Conjunction renewal, runic coordination and the death of IE **k^{w}e*

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The Indo-European enclitic connective **k^{w}e*, preserved in Gothic as the sentence connective *-(u)h* 'and', is thought to have been lost as an independent form before the attested stages of other Germanic languages. However, interpretations involving *-h* 'and' < IE **k^{w}e* have been proposed for several early runic inscriptions. The inscriptions in question are all difficult and the interpretations problematic. The only well-attested cognate within Germanic, Gothic *-(u)h*, has an exclusively clausal distribution, whereas the putative runic examples coordinate smaller elements (mainly nouns). The proposed conjunction *-h* would be odd in the early Norse linguistic system. Most clitics in Norse are not sentence or phrasal connectives but tied to specific parts of speech, nouns or verbs. All the putative runic examples of *-h* are post-vocalic and it is not clear what form the conjunction would assume after a consonant. A conjunction that could only appear post-vocalically would be unusual and unstable. Word-final post-vocalic /h/ is lost in Norse around the sixth or seventh century CE. The hypothesis that the conjunction *-h* survived to die a phonological death through this sound change suggests more etymological continuity than it may be appropriate to postulate in this functional domain subject to regular renewal. The early runic corpus provides little evidence for coordination. It has been claimed that the normal word for 'and' in early Norse is *jah*, cognate with Gothic *jah* and Old High German *joh*. However, this statement is also based on a few problematic inscriptions and on comparative data. If *jah* were the usual 'and' word in sixth or seventh-century Norse, one would expect to see remnants of it in Viking Age inscriptions. The conjunction *ok*, which becomes the word for 'and' in all the North Germanic languages, appears fully grammaticalized by the time of the Viking Age runic inscriptions.

Introduction

The Indo-European enclitic particle **k^{w}e*, preserved in Gothic as the connective clitic *-(u)h*, is commonly thought to have been lost before the attested stages of other Germanic languages. However, readings containing a reflex *-h* of **k^{w}e*, glossed as the coordinating conjunction 'and', have been proposed for several runic inscriptions in the elder futhark: the Noleby stone (Brate 1898: 337–338; Bugge 1906: 9; Jóhannesson 1923: 99; Grønvik 1987a: 95), the Kinneve inscription (Grønvik 1987a: 135–137), the Nordendorf fibula 1 (Grønvik 1987b: 125–126), the Sjælland bracteate 2 (Samplonius 1997: 253), and the Bolbro bracteate 2 (Jóhannesson 1923: 89–90).

I argue that there is no compelling evidence for such a conjunction in the runic corpus. All the examples are problematic. Some are fragmentary; all contain passages that cannot be interpreted with confidence. In most cases, the motivation for the interpretation is to account for an otherwise gratuitous or unexplained rune. The putative conjunction would be anomalous in the early Norse linguistic system, of low perceptional salience and unlikely to survive.

Conjunctions as grammatical forms undergo continual renewal (cf. Meillet 1958). The death of IE **k^{w}e* in North Germanic was likely due to a combination of causes. The loss of

final *-h* in North Germanic during the period when the Elder Futhark was used sealed the particle's coffin, but other factors may have contributed.

One of the inscriptions in which Grønvik (1987b: 125–126) posits a reflex of **k^{w}e* is likely to be West Germanic: the Nordendorf fibula 1 (Krause & Jankuhn no. 151, 1966: 292–294). Word-final *-h* perseveres longer in West Germanic. Here, however, the rune in question is not **h** but the yew-rune ᛇ **ë**, which variously shows vocalic and consonantal values. Grønvik (1987b: 125) proposes that it represents a palatalized variant of *h* (the "ich-Laut" [ç]), an allophone of /h/ appearing after /i/, in an early form of High German. However, the **h** rune appears in a similar environment in another inscription from the same general area (the Wurmlingen spear blade (Krause & Jankuhn no. 162, 1966: 304–305)).

In his interpretation of the Noleby inscription (Krause & Jankuhn no. 67, 1966: 148–151), Grønvik (1987a: 93) posits a non-traditional, though plausible, interpretation of a bindrune. The Kinneve stone (Krause & Jankuhn no. 52, 1966: 114–115) is fragmentary, so that the purported first conjunct is a matter of guesswork. The inscription type seems to pattern with formulae which elsewhere appear without any overt coordinating element. It is also reminiscent of examples in which a final **h** cannot easily be interpreted as a coordinating element, inasmuch as the inscription consists of a single noun plus **h** (the Thorsberg shieldbuckle (Krause & Jankuhn no. 21, 1966: 55–56)).

In both Kinneve and Nordendorf, the posited particle would be joining nouns, whereas the only established Germanic cognate, Gothic *-(u)h*, has an exclusively clausal distribution. While such syntactic restrictions on the distribution of a connective element are unstable in the course of language history, these two types of distribution relate to quite different discourse functions and are arguably most likely to be distinct in a system which poses any restrictions on the distribution of a coordinating element (see section 1 below).

