Coinciding Transitions

A reconsideration of the Eggja runestone and the transitional period

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Master’s Thesis in MAS4091 Viking and Medieval Norse Studies
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In cooperation with the Faculty of Icelandic and Comparative Cultural Studies,
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Abstract

This thesis aims to solve the contradiction surrounding the dating of the Eggja stone and grave by providing an interdisciplinary approach to the transitional period in runology. The Eggja find has puzzled and inspired many researchers since it was discovered in 1917 in Sogndal (Sogn og Fjordane, Norway). Both the content of the runic inscription and its origin have been disputed a lot. Eggja is an important source, especially for the understanding of language and script development in northern Europe. A new and more reliable dating could influence this understanding. An absolute dating of Eggja is not possible, as it turns out, but a comprehensive perspective, including the sociocultural circumstances of the Merovingian Period, can throw new light on the monument.

During the transitional period at stake, profound changes in language and script coincided with changes in climate and society, which indicates that they were related. The centuries preceding the Viking Age seem to be characterised by a demographic crisis and the rebuilding of society after crisis, during which a new social organisation was established. The concept of cultural adaptation suggests that this changing environment also might have motivated language and script transition. The question is how this concept of cultural adaptation can meet existing knowledge on the transitional period, which is mostly defined by typological research and relative chronologies.

Through an analysis of the full corpus of runic inscriptions from the transitional period, in which linguistic development is mirrored against the sociocultural circumstances, it becomes clear that the relative chronology for runic inscriptions as it is understood today is questionable. This is supported by a reconsideration of the dating arguments that have been proposed for the Eggja stone. Hence, with a broader definition of the transitional period, including a sociocultural context, it is suggested that the Eggja monument originated later than what has been believed by most scholars.
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1. Introduction

1.1 Aims and research question

The primary aim of this thesis is to clarify the dating of the Eggja grave and runestone. This find has puzzled and inspired many researchers for over a hundred years now, since it was discovered on June 5th, 1917 in Sogndal (Sogn og Fjordane, Norway) when Nils Eggum and his son were ploughing their land (Olsen 1919:6). The grave was simple, and the grave goods were few, but on top was lying a stone slab with, facing down, one of the longest runic inscriptions ever discovered. The interpretation of the Eggja find is ambiguous, which is unfortunate, considering its historical value. In addition to the enigmatic character of the inscription, the dating of the runestone and grave has led to diverging results. Through a reconsideration of the documentation, research, and interpretations about the Eggja grave and its runic inscription, I hope to sort out some of this contradiction and to propose the most trustworthy dating.

The approach is to discuss Eggja in the context of transition. As a ‘transitional inscription’, the Eggja stone combines features from the elder futhark script and the younger. This transition coincides with a radical development of the Nordic language from Proto-Norse to Old Norse, the language we know from famous sagas, skaldic and eddic poetry. The transitional period covers what in archaeology is called the Merovingian Period. In addition to linguistic transitions, the period also saw drastic changes in culture and society, such as a decrease in population, and the concentration of political power. Generally, the transitional period seems to be characterised by crisis and the rebuilding of society after crisis. Research increasingly suggests these societal transitions are related to climate change. This thesis intends to bring together the various transitions, to regard them as interdependent and interconnected, and to shed light on their dynamics. Through incorporating a broader historical perspective, I hope to contribute to the field of runology, where the transitional inscriptions remain underexposed.

By focussing on sociocultural transition and climate change, this thesis is carried out against the background of the ongoing FRIPRO Toppforsk research project Volcanic Eruptions and their Impacts on Climate, Environment, and Viking Society in 500–1250 CE (VIKINGS), which started in 2018 and will end in 2023. The project will lead to increasing knowledge on climate change and the rise of Viking societies in Scandinavia, by studying the impact of natural disasters on climate and society, and how people respond to such catastrophes (Tjøflos 2018). Building on studies like these, the hypothesis here is that a cooler climate affected society and its culture, which in turn had repercussions on the Norse language, and hence on the script culture. The concept of cultural
adaptation, according to which societies overcome changes of their environment, will form the theoretical basis for this. A changing environment forces people to change their ways/customs, and language is likely to adapt to the altered circumstances over time. As language is primarily spoken, language transition will precede script adjustments. On the other hand, such a development is not expected to be linear. Several transition cycles can overlap each other, and particular geographical regions evolve in different ways. The influence of social and natural geographical location is therefore an important part of this project.

For a better understanding, I will include the full corpus of runic inscriptions from the transitional period. There are 46 inscriptions preserved, some extensive and in good condition, others fragmentary and damaged. Despite the relatively low number, an overview and analysis of the full corpus in a new and broader social context will enable me to gather knowledge on the spread of language and script change.

