem *widue* ‘widow’, which clearly shows the case ending $-e$ next to the u < $*w$.

The nom.sg. feminine \bar{o} -stem ending $-a$ in Old Saxon and Old High German (not in the table) is generally assumed to be the result of levelling from the acc.sg. (Krahe and Meid 1969b, 21). This may also be the explanation for the $-e$ in Riustring Old Frisian. Also the dat.sg. endings of the same declension class do not always constitute a continuation of the Proto-Germanic case form. The dat.sg. endings in $-u$ in Early Runic, Old Norse, Old Saxon and Old High German represent the old instrumental ending, PGmc $*-\bar{o}$ (Krahe and Meid 1969b, 22). Only Gothic (not in the table) and Old English forms (and theoretically Riustring OF $-e$) can be continuations of the original dative, PGmc $*-ai$. Another instance of levelling is found in the acc.sg. feminine \bar{o} -stems in Old Norse, where the regular development can only be found in the acc.sg. of the adjectives (Kra-

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he and Meid 1969a, 133, Syrett 1994, 161). Boutkan's (1995, 225-28) account differs in details, but without consequences for the West Germanic dialects.

Apart from the aforementioned intraparadigmatic shifts, the situation as depicted in table 1, is fairly transparent and straightforward. In the further treatment of the continuation of Proto-Germanic unstressed **ō*, I will operate with three West Germanic endings: **-u*, **-ā* and **-ō*. It is somewhat unusual to stipulate a long WGmc **-ā* < PGmc **-ōn* instead of **-a*; see e.g. Nielsen (2010, 111) or Hogg and Fulk (2011, 30, 53) for a stage of West Germanic directly preceding (early) Old English: acc.sg. **zēba* 'gift', **tunga* 'tongue'. These studies operate, however, with a fairly early loss of PGmc unstressed **a*, e.g. pre-OE nom.sg. **stain* (Hogg and Fulk 2011, 15). Recent evidence, such as **ka[m]ba** 'comb' (third century) and **lapela** 'spoon' (sixth century), which is extensively discussed below (see §4), shows that PGmc unstressed **a* was preserved until a more recent date in West Germanic than previously assumed but did not coalesce with the product of PGmc **-ōn*. The latter can for this reason not have been **-a* in some form of West Germanic directly preceding Runic Frisian or early Old English. This recent view is incorporated in the study by Euler, who renders the Common West Germanic product of PGmc **a* with <ǣ>, e.g. **dagǣ* < PGmc **dagaz*, and the product of PGmc **-ōn* with <a> in e.g. **geba* or <ā> in **tungā* (Euler 2013, 43, 67, 72, 82).

2.2 The Runic Frisian material

In order to facilitate the comprehension of my identification of Old Frisian runic words (lexemic segmentation and identification, as well as functional classifications such as case and number), I present first my syntactical understanding – in English translation – of the five longer inscriptions. Here the following subscripted abbreviations are employed: S = Subject, O = object, Od = direct object, Oi = indirect object, Op = prepositional object, Vf = finite verb, P = particle (such as adverb, preposition, etc.). Words in brackets are added for a better understanding.

Westeremden A

adujislu me(p) jisuh[i]ldu

[Audgisl]_S [with]_P [Gisahild]_{Op}

The thorn was earlier readable, but has become unclear now.

Oostum

aib kobu deda habuku

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[Aib]_S [comb]_{Od} [did]_{Vf} [for Habuk]_{Oi}
alternative: [for Aib]_{Oi} [comb]_{Od} [did]_{Vf} [Habuk]_S

Westeremden B

op hämu jibāda ämlup

[at]_P (the) [home(stead)]_{Op} [confidence]_S [thrives]_{Vf}

iwi ok up duna [a]le

(near the) [yew]_{Op} [also]_P [on]_P (the) [hill]_{Op} [may (it) grow(?)]_{Vf}

wimod äh þusā

[Wimod]_S [owns]_{Vf} [this]_{Od}

Bernsterburen (only one of several possible interpretations, see Looijenga 2003, 314-16)

tuda alu[n]du(?) kiusþu tuda

[Tuda]_{Od}, [Alund]_S [choose]_{Vf} [you]_S [Tuda]_{Od}

Britsum

þän i æ beret dud

[This]_{Od} [yew]_{Od} [always]_P [carry (imp.)]_{Vf}, [(?)]_{S?}

...n bäräd mi

[NN]_S [prepares/ed(?)]_{Vf} [me]_{Od}

The following words have been identified in the corpus, which potentially offer information about the development of PGmc **ō* in Runic Frisian: **jisuh[i]ldu** (Westeremden A); **habuku, deda** (Oostum), **[d]jeda(?)** (Amay); **ded(?)** (Hoogeteintum); **(m)uræ(?)** (Ferwerd); **edæ-, boda** (Arum); **katæ** (Hamwic); **jibāda, þusā, duna, hämu** (Westeremden B), **tuda(?)** (Bernsterburen); **þän** (Britsum); **oka** (Rasquert); **hada** (Harlingen). These words will be systematically discussed in the present subsection, where details of their interpretation will be provided.

jisuh[i]ldu

This word follows the preposition *mep* ‘with’ and is generally considered to be a dat.sg. of a female personal name ‘Gisahilda’, a *jō*-stem, with an ending that originates in the instrumental, PGmc **-ō* (Nedoma 2007, 303). The form lacks any trace of the historical **-j-*, which is retained, as *i*, in e.g. the common noun in Old Saxon dat.sg. *hildi*, or in the (rather Old High German) *Hildebrandslied*: *hiltiu*. The lack of *-j-* resembles the situation in Old English or ninth-century Old High German, where the *jō*-stem endings are identical with the basic *ō*-stem endings (Campbell 1977, § 590, Braune and Reiffenstein 2004, § 209).

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habuku

While Nedoma (2007, 307) considers this to be a male personal name, an alternative interpretation is that of the dat.sg. of a female personal name \bar{o} -stem (Looijenga 2003, 304). This is also my interpretation (see above). This word would only support the evidence from *Jisuhildu* and is not decisive for the argumentation.

þusǣ

This word looks like the acc.sg. feminine form or the nom./acc.pl. masculine or feminine form of the demonstrative pronoun. In those cases, the word is attested with final *-a* in Old Saxon and *-e* in Old Frisian: OS *thesa*, OF *thisse*. It refers to something owned by Wīmōd (*W. äh þusǣ* ‘W. owns this’) and hence an accusative (see above). This “something” could be ‘luck’ (*jibada*), the ‘dwelling mound’ (*duna*), both of these feminine nouns, or the object the text was written on. By whichever interpretation, its final vowel represents the WGmc $*-\bar{a}$ ending.

murǣ, edǣ

Nedoma (2007, 320, 321) interprets these two words as female personal names, and classifies them as the nom.sg. of feminine *n*-stems. The nom.sg. of this paradigm form continues WGmc $*-\bar{a}$. This potential evidence is only supplementary to other, more secure attestations. For both, different interpretations are also available; for *murǣ* see §3 below, and for *edǣ*, §5 below.

katǣ

The inscription is found on a knuckle-bone and corresponds to OF *kāte* ‘bone, phalanx’. Several scholars (e.g. Nedoma 2007, 321 f.) interpret this form as a nom.sg. of a feminine *n*-stem, in contrast to Nielsen (2000, 92), who considers it to be the acc.sg. of an \bar{o} -stem. The Old Frisian attestations give no reason to assume that the word was an *n*-stem, neither does this single-word inscription give any reason to believe that it is an acc.sg. Nedoma finds support for his theory in the single instance *katha* in the Old Frisian Codex Jus (Buma 1996), which does not represent the most archaic Old Frisian language (cf. Versloot 2004). In the classical Old Frisian texts, the word only appears as a feminine \bar{o} -stem. I follow Nedoma in his claim that the form of the runic inscription represents most likely a nom.sg., but I reject the interpretation of it being an *n*-stem. All circumstantial evidence points towards an \bar{o} -stem.

jibǣda

This word is a full cognate of OS *gibada*, a feminine \bar{o} -stem, ‘Zuversicht/

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confidence' (Tiefenbach 2010, s.v. (*gi*)*bada*); cf. also Looijenga 2003, 313, Versloot 2014, 45). Not mentioned in Versloot (2014) was that the word is expected to show fronting of the root vowel PGmc **a*, compare Old Frisian *seke* 'case' < PGmc **sakō*, *tele* 'tale' < PGmc **talō*. The root vowel *ǣ* of the word is rendered by the runic character *†*, while the final *a* in *jibǣda* is rendered by the Anglo-Frisian *ƿ*. Therefore, I assume that *ǣ* represents a fronted vowel */*ɛ*/: /*ji'βeda*/. (The same runic character is also found in *þusǣ*.) The word is in the inscription followed by *ǣmluþ*, which looks like the 3rd pres. sg. of a verb. Therefore, I consider *jibǣda* to be a nom.sg. form.