Grønvik is not the only scholar to have proposed reflexes of **k^{w}e* in runic inscriptions. Samplonius (1997: 253) speculates that *-h* may appear in the Sjælland bracteate 2 (Krause & Jankuhn no. 127, 1966: 261–263). Bugge (1906: 9) and Jóhannesson (1923: 74, 99) see *-h* in the parts of the Noleby stone that Grønvik (1987a: 99–104) interprets differently, though not in the place where Grønvik has it; Jóhannesson (1923: 89–90) also invokes *-h* in his interpretation of the Bolbro bracteate 2 (Stephens no. 56; DR BR. 39). In most cases, the motivation for the hypothesis appears to be to explain a rune that cannot easily be incorporated into a word in the interpretation, rather than an element which is grammatically motivated.

Section 1 briefly surveys reflexes of **k^{w}e* in other Indo-European languages. Section 2 concerns Gothic *-(u)h*. Section 3 discusses the loss of final /h/ in North and West Germanic. Sections 4–6 treat the individual inscriptions suggested by Grønvik to contain *-h* < **k^{w}e*; for reasons of space I restrict the discussion to these. Section 7 addresses the issue of coordination in runic inscriptions and the example of *jah* 'and'. Section 8 summarizes conclusions.

1. **k^{w}e* elsewhere in Indo-European

Reflexes of IE **k^{w}e* are found in several branches of Indo-European. The particle is widely attested in both a connective/additive and in a universalizing function, i.e., with meanings akin to 'and, also' (cf. Latin *-que* 'and') and to 'whichever, each' (cf. Latin *quomque* 'whenever'). Much debate has attached to the historical relationship between these two types of usage. Avatars of **k^{w}e* appear both singly and doubled; further discussion attaches to whether one of these patterns may be shown to be historically prior to the other (see Dunkel 1982). The clitic is a particle derived from the interrogatory/indefinite stem **k^{w}e-*, and is reconstructed

for PIE as, *inter alia*, a postpositive coordinating particle which could conjoin both clausal and smaller constituents.

As reflexes of *k^we, Latin *-que*, Greek *-τε* and Sanskrit *-ca* all represent syntactically autonomous coordinating clitics, which are used to join a variety of types of conjuncts. The distribution varies both among the branches and within the written tradition of each language. These reflexes illustrate types of changes which may occur in the distribution of such an element, as well as types of distributions which may become conventionalized in languages with flourishing literary traditions.

Many elements meaning 'and' (including English *and*) can conjoin almost any type of element: single words of various classes, phrases, and finite and non-finite clauses. This unrestricted distribution is reconstructed for IE *k^we (Viti 2008: 51). Many languages, however, impose syntactic restrictions on the types of constituents that a specific particle may combine. A common pattern is to contrast sentence-level coordination with word- and phrase-level coordination by restricting a particular element to one or the other function (cf. Klein & Condon 1993: 4). Coordination of verbs and verb phrases tends to pattern with sentence coordination. Eyþórsson (1995: 84–95) suggests that coordinated verb phrases are best treated as coordinated clauses with null-subjects in the second coordinate.

In numerous other IE daughter languages, *k^we is found in a fossilized form in lexicalized collocations. Old Irish, for example, shows a development from a "quasi-independent" sentence-connective *-ch* to an infix restricted to certain lexicalized expressions (Watkins 1963: 8–10). Several Gothic pronouns and connectives (including the general-purpose 'and' word *jah*) likewise represent lexicalized combinations of other material and *k^we. The same holds for Icelandic *né* 'nor' < **ne-hw(i)* (Magnússon 1989: 661). Lexicalized combinations often exist alongside syntactically independent clitics, and it is often non-trivial to determine from corpus data whether an item is lexicalized (cf. Klein 1994 on a few such elements in Gothic).

Klein & Condon (1993: 32–33) provide a table showing examples of reflexes of *k^we as word-level and sentence connectives in Indo-Iranian, Greek and Latin. Here I give a few examples from different IE branches.

Latin *-que* is shown combining nouns in (1), verbs in (2) and clauses in (3).

1 *arma virum-que cano* (Virgil, Aeneid)
arms man-and sing(1sg.)
2 *[c]lasesque nauales primos ornauet parauet-que* (Columna Rostrata)
fleets-and naval equipped prepared-and
3 *in Italiam…contendit duas-que ibi legiones conscribit* (Caesar, de Bello Gallico)
to Italy…ventures two-and here legions enlists

Watkins (1963: 9) states that "The use of the sentence connective *-que* was well nigh obligatory in archaic Latin." In Classical Latin, *-que* is used primarily to conjoin nouns and noun phrases, and its use to join sentences is marginal (though cf. ex. 3 above). Hence in Latin, the tendency is for the particle to be confined to smaller units. Other (non-enclitic) 'and' elements in Latin retain a distribution which includes both clausal and sub-clausal units; among these is *atque*, transparently derived with *-que*.