In short, the objective of the investigation is to answer the following main research question: “How can a broader understanding of the transitional period, including sociocultural context, contribute to the dating of Eggja?” An interdisciplinary approach, combining archaeology, iconography, linguistics, runology, and anthropology, will be the most fruitful way to proceed.

1.2 Research history

1.2.1 The Eggja monument

The Eggja grave was discovered in 1917 when Nils Eggum and his son were ploughing their land (Olsen 1919:6). Its location is quite high, with a prominent view over the Sognefjord (Olsen 1919:5–6). The archaeological investigation of the find had to wait until after the harvest season and by then the grave was badly disturbed. It is therefore impossible to say whether the grave had been robbed (cf. Bjorvand 2010:211, Jacobsen 1931:100). In other words, the grave goods might have been more numerous than what was found – a large single-edged iron knife (B6928a) with wooden pieces attached to it, a fire striker (B6928b) of type 426 according to Oluf Rygh’s archaeological catalogue, and fragments of iron and wood corroded by the iron (B6928c).

Many scholars have racked their brains over the content of the Eggja inscription. Counting around 200 runes, it is the longest known inscription written with elder futhark runes. This makes it a unique find that provides a glimpse into the former culture in Sogndal. At the same time, it has turned out to be very difficult to interpret the runes.

The discussion around Eggja presents a prime example of the difference between reading an inscription, that is, deciphering the runic signs, and interpreting what these signs mean (Spurkland
Confusing these two can lead to circular argumentation, if one chooses to read on the basis of what one thinks the inscription is about. Besides, there is the risk of reusing misunderstandings when an interpretation takes older, false readings as given. Both these flaws seem to have played their part in the interpretation of Eggja. Because the stone is damaged, not all runic symbols are easily visible, and some are impossible to read (cf. figure 1). This has complicated the translation and interpretation of the text. Still, even the parts that are quite straightforward in reading have proven to be challenging to understand. After all, there is not much material to compare the Eggja inscription to, which means our knowledge about the language at that time is very limited. These circumstances have understandably led to many different interpretations of the Eggja inscription. The following section will discuss some of the best-known and most important contributions, focussing primarily on the interpretation offered by Ottar Grønvik (≥1985), which is widely accepted today, and Harald Bjovand’s response to this (2010).

Fig. 1. The Eggja inscription according to Magnus Olsen (1919:10–11). The uppermost line A contains some lacunae, line B in the middle is short and damaged, line C below is relatively clear to read. In between the lines, a horse figure is carved. Two other ‘lines’ of just a few runes are regarded as practice runes, without further value to the inscription (cf. Olsen 1919:18).

1.2.2 Interpretations
Most scholars have interpreted the Eggja inscription as a description of a pagan burial ritual which accompanied the creation of the funeral monument. Old Norse language and literature scholar Magnus Olsen was the first to examine the runes on the stone. He published his results in Eggium-Stenens Indskrift med de ældre Runer (1919). Olsen (1919:43–46) discerned similarities to a legend from Setesdal (in the South of Norway) about a stone that was transported at night on a sledge and was used as a doorstep. He also thought the name of the deceased, Ormari, was described with a kenning about a fish and a bird (1919:75–76). Olsen’s interpretation and method have been criticised a lot, because he seemingly built on external, random circumstances that do not follow from the inscription itself (Spurkland 2005:59). Runologist Lis Jacobsen (1931:13–14) defended an internal philological method, taking the runes on the stone as the starting point and
giving them a linguistic interpretation. This way, although she relied on Olsen’s reading (Jacobsen 1931:18), Jacobsen ended up with a different interpretation and new suggestions for the reading of the lacunae. In her interpretation of the inscription, the burial ritual which took place when the monument was created included a boat that would bring the dead man home (Jacobsen 1931:66–67). Also Jacobsen’s methods have been criticised. According to Spurkland (2005:64–65), her interpretation shows that it is impossible to accomplish a full interpretation of the inscription with a solely internal method – a certain context is always read into the text.