duna

In the inscription, the word *duna* follows the preposition *up*. Looijenga (2003, 314) considers it to be an acc.sg. of a feminine *n*-stem, OF *dune* 'dune', here interpreted as 'hill, dwelling mound', the typical human artefact of the Frisian tidal landscape. In this meaning it would stay closer to the alleged Celtic origin of the word, **dūnom* 'hill fort' (Philippa et al. 2003-09, s.v. *duin*). After *up* 'on', it is more likely to be a dat.sg. (loc.sg.). The difference between dat. or acc.sg. does not matter for the quality of the final vowel in Runic Frisian, as long as the interpretation is that of an *n*-stem: in Old Frisian all oblique cases in the singular of feminine *n*-stems end in *-a* < **-an* < **-ōn*-. Apart from this possible runic attestation, the word is first attested in the early sixteenth century without any indication to which declensional class it belongs. In Modern West Frisian, the word *dún* 'dune' is neuter, but (also) feminine in the dialect of Schiermonnikoog. In the East Frisian Wangerooge dialect it is masculine. In early Middle Dutch it can be feminine (*bider dune*), but its declensional class remains unclear. In short, the gender of the word and its lexical interpretation are unclear.

tuda

For Nedoma (2007, 318), this is a personal name and the nom.sg. of a masculine *n*-stem. In one of the interpretations offered by Looijenga (2003, 315 f.), it could be the acc.sg. of a female personal name. However, the item is fairly indeterminate.

boda, oka, hada

These three forms are most likely male personal name *n*-stems (for *Boda* and *Hada*, see Nedoma 2007, 318). *Boda* may also be a noun denoting 'messenger', OF *boda*, which does not affect the interpretation of the quality of the ending.

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hāmu

The form **hæmu*, from PGmc **haima*, a cognate of German *Heim* and English *home*, corresponds to an instrumental of a masculine *a*-stem in *-u*, as attested in Old Saxon and Old High German < PGmc **-ō*; here it seems to be used in a locative function (cf. Krahe and Meid 1969b, 7, 11).

þän

This form is most likely the acc.sg. masculine of the determiner/ demonstrative pronoun, OF *then(n)e*, OS *thena* which show WGmc **-ā* (Hogg and Fulk 2011, 193) < PGmc **-ōn* (Boutkan 1996, 297-300). Old Saxon has less frequently occurring short forms: *then*, *than* < PGmc **þan*, matching the Old High German common form *den*. The ending is missing in this Runic Frisian form, which is remarkable in comparison to the earliest Old Frisian attestations from c. 1300 which show consistently *-e* (Boutkan 1996, Buma 1949, Steller 1926, van Helten 1890). This implies either that the form represents the short version of the pronoun, otherwise attested in Old High German and marginally in Old Saxon, or that there is another reason for the lack of the final vowel.

Apart from the previous set of words, there is one item that does not contain PGmc **ō* but shows a vowel in Old English, Old Frisian and Old Saxon that otherwise matches the development of WGmc **-ā* < PGmc **ō*.

deda

The word *deda* is the 3rd sg. pret. ind. of the verb ‘to do’. There may even be two more instances of this verb form: in the inscriptions from Amay and Hoogeteintum (Looijenga 2003, 303, 325). The latter may contain a form *ded*, but the interpretation is uncertain. The former reads *eda*, but the comb is broken and the missing part may have contained more text, so it possibly represents a personal name + *[d]eda*. In all West Germanic languages, the endings of the 1st and 3rd sg. pret. ind. are the same and match the endings of the preterite of weak verbs (which are themselves most likely derived from the verb ‘to do’). Boutkan (1995, 358-62) reconstructs a Proto-Germanic ending of the 3rd sg. pret. ind. **-dē* or **-dēt*, which matches the pre-Old English form **-dā(b)* given by Nielsen (1984b, 15) and Hogg and Fulk (2011, 262). Early Old English shows the ending *-æ* in the 3rd sg. pret. ind. of weak verbs (Hogg and Fulk 2011, 263); in later Old English, the relevant form of ‘to do’ is *dyde*, with *-e*. Old Frisian has *dede*, Old Saxon has *dede* and *deda* and Old High German *tēta*. According to Nielsen (1984b, 15; 2000, 93, 163 f.), the vowel quality *-a* in **deda** is unexpected, given the Old English, Old Frisian and Old Saxon correspondences; he would rather

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expect **dedæ*. He does not come to an explicit interpretation of the Runic Frisian form. Whatever the Proto-Germanic origin of the final vowel may be, all mentioned West-Germanic languages show a vowel that matches the development of the West Germanic ending **-ā* in table 1 above. Therefore, **deda** will be treated in relation to words where WGmc **-ā* developed from PGmc **-ōn*.

2.3 The evidence from the Runic Frisian material

2.3.1 West Germanic **-u*, **-ā* and **-ō* in Runic Frisian

For the sake of greater transparency, the lexical material from Runic Frisian in the preceding discussion is presented anew in table 2, which has the same basic structure as table 1. Questionable interpretations are rendered in grey. For most of the items, the position in the table follows directly from the discussion above. Only **kataë** and **jibāda** need further explanation.

Class	Paradigm form	PGmc	Early Runic	Runic Frisian	OF	WGmc
<i>a</i> -stem	dat.sg. < loc.sg. m.	<i>*-ō</i>	-	hāmu	--	1) <i>*-u</i>
<i>ō</i> -stem	dat.sg. < instr. sg. f.	<i>*-ō</i>	solu	jisuh[i]ldu / habuku	[were]	1) <i>*-u</i>
<i>n</i> -stem	nom.sg. f.	<i>*-ōn</i>	fino	<i>muræ</i> / <i>edæ</i>	<i>tunge</i>	2) <i>*-ā</i>
<i>ō</i> -stem	acc.sg. f. (> nom. sg.)	<i>*-ōn</i>	runo	busā / kataë / jibāda	<i>seke</i>	2) <i>*-ā</i>
dem.pron.	acc.sg. m.	<i>*-ōn</i>	þinn	þān	<i>thene</i>	2) <i>*-ā/-</i>
verb	sg. pret. ind.	<i>*-ōn</i>	[-ai/-e]	deda (3 rd pers.)	<i>dede</i>	2) <i>*-ā</i>
<i>n</i> -stem	oblique sg. f.	<i>*-ōn-</i>	Agila- mu[n]don	<i>tuda, duna</i>	<i>tunga</i>	3) <i>*-ō</i>
<i>n</i> -stem	nom.sg. m.	<i>*-ōn-</i>	wagnijo	boda / <i>hada/oka</i>	<i>boda</i>	3) <i>*-ō</i>

Table 2. Examples of Proto-Germanic unstressed **ō* in various contexts attested in Runic Frisian. The less-secure instances are presented in grey. The attested Early Runic endings of the 3rd sg. pret. ind. *-ai* (*talgidai*) and *-e* (*tawide*) cannot be matched directly with the West Germanic endings, which continue WGmc **-ā* < PGmc **-ē* (Boutkan 1995, 359-63, for Early Runic see also Syrett 1994, 246-55). For Early Runic **wagnijo** see Syrett (1994, 137-45). The Proto-Germanic origin of the ending of the nom.sg. masculine *n*-stems in West Germanic is disputed: either with a special circumflex (no longer advocated) or, as the result of levelling, from the acc.sg. (Boutkan 1995, 281). The later West Germanic forms (Runic Frisian and Old Frisian) reflect an earlier WGmc **-ō*.

The forms **kataë** and **jibāda** are interpreted as the nom.sg. of feminine *ō*-stems with PGmc **-ō*. Given the other forms in group 1, one could expect Runic Frisian **-u** here, as in **jisuh[i]ldu** and the attested Riustring Old

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Frisian forms of the nom./acc.pl. of light syllable neuter nouns (e.g. *skipu* ‘ships’) with *-u* < PGmc **-ō*. Riustring Old Frisian never shows *-u*, however, in the nom.sg. of feminine *ō*-stems. Therefore, in analogy with Old Saxon and Old High German, the endings of the nom.sg. forms **kataē** and **jibāda** are considered to be the result of levelling from the acc.sg. (see also van Helten 1890, § 67, note) and hence classified as such in the table. Nielsen (1984b, 16) hinted at this interpretation of *kataē*, but claims that this process could not have taken place already in Runic Frisian, which brought him to the assumption that the word is also functionally an acc.sg. The exact morphosyntactic interpretation (either as an acc.sg. or as a nom.sg. levelled from the acc.sg.) has no bearing on the etymology of the sound, which is considered to continue WGmc **-ā*.

Group 1 preserves the WGmc **-u* as in **jisuh[i]ldu** and possibly **habuku**. The use of the original instrumental ending *-u* in Runic Frisian in the dat.sg. *ō*-stems parallels the situation in Old Saxon, Old High German and Old Norse. For the phrase ...*mep Jisuhildu*, Klein (2004, 13) prefers an interpretation with the instrumental as a separate case form in Runic Frisian; consequently, the attested form does not imperatively testify to a development common with Old Saxon, Old High German and Old Norse. If the interpretation of *Habuku*, with *Habuku* as a beneficiary and hence in a real dative function, is correct, this form would confirm the intraparadigmatic levelling from the instrumental to the dative singular in *ō*-stems in Runic Frisian, parallel with Old Saxon, Old High German and Old Norse. (This runs contrary to Stiles’ (2013, 21) interpretation, who claims that the levelling of the acc.sg. to the nom.sg. in feminine *ō*-stems and the ending *-u* in the dat.sg. of the same class is an Old Saxon-Old Low Franconian-Old High German communality “against Old English and Old Frisian”.)