In the Ṛgveda, *-ca* appears conjoining verbs (4), nouns (5, 6), noun phrases (7), and sentences (8; from Klein & Condon 1993: 32). Klein notes that "Rigvedic *ca* possesses sentential value in about 9% of its occurrences, so that the type is old, but recessive in Indo-European." (Klein 1992: 17).

4 *rakṣā ca no adhi ca brūhi deva*
2sg.imp.and acc. prev. and 2sg.imp. voc

protect and us up and speak god
'protect us and speak up for us, god'
5 *aryamṇo varuṇasya ca*
gen. gen. and
'of Aryaman and Varuna'
6 *stomo yajñaś ca*
nom. nom. and
'praise and worship'
7 *dadahikrām agnim uṣasaṃ ca devīṃ*
acc. acc. acc. and acc.
'Dadhikra, Agni, and Goddess Usas'
8 *na tvad dhotā pūrvo agne yajīyān na kāvyaiḥ paro asti svadhāvaḥ |*
viśaś ca yasyā atithir bhavāsi sa yajñena vanavad deva martān
'No Hotar previous to thee was better worshipping, O Agni, none is superior (to thee) by means of poetic powers, O independent one. And of whose clan thou shalt become the guest, that one will overcome the (other) mortals though worship, O heavenly one.' (translation Klein & Condon 1993: 32)

Greek *-τε* receives extensive treatment in Denniston (1978: 495–536) and works there cited. Denniston (1978: 498–499) states that single *-τε* may be used to coordinate essentially any type of element: single words, phrases, clauses (participial, infinitival or finite) or sentences, and, moreover, "The units linked by *τε* (or by *καί*) are not necessarily *eiusdem generis*" (Denniston 1978: 497n). Denniston goes on to outline tendencies observed in different genres, in the works of different authors and in different periods of Greek literary history.

Klein (1992: 16–18) argues that the use of *-τε* in Homer to conjoin sentences is marginal at best, with most of the relatively few examples representing "a fluid boundary between subclausal and sentential *τε*" (18). In the examples taken from verse or drama which Denniston (1978: 497) lists as representatives of this basic use of single *-τε*, the instances of sentence coordination are likewise marginal. Examples from drama tend to involve a change of speaker, and are thus (though postpositive) turn-initial in the discourse, even if the characters are made to finish each others' sentences. They thus seem to function as turn-initial marks of continuity, marking utterances as tied to preceding discourse. Clausal *-τε* without a turn change seems to mark a strong shift of topic. Editors have here provided a period rather than a comma.

In spoken language, these functions of marking continuity and topic shifts are observed in particles which correspond to both coordinating and subordinating conjunctions in written language (cf. Kalliokoski 1989 on Finnish *ja* 'and'). Koivisto (2011) discusses the conversational functions of Finnish elements that in written language are highly grammaticalized conjunctions – *ja* 'and', *mutta* 'but', and *että* 'that' (complementizer) – when they appear at the end of a turn, i.e., in utterance-final position. She argues that such turn-final "conjunctions" do not necessarily signal incompleteness but can be viewed as final particles.

Sentential coordinating elements thus have affinities with subordinating elements, as well as with particles which are not conjunctions. Subordinating conjunctions do not generally have word- or phrase-level analogues. A coordinating conjunction which is restricted to clause-level constituents is in many ways similar to a subordinating conjuction. Eyþórsson (1996: 118) concludes from (inter alia) the fact that Gothic *-(u)h* "is in complementary distribution with subordinating conjunctions" that "this clitic is base generated in C," the complementizer position (although he stresses that *-(u)h* is not a subordinating conjunction). Klein & Condon (1993: 31–32) argue that the central function of Gothic *-(u)h* is to mark discourse continuity, not coordination *per se*.

The above survey shows that reflexes of *k^we may be restricted to either clausal or subclausal usage and that this can change relatively quickly in the history of an individual language. Clausal coordination dovetails with other discourse particle functions. In many languages the particle survives longer in univerbated forms than as an independent element.

2. Gothic -(*u*)*h*

The Gothic connective -(*u*)*h* has long been established as a reflex of *k^we, though its precise etymology has been debated (< *k^we or *u k^we). The particle generally takes the form -*h* following vowels and -*uh* following consonants. The *h* may optionally undergo assimilation to a following coronal, producing such allomorphs as -(*u*)*þ*, -(*u*)*n*, -(*u*)*s*.

Klein & Condon (1993: 37) endorse the hypothesis (stemming from Brugmann 1913–14) that Gothic -(*u*)*h* reflects IE *u k^we, i.e., a combination of a discourse-continuity particle and *k^we. The same combination is found elsewhere in IE, e.g., Skt. *u ca*. The Gothic lexical items *jah* 'and' and *nih* 'nor,' on the other hand, Klein & Condon (1993: 47–48) argue, based on syntactic distribution and the absence of phonological arguments to the contrary, to be derived with "bare" *k^we rather than *u k^we.