After Olsen and Jacobsen, a long list of other contributions was to follow, all building on various methods and assumptions. Scholars also suggested modifications with respect to Olsen’s initial reading.¹

Nowadays, the reading and interpretation of runologist and philologist Ottar Grønvik is generally regarded as the most plausible (see e.g. Spurkland 2005:65–66). Grønvik published his results in Runene på Eggjasteinen (1985), and followed them up with later articles containing corrections and new thoughts in 1988, 2000, and 2002.² He stressed the importance of a meaningful linguistic interpretation, with a coherence between word forms, meanings and syntax (Grønvik 1985:48–49). All too often, he thought, scholars interpreted the words in a way that was convenient for them and fit their assumptions. Grønvik’s reading and interpretation of the Eggja inscription can be presented as follows (as rendered in Spurkland (2005:68–69))³:

¹ Alternative versions of the pagan burial ritual are offered by others. Gerd Høst (1960, 1976) offered a mythological perspective, and thought the Eggja inscription tells how Óðinn brought the deceased to the realm of the dead. Furthermore, wild variations can be found about sacrificial blood, either animal or human (e.g. Meissner 1934:198, Reier 1952:74, Boer-den Hoed 1957:140), about deliberately sunken ships (e.g. Heiermeier 1934:51, Reichardt 1936:75), and murdered men. The person who was buried is either murdered (e.g. Nielsen 1968:124–125), or the murderer himself, captured in a ‘revenant-trap’ (Nordén 1936:246, cf. Harding 1938:15, Høst 1976:45). The runic name riddle disguises, next to Ormari in Olsen’s interpretation, also Geirvakr (Jacobsen 1931:61), Oddr (Heiermeier 1934:71), Ormr and Orri (Kiil 1955:174). The many diverse interpretations illustrate the difficulty in understanding runic inscriptions, and their conditionality.

² Like scholars before him, Grønvik suggested some new readings of the runes. The most important changes he made in transliterating are examples from line A: ᵃ攻势� (‘mine’) instead of ᵃ攻势� (‘the one’), ᵃ攻势� (‘wild’) instead of ᵃ攻势� (‘man’), and ᵃ攻势� (‘great haste’) instead of ᵃ攻势� (‘bird’). Also Grønvik’s interpretation is partially built on arguments offered before. For instance, Nordén (1934:114 note 28) criticised the interpretation of ᵃ攻势� as a kenning for blood. Nordén also rejected the name riddle several runologists had seen in the ᵃ攻势�/攻势� (‘fish’/’bird’) part (1934:115), and the reading of an s-rune at the end of line A that was supposed to mark the start of line B (1934:108) (cf. Grønvik 1985:31). These elements had been taken over by many from Olsen’s first reading and interpretation. Some other elements Grønvik used were offered by Host (Grønvik 1985:44–45), such as the reading in line A of ᵃ攻势� instead of ᵃ攻势�, and ᵃ攻势�, and, in line B, ᵃ攻势� instead of ᵃ攻势� (Host 1960:529–530). Host (1960:505) also read ᵃ攻势� is ᵃ攻势� in line C, which Grønvik (1985:110–111) has taken over, albeit with another interpretation. Finally, the idea of a shipwreck was introduced by Oskar Lundberg (1949:40).

| Line A: (testifies to a shipwreck) | मिन वार्प नासेन विल्का माते ताइम काउंबा इ बोर्मोषा हुनः हुवान ओब काम हर्जः अ हित लात् गोता फिस्का ओर फिर्नाउइम सुविमाइडे फोके अफ (फ)ानिउगा लांडेच | ‘Over my (relatives) the wild one cast a corpse-wave, (it) wore out the fulcrums for them in the drill-weary masthead.’
Who brought the host over to yonder land?
The man-fish from the current-paths round Firney,
swimming in great haste from the land of the fen-folk,

\[\text{Min varp násjó villr māði þeim keipa i bormóda hání Hverr of kom her á hitt land Gotna fískr ór Firney-im svimandi foki af fenjunga landi}\]

| Line B: (obscure reading) | न इ (ि अ)ः जः इ गः ect | ‘(he) who brings wealth and happiness.’

| Line C: (grave protection formula) | नी स सोल सोट उक नी साक्से स्टेन स्करिन नी (वित्त) मार नाक्दान आ नी<ज>प रिन्न| ‘Not in sunshine, and not with sword on incised stone, that man shall not seek out, he who is crying out over a naked kinsman, nor bewildered men, this anchorage’

\[\text{Ni s sólu sótt, ok ne saxi stein skorinn ne víti maðr, nǫkðan es níp rinn ne viltir menn, lægis!}\]

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| Line A: | मिन वार्प नासेन विल्का माते ताइम काउंबा इ बोर्मोषा हुनः हुवान ओब काम हर्जः अ हित लात् गोता फिस्का ओर फिर्नाउइम सुविमाइडे फोके अफ (फ)ानिउगा लांडेच | ‘Over my (relatives) the wild one cast a corpse-wave, (it) wore out the fulcrums for them in the drill-weary masthead.’
Who brought the host over to yonder land?
The man-fish from the current-paths round Firney,
swimming in great haste from the land of the fen-folk,

\[\text{Min varp násjó villr māði þeim keipa i bormóda hání Hverr of kom her á hitt land Gotna fískr ór Firney-im svimandi foki af fenjunga landi}\]