A graphematic complication is the fact that Runic Frisian shows word-final **-u** not only in the words of Group (1), with word-final PGmc **-ō*, as in **jisuh[i]ldu** (and **habuku**), but also in forms which are mostly considered to represent the nom.acc.sg. masculine *a*-stem, PGmc *-azl-an*: **ko[m]bu**, **ka[m]bu**. As the ending of the masculine *a*-stem is lost in Old Frisian, while the *-u* < PGmc **ō* is preserved as *-u* or *-e*, at least when following a light syllable, it is assumed that the word-final **-u** represents two different phonemes in Runic Frisian (Nedoma 2007:324). The interpretation of the **-u** in items such as **ka[m]bu** is discussed in full detail below (§4).

The potential data for group 3, with the WGmc **-ō*-ending, shows consistently the ending *-a*, which is confirmed by Old Frisian evidence; the most secure instance is **boda**, less secure are **hada**, **oka**, **tuda** and **duna**.

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The latter belongs to group 3) whether it is interpreted as an acc., dat. or loc.sg. of a feminine *n*-stem.

This leaves us with four fairly transparent examples of words that have an ending belonging to group 2. Early Old English shows *-æ*, later Old English and Old Frisian *-e*. For Old Saxon a phoneme /-æ/ is believed to be represented by the alternating spellings of <-e> and <-a>, especially in the *Heliand* manuscript M (Klein 1977, extensively discussed in Boutkan 1995, 152-62)). This phoneme /-æ/ seems to be reflected in the ending **-æ** in **katæ** and the ending **-ǣ** in **pusǣ**. The other instances, however, show a final **-a**: **jibǣda**, **deda**, which otherwise is the reflex of group 3: compare RF **deda** with WGmc **-ā* > OF *dede*; RF **boda** with WGmc **-ō* > OF *boda*. Assuming that Old Frisian is the successor of Runic Frisian and acknowledging the fact that Old Frisian consequently distinguishes between the products of WGmc **-ā* and WGmc **-ō*, one has to conclude that **-æ** in **katæ** and **-a** in **deda** reflect one historical phoneme, while the **-a** in **boda** reflects some other phoneme. Otherwise, Runic Frisian would show a distribution that is not preserved in any other later form of West Germanic. This implies that there has to be a reasonable solution for this seemingly contradictory pattern. A possible interpretation will be presented that builds on the following two lines of argumentation:

1. There are parallels in Old Saxon in the asymmetry between graphemes and phonemes in the endings for WGmc **-ā* and WGmc **-ō*;
2. There is a synchronic phonological explanation in Runic Frisian for the alternation between **-æ/-ǣ** and **-a**.

Ad 1: Klein (1977, extensively discussed in Boutkan 1995, 152-62)) reconstructed an Old Saxon phoneme /æ/, corresponding to WGmc **-ā*, and a contrasting phoneme /ǣ/, corresponding to WGmc **-ō*. The former was rendered by <e ~ a>, while the latter was rendered by <a ~ o> (especially in the *Heliand* manuscript M, with various sub-patterns in other texts and dialects). I assume that Runic Frisian had a similar vowel system with a similar graphematic ambiguity of **a**. The words **katæ** and **deda** are thus interpreted as examples of final /æ/, while **boda** contains word-final /ǣ/.

Ad 2: There may even be a synchronic phonological conditioning for the alternation between **-æ/-ǣ** and **-a** in the group with WGmc **-ā*: syllable weight, see table 3. The words **jibǣda** and **deda** with a short vowel followed by a single consonant have light root syllables: */ji'bɛda/, */deda/, while **katæ** and **pusǣ** have heavy root syllables: */ka:tæ/, */pys:æ/ (see the

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discussion of **jibāda** for the interpretation of **ǣ** as a fronted vowel; see Versloot (2014, 47) for the interpretation of **u** as [y]). The more ambiguous instances of words with potential word-final WGmc **-ā* are included in grey in table 3. Following Nedoma's interpretations, the forms **muræ** and **edæ** are reconstructed with a heavy root syllable: **Murræ*, **Ēdæ*.

WGmc <i>*-ā</i>	Light syllable	Heavy syllable
-æ		kataë, þusǣ, muræ, edæ
-a	jibāda, deda , [d]eda	

Table 3. Root syllable weight and vowel quality of WGmc **-ā* in Runic Frisian

The four fairly secure and three potential attestations to WGmc **-ā* in Runic Frisian in table 3 support the hypothesis that WGmc **-ā* was on its way to becoming *-æ* after heavy syllables, but was still *-a* after light ones. This reconstruction with a Runic Frisian /æ/ and /ǣ/ is in line with the developments as reconstructed for Old English by Boutkan (1995, 436, stage 14).¹ Summarising, I want to propose the following reconstruction of the development of PGmc **-ō* in Runic Frisian:

WGmc <i>*-u</i> :	> RF <i>-u</i> <u>	> OF <i>-u</i> ~ Ø
WGmc <i>*-ā</i> :	> RF <i>-æ</i> <a - æ, ǣ>	> OF <i>-e</i>
WGmc <i>*-ō</i> :	> RF <i>-ǡ</i> <a>	> OF <i>-a</i>

Table 4. Reconstructed developments of PGmc *ō* in various contexts in Runic Frisian and Riustring Old Frisian

2.3.2 Some ambiguous instances which potentially contain PGmc **ō*

A couple of inscriptions may contain the product of PGmc **ō*, depending on their interpretation, which can be highly ambiguous. These more problematic instances will be evaluated in the light of the hypothesis formulated in the previous section, which is based on more secure instances, in an effort to throw more light on the problematic cases.

1. It is not what Klein (1977, 534) seems to think. He mentions an Early Old Saxon /æ/~ǣ/ system, that developed an /a/ ~ /ɔ/ variant in the south west, possibly under Franconian influence (idem: 532). Klein's assumption of /æ/ as the early sound value comes from his assumption that this *-æ* developed from WGmc **-a* < **ā* < **ō* as part of the North Sea Germanic fronting of short **a*, both in stressed and unstressed syllables. This fronting of short **a* in stressed syllables must be older than the year 600. This dating follows from the introduction of a new rune ƿ to represent [a] because WGmc **a* had become **æ*. The new rune is already found on the *Skanomodu*-coin, which is commonly dated to the late 6th c. (Waxenberger 2013:30). At least in Runic Frisian, the fronting of WGmc **-ā* seems of a much later date (8th c.) than the fronting in stressed syllables.

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The overview of Runic Frisian words, potentially attesting to a PGmc **ō*, contains the form **pän** without an ending. In Old Frisian, the common form is *then(n)e*, OE *þone*, *þæne*, OS *thena*. The Runic form may testify to the earlier existence of the short form of the pronoun, as attested in Old High German *den*. An alternative explanation for the lacking final vowel is a prosodic one, where the unstressed final syllable of the demonstrative pronoun was syncope before the stressed vowel of the word *ī* ‘yew’: *þæn*’ *ī*... ‘that yew...’. It should, however, be noted that such instances of prosodic syncope are in fact very rare in the early Old Frisian texts from c. 1300 AD.²

Various interpretations have been suggested for **tuda**, which is mostly considered to represent a feminine name. The suggestions entail options both with a short and a long *d(d)* (Nedoma 2007:319, Looijenga 2003:315). The ending **-a** would fit the acc.sg. of an *ō*-stem with a light syllable, following Table 3, with WGmc **-ā*, but it may just as well be the oblique case of an *n*-stem with WGmc **-ō*.

The word **duna** is supposed to mean ‘hill’ (perhaps a dwelling mound, typical for the Frisian habitat), related to the (late-)Old Frisian *dūne* ‘dune’. Reasoning from the interpretation of *iwi ok up duna [...]* as ‘at the yew also on the hill...’ the word represents a dat.sg. or loc.sg. Etymologically, the word can be an *n*-stem or an *ō*-stem. For neither of the two case forms, the ending **-a** is an option in the *ō*-stem paradigm; the options are PGmc *-ōi* (dat.sg.) or an *-ō* (dat.sg. < instr.sg.), for which one can expect RF **-æ* or *-u*. The attested final **-a** renders the interpretation as an *n*-stem, representing WGmc **-ōn-*, with a heavy syllable more likely.

The sequence **muræ** is, according to Nedoma and others, a female nickname, meaning ‘the grumbling one’ (Nedoma 2007:321, see also Findell 2012:117, with further references, who mentions that a non-Frisian origin is also possible). Looijenga (2003:303,304) reads the initial character as a bind rune representing **me** ‘me’ or **em** ‘(I) am’, followed by a personal name **uræ** (instead of **muræ**), an interpretation that is considered to be unlikely by Findell (2012:178). The interpretation as *Murræ*, nom.sg. feminine *n*-stem, fits the reconstruction in § 2.3.1, but has few parallels as an onomastic element. If we follow Looijenga’s idea of a bind rune, we have to consider various options: following *me* ‘to me’, the name could be

2. Incidentally in Codex E₁: *then otherne* ‘the other’, but: *thene irsta* ‘the first’ (both acc.sg.) in the same codex and many examples with *then(n)e* + V in the other archaic manuscripts.