In Gothic, -(*u*)*h* is a clausal connective and emphatic element which most frequently seems to have the force of 'indeed, the very same'. Both the syntactically independent connective and the lexicalized collocations containing it seem more directly traceable to the connective than to the universalizing function. The pattern of attestation in Gothic is thus similar to that in Old Irish.

Eyþórsson (1995) infers that the Germanic reflex of *k^we was associated with COMP (the complementizer position at the head of a clause) already before the formation of these elements, so that the free distribution of *jah* found in attested Gothic represents a generalization, after the lexicalization, from use exclusively with clauses in an earlier stage. Eyþórsson suggests that examples of *ja* without *h* in the meaning 'and' are "clearly archaisms"; presumably the generalized use of *jah* would have arisen through contamination. His hypotheses on the development in Gothic are thus parallel to Watkins' (1963: 8–10) claims for Old Irish.

Klein & Condon (1993: 31) demonstrate that Gothic -(*u*)*h* only rarely serves as a translational equivalent to 'and.' This usage is, nonetheless, thought to be an archaism in Gothic. The connective or generalizing *k^we reinforces the discourse-continuity particle *u. Rules reducing combinations of two vowels thus produce the variants without a vowel observed after other vowels.

According to Klein & Condon, the distribution of *nih* 'and not', as well as its phonological form, points to a formation directly from *ne k^we rather than with *u k^we. In their view, *nih* was thus probably univerbated before the free clitic continuing IE *k^we was reinforced/univerbated to *u k^we. It is more difficult to establish based on phonological evidence whether *jah* 'and' also reflects *u k^we or simply *k^we.

Eyþórsson (1995: 103), on the other hand, thinks it is "an unnecessary complication to assume that Gothic *uh* arose from PIE *u + *k^we." Rather "the variant *uh* resulted from a pre-Gothic reflex of PIE *k^we in which an anaptyctic vowel in postconsonantal position was generalized (*k^we > *uh* / C_)" (103). The syntactic specialization and evolution of function could have occurred without positing the involvement of another conjunction.

Exact analogues to *nih* are found in other IE languages. It is difficult to determine with certainty the age of the collocation or its univerbation in the individual languages. There is, however, no reason to assume that the univerbation of *u k^we (if the Brugmann etymology is

correct) was a Germanic rather than a specifically Gothic development. This reinforcement could have helped to preserve the conjunction in Gothic.

3. Final *h*

In North Germanic, post-vocalic *h* disappears during the period from which the elder inscriptions stem. Krause (1971: 44) gives as the first example of the loss the Svarteborg medallion (Krause & Jankuhn no. 47, 1966: 106–107) from ca. 450 **ssigaduR** < **Sigi-haduR*, but suggests that the change might have taken place sooner in personal names; he (Krause 1971: 44) points to a preserved *h* in **niuha** 'new' in the Steintoften stone (Krause & Jankuhn no. 96, 1966: 209–214) from ca. 650.

Noreen (1903: 148) lists **jah** on the Kragehul spear shaft (Krause & Jankuhn no. 27, 1966: 64–68) and **iah** in the Järsberg inscription (Krause & Jankuhn no. 70, 1966: 156–158), both dated to the early 6th c., as evidence that *h* is lost in Norse "Auslautend erst später," with **flu** 'fled' in the Danish Hællestad inscription I (DR 295, ca. 980) being "der älteste beleg des *h*-schwundes im auslaut" (Noreen 1903: 148). However, the Kragehul inscription is problematic, and the transliteration of the Järsberg inscription in Krause & Jankuhn (1966: 156) does not contain the sequence **iah**; the portion of the inscription that Noreen (1903: 338) transliterates "(wi)**t ia͡h**" Krause & Jankuhn (1966: 156) represent as "**h͡ait**". The interpretation takes the line in question as reading right to left rather than left to right like several other lines of the inscription.

In all of the examples considered here, the purported conjunction occurs in a post-vocalic environment. If these do represent such a conjunction, the question remains open what form it might take in a post-consonantal environment. A final /h/ might well have assimilated to a preceding consonant, producing gemination. Given that runic orthography does not generally indicate segmental length, phantom conjunctions would be unrecoverable from the preserved inscriptions. A second possibility is that the *h* would produce aspiration on the preceding consonant. Such a particle would also be unlikely to leave a trace in the runic record. A situation in which a conjunction could only appear after vowels does not seem stable. The form *h* is phonologically minimal and of low salience, and would be unlikely to last.

If the conjunction had survived so long, one might perhaps expect to find a wider variety of lexicalized collocations containing *k^we reflected in lengthened vowels etc. *Né* appears to be archaic in Norse or Germanic. The development of *k^we in other IE branches suggests that the particle dies not simply through phonological erosion but also through lexicalization, a process observed in the collocations with *-h* preserved in Gothic and, to a lesser extent, Norse.