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\[\text{Ni s sólu sótt, ok ne saxi stein skorinn ne víti maðr, nǫkðan es níp rinn ne viltir menn, lægis!}\]

Accordingly, Grønvik concluded the inscription tells us about a shipwreck, caused by the capsizing of the mast. Several words in line A point in this direction, although their interpretation is somewhat puzzling. For instance, बोर in बोर्मोषा seems to refer to a hole at the top of the mast, but as the inscription mentions केिपा, this cannot be right; केिपा in the mast are used instead of a hole (Grønvik 2000:8). Nevertheless, in his last notes on Eggja, Grønvik stuck to his first interpretation, and interpreted the combination of a hole and केिपा as an experimental phase in the development of sailing vessels, with the केिपा holding up the rigging, which in turn held upright the mast (Grønvik 2002:31).8

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8 I translated lagiš (from ON lægi) with ‘anchorage’ rather than ‘lair’, to emphasise that it comprises a place where something is lying or laid down.
8 The interpretation of a shipwreck ties in with the discussion about whether the Eggja grave could have been a cenotaph – an empty grave to commemorate somebody who died for instance at sea (suggested by Nordén (1934:114)). The grave goods fit a male grave, but there were no traces of a body or a coffin (Olsen 1991:9). With only 20 cm between the mountain rock and the runestone, there was neither room for a coffin (Grønvik 1985:8). On the other
More recently, language scholar Harald Bjorvand published his ideas on the Eggja monument. Bjorvand (2010:232–234) builds on Grønvik’s reading and interpretation of the shipwreck, but nevertheless points out some uncertainties in line A, thereby showing that neither Grønvik’s ideas can be regarded as final. The main difference in interpretation with regard to Grønvik concerns the fish that brought the crew of the ship over to yonder land. Instead of the benign creature Grønvik brought into being, Bjorvand reads the fish as a hostile force, possibly the Midgard serpent. He arrives at this explanation by reading ą hiṭ łąt got – nafiskr, contrary to Grønvik’s ą hiṭ łąt – gotna fiskr, and translates nafiskr as ‘fish of death’. Subsequently, Bjorvand interprets the rest of line A in a way that fits semantically (italicised words point out changes with respect to Grønvik):

Line A

 mı́n warb naseu wılr
‘Over my (relatives) the wild one cast (a) corpse-wave,’
 mı́de ńaım k’ai bımbıpré huńu
‘the rigging-locks were crushed for them in the drill-weary masthead.’
 huwar ob kam h-ar [u]t ą hiṭ łąt got
‘Who brought the host over to the good yonder land?’ (i.e. ‘Who killed them?’)
 nafiskr on flir[n]s uim suwınadę fıkį
‘The fish of death swimming in seafoam (=foki) out of the terrible vortex –’
 ńf [sfl is] gşlńdę
‘with all its might roaring.’

Bjorvand stresses that his interpretation is just as coherent as Grønvik’s, yet opposite in meaning. Indeed, both interpretations are based on a careful reading of the runes and a competent use of linguistics, but they diverge on some crucial points, primarily the transliteration of gotna fiskr (Grønvik) respectively got nafiskr (Bjorvand). This shows how conditional all interpretations are, appearing as a coherent whole by virtue of certain assumptions.

The reading and interpretation of the Eggja inscription have an impact on the ideas about the origin of the monument, primarily when it comes to the language typology and in relation to ship technology. This will become clear in the following section.

9 Original translation into German: ‘Über meine (nächsten Verwandten) warf ein Wilder (Gefährlicher) (eine) Todeswelle, die Dollen wurden ihnen an der im Bohrloch geschwächten Mastspitze abgeschliffen (zerrieben). Wer brachte die Menge hinüber in das gute Land im Jenseits? (d.h. Wer tötete sie?) Der Leichenfisch aus dem fürchterlichen Stromwirbel heraus in/mit der Gischt schwimmend – (er) ist aus (aller) Kraft brüllend.’