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in the dative as well, whilst following *em* ‘I am’, one expects a nominative; it may be a female and a male name, although a comb is more easily associated with a woman. Assuming that the inscription is indeed Frisian, the sequence has to be transcribed as *Uræ* or *Ūræ*.³ Such monosyllabic names are mostly *n*-stems in Germanic languages (see Nedoma 2007:316, with further references).

- nom.sg.fem.: Possible as *n*-stem or *ō*-stem, especially with a heavy syllable.
dat.sg.fem.: Given the Runic Frisian dat.sg. form in *-u* in the *ō*-stems and the Old Frisian forms in *-a* in the *n*-stems (both masc. and fem.), this interpretation is unlikely.
nom.sg.masc.: There are no declensional classes with Old Frisian *-e* < WGmc **-ā* in the nom.sg. of masculine nouns, the only sources for OF *-e* being *i-* *ja-* and *wa-*stems, with expected Runic Frisian endings **-i* or **-u*.
dat.sg.masc.: The dat.sg. of the masculine *a*-stem, although of different origin (PGmc **-ai*; Ringe 2006:279), shows the same profile as group (2) in Old English and Old Saxon: *-æ* in early Old English, *-e* in Old English and an alternation between *-e* and *-a* in Old Saxon (Boutkan 1995:183). This does not apply to Old High German, which has *-e*. With a long vowel, it would represent a nom.sg. RF **Ūrǣ*, OF **Ūr*, a cognate of the name for the aurochs, PGmc **ūraz*. Such a name is, to the best of my knowledge, not attested in Frisian, but in Old High German, the name *Uro*, apparently with the same etymology, is attested (Förstemann 1856:1217, Findell 2012:117). The Old High German form is an *n*-stem, which does not fit the ending *-æ* of the Runic Frisian inscription, but in Old English and Old Norse, the name for the aurochs is an *a*-stem.⁴ See for a further discussion of WGmc **-ai* § 3.

Using the previous indications, the following interpretations for **(m)uræ** turn out to be possible:

1. As the nom.sg. of an *n*-stem female name, Runic Frisian either **Murrae* or **Ūræ*;
2. As the dat.sg. of an *a*-stem male name, RF *Ūræ* < PGmc **ūrai*, nom.sg. **ūraz* ‘aurochs’.

The *Skanomodu*-inscription contains a final **-u**, which may be of interest to

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3. The *Skanomodu* inscription is somewhat older and contains the *āc*-rune, which implies that the original *ansuz*-rune has to be reinterpreted in its new sound value as *æsc*-rune (Waxenberger 2013:30).
 4. I considered the dat.sg. of the noun PGmc **ūraz*, ‘aurochs’ in its literary meaning: **me uræ** would then mean ‘from me, the aurochs’. This would match inscriptions such as the Anglo-saxon **raihan** ‘roe’ on a roe bone or the earlier mentioned **katæ** on a knuckle-bone. However, according to the curator of the Groninger Museum, Egge Knol, the object is made from a deer’s antler.

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the complex of vowels discussed in this section. The **-o** in the first part will be discussed in § 6. The word is commonly interpreted as a male's name with the *a*-stem RF **mōdā* 'courage' as the second element (Nedoma 2014:348-350), but Nielsen (1996:128,129, 2000:92) interprets the inscription as a female PN, which is definitely not impossible in the wider context of Germanic languages; e.g., in 12th c. Cologne, the element *-mut* was indeed much more frequent for women than for men (Kunze 1999:19). According to Nedoma, the word may, then, be an *ō*-stem or a *jō*-stem, which is in fact irrelevant for the final vowel. For the discussion of the ending when the name is considered a masculine personal name, I refer to § 4.

If the word represents a female personal name, there are two possible cases. It either is a nom.sg., as is often the case for single name inscriptions, or it is the name of the beneficiary, the lady to whom this gold solidus may have been a gift, which then appears in the dat.sg. In this latter interpretation, it fits in with other dat.sg. forms: *Jisuhildu* and potentially *Habuku*. In Nielsen's interpretation as a nom.sg., the final **-u** in **skanomodu** continues the original nom.sg. ending of the *ō*-stems, i.e. PGmc **-ō*. This would go against my reconstruction that **katæ** and **jibāda** attest to a levelling of the acc.sg. form to the nom.sg. in the *ō*-stems. At some point, there must have been a competition between both endings in the nom.sg. for some time; see for a similar case in Continental Runic, Old Saxon and Old High German, Findell (2012:157,164). As the **skanomodu** inscription is fairly old (late 6th century), the contrast with **katæ** and **jibāda** could also be chronological.⁵ It is hard to come to any final conclusion, but the various options can all be fitted in with the other reconstructions in this paper.

5. The feminine *ō*-stems with PGmc **a* in the root syllable show remarkably the Anglo-Frisian fronting (Århammar 1968:56), contrary to the development in Old English with the restoration of *a* before back vowels (Campbell 1977:§157-160): OF *seke* vs. OE *sacu* 'sake' < WGmc **sakō*. In other words with a back vowel in Proto-Germanic, such as PGmc **magōn* 'stomach', **hatuz* 'hatred', Old Frisian has /a/, as in Old English: OF *maga*, *hate* (OE *hete*, *i*-stem). This supports a reconstruction where the original nom.sg. ending **-u* was replaced by the acc.sg. ending **-a* before the fronting of PGmc **a* or before any restoration could take place (which would introduce the novel idea of a restoration of *a* parallel to Old English into the Frisian language history). The third option is a wholesale replacement of the nom.sg. form by the acc.sg. form with fronting of the root vowel. Another phenomenon that supports the levelling of the acc.sg. ending to the nom.sg. of the *ō*-stems is the fact that Old Frisian *ō*-stems have the ending *-e* in the nom.sg. irrespective of syllable weight, which fits the development of WGmc **-ā* but not of WGmc **-u* (contrary to hints made by Van Helten (1890:137,138) and Siebs (1901:1341)). This aspect deserves further detailed treatment.

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Finally, I want to mention the word **fozo** on the much older *Hitsum* bracteate from the 5th century (Looijenga 2003:208, Findell 2012:122, 410, with further references and discussion of earlier literature). This find was earlier considered to be of Scandinavian origin, but Seebold (1996) and Quak (2010:153) state that it may very well be a local product. The word **fozo** is considered to be a proper name, but the interpretations alternate between a male and a female name and the reconstructed root vowel appears either as long or short: **Fōzo*, **Fozo*. Because of the lack of typical Anglo-Frisian runes and its final *-o*, Seebold (1996) considers it to be an *n*-stem Frankish male name, under the assumption that Frisian names of this type end in *-a* (cf. Runic Frisian **hada**, **oka**). However, given the origin of this RF and OF *-a* < WGmc **-ō*, an intermediate stage with early-RF **-o* is in fact very likely, parallel to the Old Saxon development of WGmc **-ō* > Proto-OS **-o*, OS /ǎ/ <a ~o> (see the discussion in § 2.3.1). The early date of the *Hitsum* bracteate makes the lack of Anglo-Frisian runes and a Proto-Frisian ending **-o* rather than **-a* not particularly surprising. Early Germanic parallel attestations to such a name **Fozō* are not mentioned in the discussions in the literature, but one may think of the Frisian toponym *Foswert*, a compound name, with the second element < PGmc **wariþa-*, land near the water (Philippa et al. 2003:s.v. *waard*) and an unexplained first part (Gildemacher 2007:80). Names ending in *-wert/-werd* are very common in Friesland and the first element of such names is in various instances a proper name (Gildemacher 2007:9), e.g. *Baard* < *Bawerth*: personal name *Bawa*, *Jouwerd*: personal name *Juw*; see Oosterhout (1964). An otherwise not attested Old Frisian **Fosa* would fit in with these examples. This makes an interpretation of **fozo** as a local, Proto-Frisian male name a feasible option, which would be in line with the reconstructed developments of PGmc **-ō*.