4. The Noleby stone

The Noleby stone (Krause & Jankuhn no. 67, 1966: 148–151) was discovered when separated from a fallen stone wall by a shying horse in Stora Noleby, Fyrunga parish, Västergötland, in 1894. Krause & Jankuhn (1966: 151) date it to the late 6th c. The inscription consists of three lines. Much of it is obscure, and at least some part of the inscription does not seem to constitute linguistic material in a Germanic language. The Krause & Jankuhn (1966: 149) transcription of the Noleby inscription is given in (9):

9 I: **runofahiraginakudotoje͡ḳa**
II: **unaþou | suhurah | susi**x**hwatin** (with dot under w: **hẉatin**)
III: **hakuþo**

Rune 18 in the second line has sometimes been read as **h** (Krause & Jankuhn 1966: 149). The first eighteen runes seem to form the statement *runo fahi ragina kundo* 'the one with divine knowledge made a rune'. The segment **toje** has been interpreted as continuing earlier **tauju* 'I make' by Krause & Jankuhn (1966: 150), who view it as being followed by a first-person subject pronoun, and is connected semantically to ON *tjóa* 'help, serve' (cf. Mees 2013) by Grønvik (1987a: 95–96), who views the end of the line as an enclitic *-h* followed by the preposition **a** (ON *á*). The beginning of the second line recalls ON *unaðr* 'contentment'.

While **hu̯atin** and **hakuþo** are difficult but Norse-looking forms, the intervening sequence **suhurah| susi**x is not easily interpretable as Germanic, and has tended to be regarded as a magical formula. Krause & Jankuhn (1966: 150), however, point out that the absence of a separator between **susi**x and the apparent resumption of Norse material is somewhat surprising. The differences in interpretation concern the parsing and interpretation of a small number of runes which occur near the border between fairly clear and obscure material.

The ligature which forms the penultimate rune in the first line resembles a Roman capital M with a diagonal stroke from lower left to upper right. The transliteration as **e͡k** stems from Brate (1898: 331), and has been accepted by most later scholars. Grønvik (1987a: 93) prefers to transliterate this rune as **e͡h**. He points out that elsewhere in the inscription, **k** has the distinctive form Y. Brate admits some epigraphic difficulties with the interpretation as **e͡k**: "som binderuna **e͡k** är den icke lycklig, då man väntar tjännestrecket till **k** anbrakt på högra staven till **e**, icke på den vänstra" [as a bind-rune **e͡k** it is not fortunate, as one expects the identifying stroke of the **k** attached to the right stave of the **e**, not to the left one] (Brate 1898: 336), and Bugge (1906: 4 n. 1) points out that "Runen for **k** har i denne Binderune en Form, som er væsentlig forskjellig fra Formen af de to andre **k**-Runer i Indskriften" [The rune for **k** in this bindrune has a form that is significantly different from the form of the two other **k**-runes in the inscription]. The reading **e͡k** allows an interpretation of the inscription as containing a subject pronoun **e͡ka** immediately following a finite verb – a syntactic configuration found in other inscriptions as well.

The more obscure parts of the inscription clearly show **h** preserved in post-vocalic position. While Jóhannesson (1923: 99) accepts the bind-rune discussed above as **e͡k**, he sees two instances of *h* < *k^we* in the more obscure parts of the inscription, viz. in **suhurah** and **susih**. He interprets these as 'father-in-law-and mother-in-law-and':

> *suhurah* < **suhura, *súre* 'Schwiegervater', **svære*, schw. Dekl.; vgl. got. *swaíhra*, ahd. *swehur*, ags. *swéor* + *h* (Partikel, vgl. got.) *susih* ('und Schwiegermutter', *susih* < **súsî* + *h*, **susî* Kosename von **su* in **suhurô* (Nebenform zu *suhura*, vgl. got. *swaihrô*, altn. *sværa* < **swehrōn-*) + *si* (Kosenamenendung, vgl. isl. *bangsi, dengsi* (< *dreng-sî*), *bjössi* (< *björn-sî*)) (Jóhannesson 1923: 99).

Grønvik (1987a: 99) translates the full inscription to Norwegian: "Man skrive (male) en hemmelig formular, som stammer fra maktene (gudene), og hjelpe den unge (kvinnen) til trivsel!" [May one write (paint) a secret formula that comes from the powers (gods) and help the young (woman) to contentment.] The Noleby inscription is the most convincing of Grønvik's proposed examples of *-h*. The reading of the bind-rune is epigraphically plausible. The function of *-h* combining verb phrases corresponds to the use of the cognate element in Gothic. The main difference between Grønvik's (1987a: 99) interpretation and those of others is that the inscription invokes a third-person runic magician rather than a first-person rune carver. First-person carver formulae are frequent in the older runic corpus, which could corroborate the "traditional" interpretation.