10 The translation into English is my own.
1.2.3 The dating of Eggja

Like the interpretation of the runic inscription, the dating of Eggja has been puzzling too. Archaeologist Håkon Shetelig, who investigated the Eggja find in 1917, dated the grave to the seventh century (Olsen 1919:9–10). The simple grave on level ground, with no coffin and scanty grave goods, was typical for this period on the west coast of Norway. Shetelig found support for his dating from an iconographic perspective, as the stone also contained the carving of a horse figure (cf. figure 1) with a head like a bird, matching the elder Vendel style which was typical for precisely the seventh century in Scandinavia (Olsen 1919:10). Magnus Olsen, who was responsible for the investigation of the Eggja stone, built his dating on Shetelig’s archaeological considerations. Combining the archaeological dating with the character of the inscription, he inclined to ascribe the Eggja monument a rounded date of ca. 700 (Olsen 1919:121).

The discovering of the Eggja stone and the conclusions that were drawn on its dating forced language historians to revise their view on the development of the Nordic language. The language of the inscription testifies to important changes that define the transition of Proto-Norse to Old Norse. The beginning of Old Norse, as it is attested in eddic poetry, was at Olsen’s time thought to be no older than the ninth century (Olsen 1919:121). From a purely linguistic perspective, therefore, Eggja would presumably have been dated between ca. 800 and 1000 (Spurkland 2005:70). The archaeological and art-historical dating, however, pushed the transition from Proto-Norse to Old Norse a few centuries back in time. This means that this transition has taken place in a very short time span, of around 250–300 years (Spurkland 2005:70).

Lis Jacobsen’s publication on Eggja, however, not only presented a new interpretation of the inscription, it also questioned the dating Shetelig and Olsen had presented. In her view, it was inconceivable to assume such an early start of Old Norse. Jacobsen (1931:85–91) claimed on linguistic grounds that the Eggja stone belonged to the Viking period. She maintained that the language typology is the same as the classical Old Norse from the earliest written eddic and skaldic poetry, also found on the oldest Danish runestones – dating to the ninth century. To substantiate a younger dating of the runic inscription, Jacobsen challenged the archaeological arguments by questioning the grave and horse typology. Not only was it possible that the grave had been robbed – which made the grave typology unreliable – Jacobsen (1931:100) also pointed out that many graves on level ground might have been covered by a small mound, which disappeared over time due to agricultural work. Furthermore, she argued that both the fire striker and the iron knife from the Eggja grave fit Viking Age graves as well. Regarding the iconography, Jacobsen (1931:105–108) discussed several examples of other horse figures that were similar to the Eggja horse but had a much younger dating. The most important example is found on the Skokloster runestone (U678).
This stone contains a Vendel-style horse carving, but the runes are carved by the late eleventh-century rune master Fot, who is known from other inscriptions.

However, archaeologists did not accept Jacobsen’s claim. Her argument about Skokloster was refuted by Bertil Almgren (1940:171–173), who argued that the runemaster added the runes to an older picture stone from around 700. His arguments seem to have won the day, although not all scholars agreed on this (e.g. Wessén and Jansson 1949:180). Other examples Jacobsen referred to were refuted by Gutorm Gjessing (1934:182–183). He acknowledged the similarities Jacobsen identified between the various horses, but stressed the importance of some specific details that they did not have in common. These important details, on the other hand, Eggja shared with a little bronze brooch from Veggerslev, Jylland (Denmark), dated to the latter half of the seventh century. Although the Eggja horse is less sophisticated due to different material and technique, both horses have a similar head with a pointed chin, a sharply marked transition from the head to the back, and a distinctively thick neck, Gjessing stressed. Consequently, the Veggerslev horse (cf. figure 2) has been the most important object governing the iconographic dating of the Eggja horse.

![Fig. 2. Veggerslev brooch. Image: Müller (1897:615).](image)

In the latter part of the twentieth century and still today, the iconographic argument has been decisive for the dating of the Eggja stone. Gjessing (1934:182–183) and later archaeologist Birger Nerman (1947:124–126) have been important sources for this. Both ascribed the elder Vendel style and hence the Eggja horse to the second half of the seventh century. In his work on the Eggja stone, Ottar Grønvik (1985:8) accepted this dating. Considering the importance of his publications on Eggja, it is not surprising that others (e.g. Spurkland 2005; Samnordisk Runtextdatabas) follow his dating as well.

In the most recent contribution to the Eggja debate, Bjorvand (2010:209–212) combines archaeological and linguistic evidence to conclude on a dating between 650 and 750. He argues that the Eggja language preserves the Proto-Norse distinction between intervocalic $þ$ and $ð$, visible in bormøpa (ON -móða) and made (ON máði). This distinction is said to have disappeared in the
entire language area in the course of the eighth century – probably before ca. 750 – and is reflected in the younger futhark, where the \( \mathbf{p} \)-rune is used for both \( p \) and \( \delta \).\(^{11}\) In addition to this, Bjorvand’s main reason for drawing the dating boundary into the eighth century seems to be the development of ship technology. If Grønvik’s interpretation about a sailing ship with a mast and rigging is correct, it is unlikely the Eggja stone originated before the mid-eighth century, he states. Because this younger dating is inconsistent with Eggja’s iconography, Bjorvand acknowledges the possibility that the horse was carved considerably earlier than the runes.