2.4 Conclusion about Proto-Germanic unstressed **-ō-* in Runic Frisian

Bearing in mind all considerations, I will try to summarise the conclusions about Proto-Germanic unstressed **-ō-* in Runic Frisian. A comparison with other older Germanic languages allows us to conclude that there were three endings in WGmc: **-u*, **-ā* and **-ō* as continuations of PGmc **ō* in various contexts. The first one appears as **-u** in Runic Frisian which, in contrast to Old Frisian, was also preserved after heavy syllables. The most secure instances in Runic Frisian representing words with WGmc **-ō* show **-a**, which is confirmed by Old Frisian *-a*. Also, some secure instances with WGmc **-ā* show **-a**, suggesting a possible merger of the two phonemes in

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Runic Frisian. Old Frisian, however, maintains the historically defined contrast in these endings (*-a* versus *-e*), which could never have developed if such a contrast was absent in the parent language. Therefore, there must be a subtler reality behind these **-a**-spellings. Here the distributions as observed in 9th c. Old Saxon, where <a> is part of two alternating spelling patterns, reflecting different phonemes, may offer a possible line of enquiry. Even when the ending **-a** is the most frequent one in Runic Frisian for both West-Germanic endings, there are a few forms that fit in quite well with this assumed Runic Frisian-Old Saxon-parallelism: **kataē**, and possibly **muræ**, as a nom.sg. feminine *ō*-stem with WGmc **-ā* (levelled from the acc.sg. as in Old Saxon and Old High German), and **pusā** as the acc.sg. of the feminine demonstrative pronoun. Some of the other, more ambiguous forms can perhaps be covered by this theory as well. This hypothesis solves a few seemingly contradictory and inexplicable Runic Frisian forms, such as the form **deda**, which is totally unambiguous when it comes to reading and meaning. This interpretation places Runic Frisian from the period c. 600-800 in one line with 9th c. Old Saxon and suggests that all West-Germanic languages started off from a stage with *-a ~ -o*, which evolved into the North Sea Germanic *-e ~ -a* system, a process that apparently started in Old English, covered Runic Frisian in the 7th and 8th century, and was clearly on its way in 9th c. Old Saxon (Boutkan 1995:436, stage (14)). The 5th c. text **fozo** may attest to this earlier *-a ~ -o*-stage as well.

3. Proto-Germanic **-ai* and **-ī*

Three inscriptions may testify to the development of other Proto-Germanic long vowels and diphthongs others than the ones discussed in the previous section in Runic Frisian: **uræ** (*Ferwerd*, if not read as **muræ**), **iwi** and **ale** (*Westeremden B*). All three are questionable when it comes to their exact interpretation.⁶

If Looijenga's (2003:314) interpretation of *Westeremden B* (see the beginning of § 2.2) is correct, **iwi** seems to be a loc.sg. of the word 'yew', which word may also be attested in the nom.sg. as **i** in the *Britsum*

6. A fourth possible inscription in this row is **hiwi** 'spouse' (*Wijnaldum B*). I consulted Tineke Looijenga about it, after checking photos of the object. This inspection was triggered by the interpretation of the word's final *-i*, which is problematic because its potential cognates are all *n*-stems (Findell 2012:207, 208). Ms. Looijenga let me know that the circumstances of the identification of the inscription are in fact fairly suspicious: it was brought in by an amateur-archaeologist, not long after the discovery of the Meldorf brooch, which, possibly, carries the same text *hiwi*. I therefore consider the inscription to be suspicious and do not include it in this discussion.

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inscription (< PGmc *īwaz). Early Old English shows traces of an ending *-i* in the *a*-stems, functionally an instrumental, but etymologically interpreted as a locative (Hogg & Fulk 2011:16,17, Boutkan 1995:381, 382). According to Gallée (1993:197), this locative meaning of the ending *-i* can still be found in Old Saxon place names, next to an instrumental case in *-u*. Van Helten (1890:125) mentions various instances of Old Frisian dat.sg. forms with palatalization of the previous velar consonant that can only be derived from a form in *-i*, parallel to the mentioned locative relics in Old English and Old Saxon. The form **iwi** would fit in with the earlier mentioned Old Saxon locative instances in *-i*.

The form **uræ** was already mentioned as a potential dat.sg. *a*-stem, and discussed in § 2.3.2. In this interpretation, which after all is only one of the possible interpretations of this inscription, it would attest to the Runic Frisian development of WGmc *-ai.

Another potential instance of a word with PGmc *-ai is **[a]le**. The form is believed to be the 3rd pers.sg. subj. present of a verb RF *ala(n) ‘to grow’. The verb is not attested in any other form of Frisian, but existed in Old English. The vowel in the subjunctive ending developed from PGmc *-ai (Boutkan 1995:353, Ringe 2006:267). Old English and Old Saxon show for PGmc *-ai the same ending as for PGmc *-ōn: Early Old English *-æ*, Old Saxon *-e/-a = */æ/* (Klein 1977:158). Section 2 suggested an alternating spelling <æ ~ a> in Runic Frisian, with <a> rather following light syllables (see Table 3). The evidence from **[a]le** would add <e> as an additional variant with a light syllable, which does not contribute to the consistency of the whole reconstruction. Perhaps this <e> represents a WGmc *-ē < rather than WGmc *-ā < PGmc *-ōn and *-ē. But note that the interpretation of **uræ** as a dat.sg. also presupposes a PGmc *-ai.

If we assume that PGmc *-ōn and *-ē and *-ai had already merged in one vowel, RF *-æ, there may be another potential synchronic explanation for the variation between <a, æ, e> in this complex, different from the syllable weight hypothesis as presented in Table 3, namely, a perception based distribution of allographs. The <a> follows mid-open vowels */ε/ and */e/: **jibāda**, **deda**, while <æ, ā, e> follow extreme vowels */a(:), y/: **kataæ**, **pusā**, **ale**. This explanation would also hold for **(m)uræ**, but not for **edæ**. The idea is that the assumed low mid-open vowel quality */æ] sounds as a mid-open vowel when preceded by an extreme open or closed vowel, but rather as an open vowel when preceded by a mid-open vowel.

To sum up: Runic Frisian had a closed unstressed vowel /i/ that most likely originated in a WGmc *-ī, a historical loc.sg. ending. For the inter-

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pretation of the <e> in **[a]le**, whose interpretation is problematic anyway, there are various possibilities, but none of them can be more than a fragile hypothesis.

4. *The masculine nom.acc.sg. of the a-stems*

One of the most outstanding features of Runic Frisian is the presence of the ending *-u* in the nom.acc.sg. of the masculine *a*-stems. A concise but fairly complete overview of inscriptions in the Runic Frisian corpus that may contain a nom.sg. in *-u*, also with further references to scholars who advocate other interpretations, can be found in Nedoma (2007:302), and recently more extensively in Nedoma (2014). I largely follow his selection of items: **ko[m]bu** ‘comb’ (*Toornwerd*); **adujislu** personal name (*Westeremden A*); **skanomodu** personal name, **æniwulufu** personal name (*Folkestone*). Nielsen's (2000:92) formally possible interpretation of *Skanomodu* as a nom.sg. of a female name, and hence an \bar{o} -stem, has been discussed in § 2.3.2. A possible nom.sg. in *-u* is the personal name **alu[n]du**, which is in fact only one of the possible readings of the *Bernsterburen* inscription (Looijenga 2003:314,315). Alongside these instances of potential nom.sg. forms, the acc.sg. form **ka[m]bu** ‘comb’ (*Oostum*) is attested. Nedoma also mentions **wela[n]du** personal name (*Schweindorf*), but here I follow Looijenga (2013) in the reading without **-u**: **wela[n]d**, which I find convincing, to judge from the photograph of the inscription in her article. This latter reading can also be found in Krause (1971:67). Considering the Icelandic form *Völundur*, gen.sg. *Völundar*, I am inclined to interpret it as a *u*-stem (similarly Looijenga 2003:308; for further discussion see § 5 below). The personal name **habuku** (*Oostum*), also considered by Nedoma to be a male personal name in the nom.sg., is in my interpretation a dat.sg. of a female personal name (see the beginning of § 2.2). Altogether, there is a core of rather secure instances that can be expanded more or less according to the interpretation of some inscriptions where Runic Frisian has an ending **-u** in the nom.acc.sg. of masculine *a*-stems that forms the continuation of PGmc **-az/-aⁿ*. Taking the morphosyntactic criterion of nom.acc.sg. of masculine *a*-stems into account, two more Runic Frisian words without *-u* should be added: **wimod** personal name (nom.sg.) (*Westeremden B*) as a parallel to **skanomodu** (if an *a*-stem), and **i** ‘yew’ (acc.sg.) (*Britsum*) < PGmc **īwaⁿ*. The lack of an ending in these two words will be discussed later in this section.

Prior to looking into the Runic Frisian instances, I will consider the development of the nom.acc.sg. ending of masculine *a*-stems in earlier runic

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inscriptions. Early Runic has nom.sg. **-az**, acc.sg. **-a** (= *[ã]?), both closely resembling the reconstructed Proto-Germanic endings **-az* and **-aⁿ* (see e.g. Krause 1971). In Old Norse, the *-a* ending is lost and *-az* evolves into *-r*. All West-Germanic languages witness the loss of final *-r* / *-z* in unstressed syllables, and none of the Old West Germanic languages – Old English, Old Frisian, Old Saxon, Old Low Franconian or Old High German – attest to any trace of a vocalic ending in the nom.acc.sg. of the masculine *a*-stems. The loss of final *-z* in West Germanic is dated to the third century by Nielsen (2000:243), a dating that is at least as a *datum ante quem* confirmed by the *Friestedt* inscription from the late 3rd century (Schmidt, Nedoma & Düwel 2010).