5. The Kinneve stone

The Kinneve stone (Krause & Jankuhn no. 52, 1966: 114–115) is a fragment 7.5 cm in length and 4.5 cm in width, which was found in Västergötland in 1843 in the course of plowing a field. It is dated to the late 6th c. It is presumed to have originally lain in a grave; remains of several small grave mounds were found in the vicinity. The stone is broken off on the left; the seven runes preserved read from left to right:

10 ///**siRaluh**

Several of the interpretations summarized by Krause & Jankuhn (1966: 114–115) have tried to treat the inscription as complete as it stands. These have taken **siR** variously as a reflexive pronoun (ON *sér*) or a subjunctive form of 'to be'. An interpretation (due to Marstrander) involving interpolation of missing material involves speculation that the first part may have been *æsir* 'gods'. In all of these cases, the final **h** is taken as an ideograph. Grønvik (1987a: 136–137), however, suggests that the missing material was a noun which created a formula semantically parallel to the recurring *laukaR alu*. He says that the only possibility is Norse *krás*, pl. *-ir* 'godbit, lekkerbisken' (Grønvik 1987a: 136), so that the inscription reads "delicacies and ale." However, *laukaR alu* formulae are elsewhere attested without any conjoining element. The Kinneve stone is too fragmentary independently to provide strong evidence regarding **k^{w}e*.

The Ølst bracteat (Krause & Jankuhn no. 123, 1966: 258–259) reads **hag alu**, perhaps interpretable as *hagala alu*. This could corroborate an ideographic interpretation of the **h** in the Kinneve inscription, inasmuch as **alu** may be coupled with 'hail' in a formula.

6. The Nordendorf fibula 1

The Nordendorf fibula 1 (Krause & Jankuhn no. 151, 1966: 292–294) was part of a grave find uncovered in 1843 in the course of construction of the railway between Augsburg and Donauwörth. Its inscription, dated to the early 7th c., has attracted attention largely for the presence of the theonyms **wodan** and **þonar** in its first half.

The inscription consists of two parts.

11 A I: **logaþore**
II: **wodan**
III: **wigiþonar**

B: **ą̇waḷeubwinië**

Krause & Jankuhn (1966: 292) transliterate the last rune as x, unidentified.

Here I discuss only the B inscription. Grønvik (1987b: 124–126) argues that the B inscription contains two personal names *Awa* f. and *Leubwini* m. followed by the enclitic conjunction *-h* in a palatalized form [ç], represented by ᛦ, following a front vowel. Other researchers had treated the last rune as a vowel and viewed the second name as a feminine *Leubwinie* < *Leubwinia* (Grienberger 1913: 144, Unwerth 1916: 84 apud Grønvik 1987b: 124) or as a masculine dative form based on the analogy of the *a*-stems (Henning 1889: 104, cf. Grønvik 1987b: 124–125). Page (1995: 140) is skeptical about the interpretation of the final symbol in the Nordendorf 1 inscription, which is unclearly carved and was regarded by several scholars as a punctuation mark. Grønvik's interpretation involves a number of assumptions and, again, the uncertainty seems too great to justify strong claims regarding a preserved reflex of **k^{w}e*.

6.1. The thirteenth rune

The thirteenth, yew or *ihwaz* rune ᛇ is often transliterated as **ï.** However, its phonetic value has been somewhat difficult to establish (Mees 2011). Antonsen (1975: 2–3) summarizes some of the issues and contributions to the debate. Various front vowels, including one "between e and i," have been suggested as the rune's Germanic value (Elliott 1963: 83, cf. Antonsen 1975: 2) but this has been debated. Steblin-Kamenskij (1962: 6) concluded that the rune "was superfluous from the very inception of the fuþark" (Antonsen 1975: 2) as it does not correspond to a phoneme in the system represented by the oldest inscriptions. As Antonsen (1975: 2–3) points out, however, this involves a presupposition "that the phonological system of the earliest inscriptions was also the one the fuþark was originally intended to represent" (Antonsen 1975: 2–3), and leaves the rune's presence in the fuþark unexplained. Antonsen (1975: 4) concludes that the original value of the yew-rune was "the (long/tense) low spread phoneme */ǣ/", based on his analysis of the vowel system of Proto-Germanic. Old English also provides an attestation of the yew-rune with the value /h/ in *almehttig* 'almighty' (Ruthwell cross), though according to Antonsen (1975: 6) this value cannot have been original.

The thirteenth (*ihwaz*) and fifteenth (*ingwaz*) runes caused the greatest difficulties in determination of their phonic significance. In both cases, two different values seem to be attested, one vocalic, the other consonantal. In both instances, Grønvik (1981: 29–32) argues, the value of the rune has been unstable because the original value of the rune was not a phoneme of the language which could appear in word-initial position. When the sound represented by the rune was not the first sound in its name, the mnemonic value of the name was less, and there was a tendency for the value of the rune to shift to the vowel which appeared initially in its name. Sound changes also conspired to remove the original sound value from the word which formed its name.