As the summary of the interpretation and dating of the Eggja grave and stone shows, Eggja was a startling discovery one century ago, and is still subject of debate today. The dating arguments contradict each other and we will probably never know what the full inscription is about. Nonetheless, the Eggja monument is a valuable historical source, not least in the field of linguistics.

**1.2.4 The transitional period**

**1.2.4.1 Linguistic transition**

The Eggja monument is an important source for the understanding of language history and the development of runic script in northern Europe (cf. Spurkland 2005). It is one of few significant sources documenting the transition from Proto-Norse to Old Norse and the transition from the elder 24-character futhark to the younger 16-character writing script. These changes have led to the demarcation of a so-called transitional period (cf. Barnes 1998). The radical development of the runic script probably was a consequence of substantial language changes (Birkmann 2002:692). Language scholars name the whole period ‘the syncope period’ which refers to the most striking change in the Proto-Norse language, namely the contraction of words through loss of syllables, and additionally more vowels, umlaut and breaking (cf. Birkmann 2002; Ralph 2002:703–712). Today, the syncope period is dated to ca. 500–700 (Birkmann 2002:696). The dating of Eggja has been of impact for this demarcation. In the language of Eggja, definable as early Old Norse (cf. Grønvik 1985:168–178), syncopation seems to be more or less completed. The script transition, however, is still in its early stages.

Considering its historical value, the puzzling character of the Eggja stone invites further study on the transitional period. In runology, not much research has been dedicated to the inscriptions of this time, compared to the extensive studies on the elder futhark period and the

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\(^{11}\) This argument presupposes that the disappearance of the \( \mathbf{d} \)-rune was linguistically motivated, but this is not evident. In fact, the archaic distinction between intervocalic \( p \) and \( \delta \) might still exist in younger futhark inscriptions, but because the \( \mathbf{p} \)-rune replaces the \( \mathbf{d} \)-rune in this futhark, it is not visible.
Viking Age inscriptions in the younger futhark. Although the Eggja stone is a much debated
inscription, its contradicting dating needs some clarification. Ultimately, exactly when and where
language development phases and runic script change took place is undecided, and largely based
on relative chronology, as is archaeological dating (cf. Würth 2002:699–700). This relativity can
lead to circular argumentation, where the dating of an inscription or object derives from its position
in relation to the relative chronology, which in turn is developed out of the dating of similar
inscriptions or objects (cf. Stoklund 2010:248). Perhaps the Eggja monument illustrates the limited
value of such a relative chronology, considering that the different typologies – of script, language,
grave, and iconography – give varying results.

1.2.4.2 Coinciding transitions

When looking at the historical context of the transitional period, the question arises whether the
transitional period in runology and linguistics might have been motivated by transitions in society
during the Merovingian Period (ca. 570–800 (Magnus et al. 1995:11)). These transitions can to a
considerable extent be traced back to catastrophic events in the sixth century, when a large volcanic
eruption created a cloud of ash and other particles that made the sun disappear for over a year. In
research, the event is often referred to as ‘the dust veil’ or simply AD 536 (cf. Gräslund and Price
mentioning the disappearance of the sun and cold summers in Europe and the East, leading to
ruined harvests and starvation. As a result of the dust veil, the climate became suddenly cooler.
Scholars speak of the Late Antique Little Ice Age (LALIA), which lasted from AD 536 to ca. 660
(Büntgen et al. 2016). During the LALIA more volcanic eruptions probably enhanced the cooling
effect (Büntgen et al. 2016). The famine and hardship people suffered during the LALIA might
also have contributed to plague outbreaks. That this was the case in southern Europe is known
from documents stating the Justinian plague, but research increasingly indicates that it reached
Scandinavia as well (Iversen 2016:47). The effects of the volcanic eruptions are thought to have
lasted for several centuries (cf. Tvauri 2014:48; Gunn 2000). The Eggja grave and stone originated
therefore most likely during the aftermath of AD 536 and need to be understood in this context.