There are a few early runic inscriptions with a vocalic ending in the nom.sg. which either originate from West Germanic territory or are sometimes linguistically interpreted as (Proto-)West Germanic. Especially the status of the Germanic dialect of Jutland before the Great Migrations is ambiguous in this respect (Nielsen 2000:342). Problematic instances from Denmark are **harja** *Vimose V* (c. 150; it may also be from Jutland (Nielsen 2000:281)), **swarta** *Illerup I* (c. 200), and **lagupewa** *Illerup III* (c. 200). Looijenga (2013:96-98) discusses various interpretations, and seems to prefer their interpretation as West Germanic forms, but Nielsen (2000:154) considers **swarta** and **lagupewa** to be *n*-stems (but note **-pewaz** as an *a*-stem on the *Thorsberg* buckle). Also there is **frohila** *Darum I* (c. 500) and a few other names ending in *-a*, which are *n*-stems according to Nielsen (2000: 284). A recent overview of the discussion can be found in Marold (2010:69-72).

The most unambiguous West Germanic example of the nom.acc.sg. of an *a*-stem word is **ka[m]ba** (*Friestedt*, Thüringen), dated to the late 3rd century (Schmidt, Nedoma & Düwel 2010). Another fairly straightforward inscription is the text **lapela** < PGmc **lapilaz* on a spoon in a 6th c. Merovingian grave in *Ichtratzheim* in the Alsace region. (Fischer et al. 2014). Boutkan (1995:50) mentions the form *focla* ‘bird’ (*a*-stem) from the 6th century Malberg glosses, linguistically associated with the Low Countries, although it has to be noticed that their transmission is very problematic (Quak 2008). A fourth potential instance is the word **ksamella** from *Wremen* (c. 425), to be read as **skamella* ‘footstool’. The word is attested in most of the old West Germanic languages, as in OS *fotscamel*, *fuotscamil* and OE *scamel*, *sceamul*, *sceamol*, which are all masculine *a*-stems. According to earlier scholars, the ending *-a* in **skamella* represents either a feminine *ō*-stem or a Latin neuter nom.pl. ending (Findell 2012:240). As the

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word was neuter in Latin (*scamellum*), yet is masculine in later Germanic languages, there seems to be little justification to me to interpret the word either as a feminine or a plural form, especially given that the inscription refers to just one object. The more straightforward interpretation is to treat the word as a nom.sg. masculine *a*-stem, with the West Germanic ending *-a* < PGmc *-az* (so also Nedoma 2014:358). Alternatively, it can be interpreted as a neuter noun, with the archaic nom.sg. ending *-a*.

The inscription **-þewaz** ‘servant’ < PGmc **þegwaz* on the *Thorsberg* buckle, dated to c. 200 AD, is commonly believed to be of (geographically) West Germanic origin (Looijenga 2003:259, Schuhmann 2014:411) and could provide a *datum post quem* for the loss of final *-z*.⁷ These attestations indicate that word-final *-a* had not been apocopated in central Germany by about 300 AD (*Frienstedt*) and was also present in northern Germany (*Wremen*) around 450 AD, a region that was Frisian speaking in the later Middle Ages. The Malberg Glosses (with caution) and the *Ichtratzheim*-text testify to the persistence of the vocalic ending in the Franconian region. Other Continental Runic evidence shows the loss of the vowel in the same period, as can be seen in **awimund** (cognate Icel. *Eymundur*), a male personal name on a find from *Weimar*, from the 6th c. from Thüringen. Another recent find, dated to the 5th century, has the form **balþlik**, which is interpreted as a masculine nom.sg. adjective without an ending (Findell 2012:500). The scarce evidence suggests the implementation of apocope of word-final PGmc **-a* from the south to the north, beginning in the 5th century, but leaving the Frisian region unaffected until the 8th century; see Table 5.

While the consonantal part of the Proto-Germanic ending **-az* was lost early in West-Germanic, the vocalic element remained in the northern dialects until relatively late, especially in Frisian. The *Skanomodu*-inscription may reflect the oldest Runic Frisian instance of a nom.sg. *a*-stem, while various other instances are dated to the 8th century. It seems that by the 8th century, Runic Frisian was the only Germanic language that preserved a vocalic trace of the Proto-Germanic endings **-az/*-aⁿ*. In North Germanic, apocope and syncope are generally dated to the 6th and 7th cen-

7. This seemingly straightforward interpretation may be in conflict with **-mariz**, which Schuhmann (2014:412, 413) with Grünzweig interprets as a *ja*-stem and hence a form with syncopated **-a-*, while he considers **-þewaz** to be of North Germanic origin. Other scholars interpret the form as an *i*-stem, see Looijenga (2003:259 with references). In Schuhmann’s (2014:409) opinion, also the inscription **argz** on the Thorsberg shield boss contains a form with syncopated **-a-*, but its interpretation is very problematic.

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dating	‘North’ (Frisian coast)	‘South’ (Middle Germany)
c. 200	-az : -þewaz (if West Germanic)	
3 rd c.	*-a	-a : ka[m]ba
5 th c.	-a : [sk]amella	-∅ : balþlik
6 th c.	-u : skanomodu	-∅ : awimund / -a : lapela
8 th c.	-u : ka/o[m]bu	-∅ : Old High German

Table 5: Dating the apocope of *-a* < Proto-Germanic **-az/*-an* in West Germanic

ture (Haugen 2004:19), and for the rest of West Germanic, a similar date seems appropriate. The details of this process, both in time, space and potential phonological conditioning, remain hidden. The consequences of this interpretation for the overall order of the apocope of unstressed vowels in Proto-Frisian (and potentially also other West Germanic languages) is discussed in § 7.

It has to be noted that Schuhmann (2014) advocates a totally different interpretation of the Runic Frisian ending *-u*, which I don’t follow. Schuhmann (2014:411) himself concludes that his interpretations may be ‘magerer’, but ‘von der Beweiskraft dennoch mehr [...] überzeugen[d]’. I will run through Schuhmann’s main arguments (with pages):

1. The interpretation of *-ka/ombu* as an *n*-stem instead of an *a*-stem (p. 400-401).
2. The interpretation of dat.pl. forms in *-ms* (p. 407-408).
3. The interpretation of inscriptions with *-Cz* as nom.sg. forms of West Germanic origin (p. 408-413).

Ad 1: The interpretation of *ka[m]ba*, *ka[m]bu*, *ko[m]bu* as an *n*-stem name may be “nicht gänzlich auszuschließen”, but has a very low probability, competing with an interpretation of the forms as *a*-stems. I know of 4 combs with an inscription that looks like the word for ‘comb’, with at least one (Elisenhof: *ka[m]br*) being an unambiguous *a*-stem. All findings are from regions where the word for ‘comb’ is an *a*-stem in later attested varieties (Old Norse, Old Frisian, Old Saxon, most of Old High German). The likelihood that 3 out of them would represent an only marginally attested *n*-stem proper name, can never be excluded, but is highly unlikely compared to the more obvious interpretation. The simple interpretation of these words as denoting the object ‘comb’ is also in line with the recent finding of *lapela* on a 6th century spoon, representing with the combs the inscriptions on so-called ‘talking objects’ (Fischer et al. 2014:14).

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Ad 2: Assuming that the Matron-inscriptions *AFLIMS* etc. indeed represent dat.pl. forms, it is not that obvious that they testify to the loss of an unstressed **a*. Panieri (2015:27) is strongly convinced that the ending was **-miz* and not **-maz* (so also Boutkan 1995:197, Ringe 2006, Lehmann 2007: § 3.2.1, Hogg & Fulk 2011:39). The Old English dat. pl. forms *þǣm* ‘them’ < **þaimi(z)* and *twǣm* < **twaimi(z)* ‘two’, show preservation of the **-i-* until after the application of *i*-mutation.

Ad 3: Schuhmann’s clinching argument for the syncope of unstressed *-a* in West Germanic seems to come from a number of runic inscriptions, which end in *-Cz* : Illerup, Gårdlösa, the former near Århus, the latter in Skåne, southern Sweden. Even when they may not be local, a West Germanic origin is also not automatically obvious (Looijenga 2003:37,38). I therefore reject Schuhmann’s objections.

Taking into account the inscriptions mentioned at the beginning of this section, we have the following evidence for the nom.acc.sg. of the masculine *a*-stems in Runic Frisian:

masc./neutr. a-stem	-u	-Ø
nom.sg.	ko[m]bu / adujislu / skanomodu / æniwulufu / alu[n]ðu (?)	wimod
acc.sg.	ka[m]bu	i

Table 6: Attestations of masculine *a*-stems in the nom.acc.sg. in Runic Frisian

The final *-u* of the nom.acc.sg. goes back to the nom.sg. **-az* and acc.sg. **-aⁿ*. The quality of RF *-u* < PGmc **-az/*-aⁿ* apparently differed from the masculine instr.sg. (**hāmu** ‘home(stead)’) and the feminine *ō*-stem ending *-u*, discussed in § 2: the nom.acc.sg. *a*-stem ending was lost in Old Frisian, and the masculine instr. ending and the feminine *ō*-stem ending remained as *-e*. A possible interpretation is given by Nedoma (2007:303):

Daß hier **-u** für altes **-az* (bzw. **-an*) steht, deutet auf durchgeführte Reduktionsprozesse, wobei als output-Lautung am ehesten an einen geschlossen realisierten Zentralvokal zu denken ist, phonetisch also etwa [ə] (demnach ‘obermittelhoch’; der mittlere Zentralvokal [ə] wäre wohl durch *-e-* bezeichnet worden).