The Wurmlingen spear blade (Krause & Jankuhn no. 162, 1966: 304–305) reads **idorih**. The Wurmlingen inscription has been interpreted as a personal name *Idorīh*, the second element in which is *-rīh* 'powerful' (cf. ON *ríkr*, MnGer *reich*). This represents the same general dialect area and period as the Nordendorf fibula 1. Hence in at least one High German inscription, *x*/*ç* < **k* (by the second sound shift) is represented as **h** after *i*, though this is known later to represent a palatalized sound. It is not clear whether an inherited Germanic /h/ would be written differently.

7. Runic coordination

The older runic inscriptions are generally brief and elliptical texts, frequently obscure. Syntactic discussions of this corpus have tended to focus on basic word order, particularly the position of the finite verb, and the relative order of noun and modifier – basic, high-frequency collocations. Even in these questions, the record does not yield unambiguous or undisputed results. The number of early inscriptions which contain more than one clause is limited.

Little is known about coordination strategies in early Norse. Asyndetic coordination is common in older Indo-European languages generally (Viti 2008: 36–39). The elder runic corpus contains very few undisputed attestations of coordinating conjunctions. The claim that *jah* was the usual word for 'and' in early Norse (as in Gothic) (Falk & Torp 1910: v.1, 788) is based on a few problematic inscriptions and comparative evidence. If *ja*(*h*) were the normal word for 'and' in 6th and 7th c. Norse, one would expect to see some remnants of this in Viking Age inscriptions.

7.1. ja(h) *in runic inscriptions?*

The coordinating conjunction *ja*(*h*), known from Gothic, has also historically been invoked in interpretations of inscriptions in the Elder Futhark. Cognates include Old High German *ja* and *joh*, Old Saxon *ja*, *gia* and *gi*(*e*), and Old English *ȝe* (id.) (Feist 1939: 300, s.v. *jah*). It is formed from PIE **i̯o-kʷe-*, the affirmative particle **i̯o-* with the connective **-kʷe*, cf. Sanskrit *yac-ca* 'und war' < *yad ca*. Falk & Torp (1910: v.1, 788, sv. *og*) state that "Das in der älteren runensprache gewöhnliche wort für „und" war (*j*)*ah* = got. *jah*." As mentioned, this is, however, based on just a few inscriptions. Krause & Jankuhn (1966: 242), to the contrary, insist that there is no such word in Norse.

Feist (1939: 300, s.v. *jah*) mentions the Kragehul spear shaft (Krause & Jankuhn no. 27, 1966: 64–68) as a runic example of *jah*. The artifact is fragmentary, and the purported word would span one of the junctures, where it is not certain whether the fragments were originally contiguous. Krause & Jankuhn's (1966: 65) transliteration of the inscription is given in (12):

12 **ekerilaRasugisalasmuhahaitegagagaginugahe///lija///hagalawijubig///**

The **ja** of the inscription seems to belong to a fragmentary word ending in **lija**, while the **h** clearly begins **hagala** – whatever may or may not be determinable about the content of other portions of the inscription. Krause & Jankuhn (1966: 321) do not list *jah* in their index of words found in the older inscriptions, nor does Antonsen (1975: 92).

Jóhannesson (1923: 74, 93) sees *iah*? 'und' in the Järlsberg inscription (Krause & Jankuhn no. 70, 1966: 156–158) and a *ja* 'und' in the Skodborg Bracteate no. 67 (Krause & Jankuhn no. 105, 1966: 241–244). The Järlsberg inscription is divided into four segments, which Krause & Jankuhn read as running variously from left to right and from right to left. There are several bindrunes. Their transliteration (1966: 156) is given in (13):

13 I. (rechtsl.): **ubaRhite | harabanaR**
II. (linksl.): **hait**
III. (rechtsl.): **ekerilaR**
IV. (rechtsl.): **runoRw** (linksl.) **aritu**

Jóhannesson (1923: 74, 93) views II as reading from left to right, contra Krause & Jankuhn; he reads **iah**, leaving the **t** to form a word with a preceding lacuna. The stone is broken off immediately above the **t** (also the left edge of the **u** in I). Krause & Jankuhn's interpretation of II as a form of the verb *haitan* 'to be called' seems more likely than *jah* 'and'.

The Skodborg bracteate (Krause & Jankuhn no. 105, 1966: 241–244) reads (1966: 241):

14 **auja alawin auja alawin auja alawin j alawid**

Jóhannesson (1923: 74, 105) interprets the **j** and first **a** of the final **alawid** as **ja** 'and'. Krause & Jankuhn (1966: 241–242) argue against this interpretation on the basis of the linguistic form postulated:

> R. 31 *j* ist kaum (mit den älteren Erklärern) als *ja* 'und' zu fassen, weil dieses Wort im nordischen Sprachgebiet nicht existiert (fi. *ja* 'und' ist wahrscheinlich dem Got. entlehnt). Man kann in *j* entweder (mit Bæksted) die Verschreibung für ein nochmaliges *auja* oder (mit Salberger) die Begriffsrune *j*(*āra*) 'gutes Jahr' erkennen (vgl. oben Nr. 96 Stentoften). (Krause & Jankuhn 1966: 241–242)

Again, we see an 'and' word and an ideogram as competing interpretations for a rune that is hard to integrate with the surrounding words. The inscription is sufficiently repetitive that accidental repetition of **j** from **auja** also seems plausible.