Archaeologist Andres Tvauri (2014) has analysed the impact of this climate crisis on society
in what is today Estonia. Crop failure and a catastrophic decrease in population disrupted society
by changing power relations, trade networks, handicraft traditions, settlement structures – and the

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12 Gräslund and Price connect the event to the origin of the Old Norse *fimbulvetr* myth, about the great winter preceding
the end of the worlds.
entire worldview of people (reflected in changed burial customs) (Tvauri 2014:48). Tvauri (2014:48) stresses the possibility that the hardship people experienced accelerated and affirmed certain transitions that already were in progress since the Migration Period.

Similar effects are thought to have happened in the Nordic area (cf. Iversen 2016). During the aftermath of AD 536, Scandinavian communities were subject to reorganisation. Archaeologist Frode Iversen (2016:44–46) refers to the high number of abandoned farms and the immense decrease in graves during the Merovingian Period as markers of a crisis. From the eighth century onwards, societies were able to gradually rebuild themselves, it seems. This can be derived from the increase in grave finds in Norway, starting in the eighth century and peaking in the ninth, which indicates that the population was growing (Iversen on his research for the VIKINGS project, personal communication 2019). Furthermore, a new elite seems to have emerged from the seventh century onwards, to judge from various signs of power concentration (Iversen 2016:70–71). Such signs are not least visible in Denmark, with the establishment of the Ribe town, the Kanhave canal, and the Danevirke fortifications in the eighth century (Näsman 1991:177–178). As such, the Danish regions in the South – that is, present-day Denmark and Skåne – enjoyed a strong position within the Scandinavian area (Høilund Nielsen 1991:150). A recent article on the beginning of the Viking Age shows, moreover, that there was a trading route from Trøndelag in Norway to Ribe (1100 km) since the early eighth century, supplying the Ribe market with whetstones (Baug et al. 2018:64). This illustrates the rebuilding phase as well.

The events of AD 536 and the LALIA appear to be crucial elements in the demarcation of the Merovingian Period, which is marked by a decline in cultural production in Scandinavia. The luxury of gold and bronze characteristic of the preceding Migration Period has disappeared (Magnus et al. 1995:396). Generally, there are far fewer archaeological finds from this period, although increasingly more finds are being made. This leads archaeologist and runologist Lisbeth Imer (2015b:20–21,135) to conclude that the period rather is underexposed. Yet, in light of ‘the dust veil’ and its aftermath, it seems plausible that the period is marked by stagnation. The decline is also visible in script culture. Compared to the preceding and following periods, few inscriptions are transmitted from the Merovingian Period, as follows from Imer’s dissertation (2015b:43,48), according to which there are only 13 linguistically meaningful inscriptions that can be dated on an archaeological basis to 560/570–750. In this regard, the long inscription on the Eggja stone is an outstanding find.
1.2.4.3 Reconsidering the transitional period

In short, the LALIA can be regarded as an “environmental driver of crop failure, plague and famine, as well as a possible trigger for political, societal and economic turmoil” (Iversen 2016:46). In other words, although transition is of all times and places, the transitional period to which the Eggja monument belongs is characterised by significant changes on multiple levels. Including the social circumstances of crisis and rebuilding, the transitional period in linguistics could be redefined.

In this work I find reasons to investigate whether the full corpus of runic inscriptions from the transitional period could provide information on the dynamics between the great upheavals in society and the profound changes in language and script. Combining the various transitions might help to understand the Eggja stone as a transitional inscription, and the results of the investigation could help to solve the obscurity surrounding its dating. The Eggja monument is a valuable source for understanding language and script development and provides cultural insight in for instance burial rituals and possibly ship technology.
2. Theory and method

2.1 Theory

2.1.1 Cultural adaptation

A broader understanding of the transitional period makes it possible to connect language and script changes to the great upheavals in society during the aftermath of AD 536. In anthropology, ‘cultural adaptation’ denotes “the specific capacity of human beings and human societies to overcome changes of their natural and social environment by modifications to their culture” (iResearchNet n.d.). Applying the concept to this study, a link between social organisation and cultural practice is established. After ‘the dust veil’, both the natural and the social environment appear to have changed – the sun disappeared for some years, the climate became cooler, harvests got ruined, the population declined due to starvation and plague outbreaks. After the LALIA, the population was able to grow again, and this involved a new social organisation. Humans and society adapted to these changes through modifications to their culture. This comprised more than simply a decline in cultural production during the crisis. Research history offers some examples of cultural modifications through which people could have counteracted the crisis. These include the cultivation of other crop types that suited the colder climate (Tvauri 2014:49), the switch to animal husbandry (Iversen 2016:47), and the division of large estates into smaller production units (Iversen 2016:70).