This idea is reflected in the reconstructions of Proto-West Germanic presented by Euler (2013:43), who assumes some kind of super short reduced vowel, which he spells *ǣ*.

Finally, the two forms without *-u*, **wimod** and **i**, deserve a separate discussion. Why would *-u* disappear in these words yet being retained in

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many other instances? All examples in Table 6 contain a heavy syllable, so the retention is not quantity-conditioned. The explanation for the lack of an ending in the name *Wimod* may be connected with prosody. *Skanomodu*, *Æniwulufu* and *kambu* are isolated words, *kombu*, *Adujislu* and *Alundu* are followed by a consonant, but the *Westeremden* inscription reads: **wimod äh þusã** ‘Wimōd owns this’, where the name is followed by a word with an initial long stressed vowel. Assuming that the ending was a phonetically reduced vowel, such as [ə] or [u], apocope would be a logical consequence of this reduced vowel quality in order to avoid hiatus.

The second endingless instance of a nom.acc.sg. *a*-stem is found in the *Britsum* inscription: **þän i** ‘this yew’, which is an acc.sg., as can be deduced from the preceding demonstrative **þän**. (Note that a similar prosodic explanation to the one mentioned above was suggested as one of the possible explanations for the form **þän** instead of *þäna or *þänæ in § 2.3.2). Also this word is followed by a long stressed vowel: *æ* ‘always’. The lack of the final *-u* in the acc.sg. may also be a consequence of the phonological structure of the word: **īwa*ⁿ. According to Campbell (1977:232), the *-w-* is dropped in ‘uninflected forms’ in Old English, i.e. nom.sg. and acc.sg., OE *cneo* ‘knee’, dat.sg. *cneowe*. The word for ‘yew’ may also be attested as a loc.sg. **iwi** in *Westeremden B*. In Old Frisian, also the intervocalic semi-vowel *-w-* is lost – compare OE *on cneowe* ‘on the knee’ (dat.sg.), OF *bi tha riuchta kne* ‘by the right kinship’ (dat.sg.) (see also Van Helten 1890:§ 86). RF acc.sg. **i**, loc.sg. **iwi** complies with the situation in Old English. Also in RF *æ* ‘ever, always’ < PGmc **aiwi*, the *w* is missing.

Summarising, the evidence points to the retention of the Proto-Germanic inflections of masculine *a*-stems, the nom.sg. **-az* and acc.sg. **-a*ⁿ, as RF **-u**. This vowel was retained irrespective of the quantity of the preceding syllable. Given the later developments in Old Frisian, its phonetic (and phonemic) quality and/or quantity must have differed from RF **-u** < PGmc **-ō*. A reduced quality would help explain why it underwent apocope before a stressed long vowel. The Frisian retention of the vowel in the 8th century was an archaism from the perspective of other West-Germanic dialects of that time – Old English, Old High German and Old Saxon – where no trace of it is found.

5. Proto-Germanic short *-a*, *-u*, *-i*

This section addresses Proto-Germanic short vowels that have not been discussed so far. Three positions can be distinguished:

1. vowels that were word-final in Proto-Germanic;

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2. vowels that became word-final through loss of a final consonant in West-Germanic;
3. short vowels that were still protected (i.e. by a final consonant) in Runic Frisian.

Only the last category of vowels is preserved in Runic Frisian in some instances; in other contexts, the short vowels had disappeared, with the exception of PGmc **aC* (see previous section).

The Runic Frisian sample words with short vowels that were already word-final in WGmc are: **eka* > **ek** ‘I’, **aiwi* > **æ** ‘ever, always’, **miđi* > **me(p)** ‘with’. Examples of PGmc **-u-* and **-i-* that became word-final through loss of a final consonant in WGmc are **Wēla-handuz* > **wela[n]d** personal name, **Aibiz* > **aib** personal name, with a short *-u-* and *-i-* < **-uz* and **-iz*. Both words have a heavy syllable structure. There are no examples attested that can illustrate the development in words with a light syllable structure, but Old Frisian shows that these vowels were retained after a light root syllable, e.g. OF *sunu* < PGmc **sunuz*. The historical short *-u-* and *-i-* were subject to apocope after heavy root syllables, while the *-u* (< Proto-Germanic unstressed **-ō*) and the *-i* (< Proto-Germanic unstressed **-ī*) were retained in Runic Frisian, as in **jisuh[i]ldu**, **hāmu** and **iwi**. The short *-a-* (< **az* and **-aⁿ*) is in this respect a remarkable exception, because PGmc **-i* and **-u* are sensitive to syllable weight but RF **-u** (= /ə/) (< **az* and **-aⁿ*) was not. This will be further discussed in section § 7.

Protected WGmc **-i-* appears as **i** or **e**: **beripi* > **beret** ‘carry’ (imp.pl.), **-maidīd-* > **umædit** ‘not mad(?)’. In Old Frisian, there is no phonological contrast between short [i] or [e] in unstressed syllables. The alternation between the two vowels may reflect a vowel harmony pattern; see Findell (2012:90) for Continental Runic. In **bārād** ‘prepares (3.sg.prs)’ < **biraidipi*, OF *bīret*, there is a loss of unstressed *-i-* in a protected position between two homorganic, especially dental consonants, a pattern that is pan-Frisian (Siebs 1901:1213).

The **u** in the word **āmluþ** 3rd pers. sg. ind. present tense of ‘to thrive (?)’ (*Westeremden B*) is most likely an epenthetic vowel that was introduced to resolve a cluster /mlp/. The root vowel **ā** would comply with a reconstruction of a weak verb class I, deriving from PGmc **amljan*, related to ON *amla* ‘to strain oneself’ where the lack of rounding of the root vowel to /ɔ/ in **āmluþ** can be ascribed to *i*-mutation induced by the *-jan*-ending. The sequence OF **aml-*, with an unrounded PGmc **/a/* before a nasal, is exactly what one expects as the forerunner of Mod.WFries. *eamel(der)*, and

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Mainland North Frisian *aamel* ‘ant’ (Löfstedt 1931:67), words which can be semantically related to a verb meaning ‘to be busy’, see also the Mod.HG and Mod.Dutch idioms: *fleißig sein wie eine Ameise* = *zo vlijtig als een mier*, ‘as diligent as an ant’. Building on the assumption of a weak verb class I, a form ***ämlip** can be hypothesised. In 13th c. Old West Frisian, the thematic vowel /i/ had generally been syncopated before the ending /p/ of the 3rd sg. pres. ind. after heavy syllable stems and was only sporadically found after light syllable stems (Versloot 2008:166). Syncope after heavy syllable stems is also found in Old English from the 8th century. A form **æmlip* with syncope would yield **æmlp*, which is phonotactically not well-formed. The form **æmluþ* fits the pattern of epenthesis as found in RF **-wulufu** < **wulfu* ‘wolf’ (*Folkstone*) or Anglo-Saxon **aluwaluda** < **aluwaldo* ‘almighty’ (*Whitby*), with /lC/ > /luC/ (see Hogg & Fulker (2011: 269) for syllabification of sonorants in similar clusters, such as in **timbrde* ‘built’, appearing either as *timbrede* or *timbered*). The Runic Frisian vowel **u** for an epenthetic vowel complies with the interpretation of **u** as a schwa-like sound (see § 4 and § 6).

To sum up, short unstressed Proto-Germanic vowels were lost in word-final position and sometimes word internal after heavy syllables. Otherwise, they were phonologically neutralised and could be coloured by vowel harmony effects.

6. Binding vowels

In a number of words, vowels appear in unstressed syllables, which are not inflections and not word-final. They are interpreted as binding vowels in compounds, such as in **adujislu**, **jisu[h[i]]ldu**, **skano_omodu**, **æniwulufu**, **edæ-boda**. The **u** can continue a PGmc **-a-*, in **adu** < **auda-* ‘fortune’ and in **jisu** < **gīsa-* (Nedoma 2007:304-305). Just as in the case of the nom.acc.sg. *a*-stem ending **-u**, they rather represent a reduced vowel **/ə/*. This practice to render a reduced vowel with **-u** can potentially already be found in the sequence **[a]lgu-** ‘elk’ on the *Wremen* footstool from the 5th century, which seems to reflect a PGmc **algi-* (Findell 2012:146). The **i** in **æni** is fairly unambiguous as a retained short **-i-* in a protected position (Nedoma 2007:310; see also § 5). To deduce the *-æ-* in **edæ-** from PGmc **-a-*, as Nielsen (1984b:17) does, seems less likely in the light of the other instances with PGmc **-a-* and various other objections, discussed in Nedoma (2007:312-320). Nedoma wants to interpret the elements **edæ** and **boda** as two words, as suggested by the separation marks between them.