The word for 'and' in most Finnic and Sámi languages, *ja* (in some Finnish dialects and South Sámi *jah*) is commonly regarded as a Germanic borrowing. It was viewed since Thomsen (1869) as a Gothic borrowing. However, Karsten (1915, 1943–1944) questioned Thomsen's Gothic loanword stratum. There are no loanwords in Finnic languages that display specifically Gothic innovations, nor is the likely contact area clear. It is more likely that the words are from Proto-Germanic (Kallio 2015: 23–24, 28).

The loss of initial *j* by the 6th c. would erode *jah* to **ah*. Krause (1971: 30) cites Årstad (Krause & Jankuhn no. 58, 1966: 130–132) **ᚮᚿwinaR** < PGmc **junga-winaiz* from the mid 6th c. as the oldest inscription showing the change. Bugge (1897: 334–335, 344; 1899: 146) suggests that runes 5–8 in the first line of the Noleby inscription (discussed above) could represent a possible **jah** 'and' and runes 12–13 **ah** in the second line the same word, representing a stage where *j* is preserved only following a vowel, but admits that the reading of the fifth rune is uncertain. (In 1906: 8–9, however, he changes his interpretation of the second line.) The loss of word-final *-h* in North Germanic around the 6th or 7th c. CE would reduce it to **a*. Early Norse was in the market to grammaticalize new connective conjunctions due to phonetic erosion. It is likely that *ok* emerged around this time.

7.2. The conjunctions ok *and* en

The conjunction *ok* 'and' develops from the adverb *auk* 'also', which has cognates across Germanic. It has variously been regarded as a frozen case form of a noun **auka-* 'addition' related to the verb ON *auka* 'to increase' (Falk & Torp 1910: v. 1, 788, sv. *og*) or as derived from the IE pronominal stem **au-* **u-*, cf. e.g. Lat. *aut* 'or', Gk. *αὖγε* 'again' (de Vries 1961: 19, sv. *auk*; Magnússon 1989: 687, sv *og*). The conjunction *ok* appears once in the older runic corpus, in the Eggja inscription from the late 7th c. (Krause & Jankuhn no. 101, 1966: 227–235). The first part of this lengthy poetic inscription begins (Krause & Jankuhn 1966: 228):

15 **nissolusotuknisAksestAinskorinni**xxxx …

Krause & Jankuhn normalize the first part as to "Ni's sólo sótt ok ni saxe stæinn skorinn" [Not is sun sought and not by sword stone cut] (229). The word *ok* appears to be fully grammaticalized as a conjunction by the time of the Viking Age runic inscriptions (Wessén (1962: 28) regards the spelling **auk** as traditional). The conjunction *en* 'but, contrastive/topic-shifting and' seems to appear in Viking Age inscriptions exclusively as a sentential or verbal connective, though not always with contrastive force, as seen in the Fjenneslev stone (DR 238) from the early 11th c. (Danske runeindskrifter).

16 **+ sasur : risþi : stin : an : karþi : bru :**
'Sassurr carved stone and made bridge'

Markey (1987: 380–381) suggests that the rapid rate of change, including conjunction renewal, in the early Germanic languages points to a situation of intense contact. Braunmüller (1978) describes redistributions in the functions of conjunctions in the early Germanic languages as new ones emerge. In early Norse, phonetic change eroding the inherited conjunctions likely also motivated the grammaticalization of new ones.

8. Conclusion

The question under discussion here, beyond the interpretation of the individual inscriptions, is whether or to what extent IE **k^{w}e* died a phonological, morphological vs. lexical death in North Germanic.

If the item disappeared only with the loss of final *h*, as Grønvik suggests, it would have been productive and syntactically independent, evidently with an unrestricted distribution in terms of the types of conjuncts it could join, although perhaps with the phonological restriction that it could only appear post-vocalically, until around the 6th century CE, when it suddenly perished through sound change.

This seems an implausible course of development for a connective element which would be typologically unusual in the Norse linguistic system and phonetically minimal. A postpositive enclitic conjunction is odd in Old Norse syntax; it would be likely to be bound to another particle (as with *né* 'nor' < **nīh*) or replaced with another element. Gothic *-(u)h* in has an exclusively clausal distribution, while the putative examples of coordinating *-h* in runic inscriptions are nominal.

The clitics that emerge in Norse are not sentence connective but tied to specific parts of speech, nouns (the definite article) or verbs (the reflexive pronoun that becomes the middle voice; subject pronouns and negating elements seen mainly in verse).

A conjunction that is grammatically odd and phonetically minimal seems unlikely to survive, and the putative examples of *-h* in runic inscriptions are too problematic to provide strong evidence of such an element.

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