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Nedoma's interpretation of **edæ** as a female personal name was included in the discussion in § 2.3.

More difficult is the **-o** in the first element of the name **skanomodu**. The name is a so-called root composite, with the *i*-stem adjective PGmc **skauni-* (Old Frisian *skēne*) as the first element (Philippa et al. 2003:s.v. *schoon*). The most likely form in a Runic Frisian inscription from the 6th c. would be **skani-*, without *i*-mutation yet (Salmons 2008:368). A current interpretation of the inscription is that the **-o** derives from WGmc **-a*, as a neutral compositional vowel (Nedoma 2014:348,349; Nielsen 1984b:15). Explanations for the actual spelling with **o** instead of **a* are 'inaccurate writing' or 'a special development before /m/'. The latter interpretation is unlikely, because the /m/ is hetero-morphemic and more important, velarisation of PGmc **a* is in Frisian restricted to stressed syllables (Van Helten 1890:6). 'Inaccurate writing' is never an attractive solution. Arend Quak (p.c.) suggested a potential rationale for the spelling with **o**: he noticed a certain tendency towards vowel harmony in the spelling of compositional vowels in root composites, such as in: *Berthachárius*, *Berthichíldis*, *Bertovvinus* (Reichert & Nedoma 1990:481). The Form *Skanomódu* fits in surprisingly well with this hypothesis.⁸

Summarising, it can be concluded that the binding vowels confirm the findings from the analyses in § 4 and § 5, namely that protected, unstressed PGmc **-a* and **-i* are subject to a large scale reduction of quality and neutralization to **/ə/*, rendered mostly as **u**, but with the option of colouring through vowel harmony.

7. Discussion

7.1. The reconstructed Runic Frisian system of unstressed vowels

Despite the problematic interpretations of some instances, some conclusions and hypotheses can be presented:

- Proto-Germanic word-final long vowels and diphthongs are retained, most likely as short vowels;
- Proto-Germanic *-a-* < **-az* and **-aⁿ* is still retained in Runic Frisian, probably as **/ə/*, but it may be dropped before a stressed vowel;
- Other Proto-Germanic word-final short vowels (also after the earlier

8. It would be worth checking this hypothesis in a systematic way. For the moment, I rely on Quak's expertise and long standing experience.

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apocope of final *-z*) are dropped after heavy syllables and in unstressed words;

- Proto-Germanic short vowels that were still protected after the apocope of final consonants in Proto-Germanic are retained but with a strong tendency to reduction to **/ə/* and phonetic colouring through vowel harmony from the vowels in neighbouring stressed syllables.

In § 2, a system of unstressed vowels for Runic Frisian was reconstructed which corresponds to the */æ/ ~ /â/*-system in 9th c. Old Saxon. Furthermore, an unstressed */u/* < PGmc **-ō-* was identified. A phonological distinction between protected <e> and <i> could not be established. A peculiarity of Runic Frisian is the <u> which developed from PGmc **-a-*, which probably had phonological status. The vowel is usually given in the literature as */ə/*, but phonetically it may have been a mid or possibly high rounded central vowel, i.e. [ə] or [ɯ]. It was hypothesised that Runic Frisian may still have distinguished between the products of WGmc **-ǣ* and WGmc **-ā*.

The above discussions and analyses of the Frisian attestations lead me to postulate the following system of vowels in Runic Frisian unstressed syllables:

short vowels			examples:		
/ i/ l		/u/ ŋ	iwī		-h[i]ldu
(/ɛ/ M ?)	/ə/ ŋ, ǧ, M		[a]le (?)	ko[m]bu, skano-, beret	
/æ/ ƒ, †, ƒ		/â/ ƒ	katae, þusaǣ, deda		boda

Table 7: Reconstructed Runic Frisian vowels in unstressed syllables

This system complies largely with the systems for early Old English and for Old Saxon (Nielsen 2001:518), both in its synchronic distribution as in its diachronic derivation. There are two differences: the additional */ə/* and possibly the not completed merger of WGmc **-ǣ* and **-ā*.

The presented analysis suggests that Runic Frisian differed from Old Frisian, which had a three-vowel system, and shared with Old Saxon the */æ/ ~ /â/*-system, which was the result of the development of Proto-Germanic unstressed **-ō(-)*. This reconstruction implies that the North-Sea Germanic */e/ ~ /a/*-system was a relatively recent development in Frisian. If one follows Boutkan's reconstructed order of *Auslautgesetze* in West Germanic

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(1995:435,436), this hardly comes as a surprise. In his reconstruction, the transitions from the /a/ ~ /o/-system towards the /æ/ ~ /ǣ/-system in Old Saxon and the /e/ ~ /a/-system in Old English and Old Frisian were relatively late developments.

The existence of a /ǣ/ < PGmc *-aC is definitely a pretty archaic feature of Runic Frisian, compared to Old English and Old Saxon, and according to earlier scholarship in fact nearly impossible at such a late date (so e.g. Stiles 1995:189). In the light of more recent finds, such as *Frienstedt* (3rd c.) and especially *Ichtratzheim* from the 6th c., the Frisian data appear somewhat less isolated.

7.2. The reduction of unstressed Proto-Germanic vowels

There are various opinions about the dating and order of the loss of vowel and consonant in the nom.sg. *a*-stem ending *-az. Boutkan (1995:435) places the syncope of Proto-Germanic unstressed *a in the ending *-az before the loss of final *-z. This relative order is also assumed by Schuhmann (2014:407, 408) and is in line with Campbell's (1977:§ 331 (4)) description. Many scholars consider the order of events to be the opposite. Streitberg (1896:149) mentions reconstructed West-Germanic nom.sg. forms in -a, such as *apla 'apple', which shows that he considered the loss of *-z to be older than the loss of *-a-. He states that the loss of unstressed *-a is older than the loss of *-i or *-u (Streitberg 1896:173). Siebs (1901:1237) is of the same opinion, as follows from a nom.sg. "WGmc *draum(a)" 'dream' < PGmc *draumaz. Also Boer (1924:63) considers the loss of the vowel in the Proto-Germanic ending *-az to be younger than the loss of the consonant. This order is also sketched by e.g. Nielsen (2000:93), Hogg (2011:63), Stiles (2013:15), Euler (2013:68) and Nedoma (2014). Table 5 in § 4 supports the reconstruction that the loss of final *-z in West Germanic is older than the loss of unstressed *-a- and that the loss of (a reduced version of) unstressed *-a in Runic Frisian postdates even Boutkan's last stage (14) of the *Auslautgesetze*.

Another modification of Boutkan's account concerns his order PGmc *-ō > *-ū (stage 1) > *-u (stage 8), with a subsequent loss of -u after heavy syllables (stage 9) (Boutkan 1995:435). The contrast between **wela[n]d** < *Wēlandu, with the loss of *-u < *-uz, and **jisuh[i]ldu** < *Gīshild(j)ō, **hāmu** < *haimō, possibly also **habuku** < *Habukō if a dat.sg. ō-stem (and **skanomodu** if a nom.sg. ō-stem), all with -u < *-ū < *-ō, implies that the loss of originally short -u after heavy syllables must have antedated the shortening of *-ū < *-ō, which is the reverse of the order suggested by

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Boutkan. Irrespective of the interpretation of **wela[n]d**, the apocope of $-u < *-\bar{u} < *-\bar{o}$ is much later than in Boutkan's chronology. The apocope of $-u < \text{PGmc } -\bar{o}$ after heavy syllables was not implemented without exceptions, such as in the ending of the instr.sg. of a -stems, the 1st pers.sg.ind. (in OE, OS, OHG) and the dat.sg of the \bar{o} -stems (OS, OHG) (Boutkan 1995:186, 228, 309, 382). This would fit in with a scenario where $-u < *-\bar{u} < \text{PGmc } *-\bar{o}$ was lost later than PGmc $*-u$. It also suggests that we should reconstruct a Proto-West Germanic $*-\bar{u} < \text{PGmc } *-\bar{o}$, rather than $*-u$ (as was suggested in § 2).

8. Conclusion

Finally, I conclude that this reconstruction of Runic Frisian accounts for all relatively unambiguous forms. It offers a possible solution for one of the most unresolved problems in Runic Frisian unaccented vowels, namely the origin of the word-final **-a** in **deda** (Nielsen 1984b:15; 2000:93) and presents a solution for the **-o** in **skanomodu**. The offered reconstruction leaves space also for more ambiguous inscriptions, such **edæ** or **hada**.

In this reconstruction, Runic Frisian is a fairly 'normal' 7th/8th c. West Germanic language with structural similarities to Old Saxon and Early Old English, with four vowel qualities in unstressed syllables. It had, however, some outstanding conservatism: the retention of $-u < *-\bar{u} < *-\bar{o}$ after heavy syllables and the retention of Proto-Germanic unstressed $*-a-$ as <u>. The two mentioned conservatisms of Runic Frisian will give rise to a re-evaluation of earlier suggested orders of *Auslautgesetze*. In the adjustments within the paradigm of the \bar{o} -stems, Runic Frisian seems to have been more similar to Old Saxon than to Old English.

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