When it comes to the cultural adaptation of beliefs, it is interesting to notice the difference in religious cult in the sixth century that archaeologists have pointed out. Here, a connection is made between religious cult and social organisation and ideologies. With the concept of cultural adaptation, a change in religious cult does not only reflect social ideologies, it becomes a strategy to overcome discontinuity in social and natural environment – thus allowing societies to survive. Anders Andrén (2014:117) has pointed out that sun symbolism, which appears to have been part of religious cult in northern Europe since the Stone Age, suddenly disappeared from the imagery during the sixth century. This is visible on the early picture stones on Gotland and generally on Scandinavian metalwork ornamentation (Andrén 2014:162–163). This means that the solar cult characteristic for Scandinavian culture must have become far less dominant. This change can easily be linked to AD 536. Yet, Andrén (2014:185) argues that it also was politically motivated. Since the sun did not disappear in Sámi and Baltic religions, the dust veil must have hit the political basis of certain aspects of Old Norse religion, Andrén suggests. This illustrates how religious cult
is inclined to adapt itself to environmental changes, in doing so finding ways for communities to remain functioning.

The disappearance of the sun might be part of a larger shift in religious cult, which is thought to have been socially motivated. Archaeologist Charlotte Fabech (1991:290,303), for instance, described how archaeological finds indicate a radical change in choice of sacral sites, when at some point religious rituals got more connected to settlements and buildings, starting around 400, and offerings were no longer made to bogs and lakes from the end of the sixth century. According to Fabech, this change might be the result of the rise of a kinship-based social system, in which a social elite gained enough power to institutionalise cult practices and connect them to their rulership. In light of the sixth-century catastrophe, it is possible that this change in social organisation was facilitated by the disruption of societies during the aftermath of AD 536. In other words, a changing natural environment led to a change in social environment. This stimulated cultural ideologies and practice to adapt to the new environment.

2.1.2 Linguistic transition

The concept of cultural adaptation thus turns out to be of key value in the understanding of the transitional period. The crisis that followed the events of AD 536 caused upheavals in northern European societies and cultures. As language is a central part of a society and its culture, cultural adaptation could apply to language and script transition as well.

Scholars assume today that linguistic transition, in which language change preceded script reform, started around 500, if not before (Birkmann 2002:692). This means that the changes brought about by the preceding Migration Period understandably affected the language as well. The same can be said for script transition, as the runic script probably was subject to change continuously. From the mid-sixth century onwards, however, it underwent substantial changes (cf. Imer 2015b:43, Magnus 1995:397–398). Runic transition is therefore most characteristic of the period when society was disrupted and rebuilding after a crisis. Moreover, like Tvauri pointed out with respect to the cultural changes in Estonia, the crisis from the sixth century might have amplified an accelerated certain changes that started during the Migration Period. In other words, every historical phase is intertwined with other phases, and historical phenomena can never be studied in isolation. As such, climate and society during the Merovingian Period are not ruled out in affecting language and script. More importantly than the demarcation of 500 as the start of linguistic transition, therefore, is that the coincidence of substantial cultural, societal and linguistic changes indicates that they might have been related.
The crisis seems indeed to have had repercussions on language and writing culture. The fact that the transition from Proto-Norse to Old Norse is profound and occurred in the course of just a few centuries, suggests that it might be the result of a cultural adaptation. During the transitional period, crisis and disruption meant a reduction of people, of resources, of material and script culture, and afterwards the rebuilding of society. Perhaps this reduction and reorganisation are reflected in the language change, with for instance a reduction of syllables and a reorganisation of sound values, leading to new phonemes and vowels. Moreover, in the field of psychology, Reali et al. (2018) show that smaller populations are more inclined to develop innovations to the structure of their language (as opposed to lexical innovations), as these changes are complex and hard to learn, and therefore less likely to spread in large language communities. Hence, it makes sense to expect the structural language changes from the syncope period to happen after the events of AD 536. As for script, the decrease in runic writing and perhaps the futhark changes that accompanied the cultural decline, might be motivated by a cultural adaptation to sociocultural reorganisations as well. Therefore, cultural adaptation seems to be a useful concept in the understanding of linguistic transition.

2.1.3 Relative chronology
The question is how the concept of cultural adaptation can meet existing knowledge on the transitional period which is mostly defined by typological research and relative dating, both in linguistics and archaeology. In this regard, there is a principle on which relative chronologies often is based that can be reconsidered. This is the principle that typology shows uniformity at a given point in time. A result of this uniformity is that variants are diachronically connected, that is, they indicate stages in the temporal development. Not least in historical linguistics of the Nordic languages this plays an important role (cf. Bandle 2002:27). The reliance on diachrony has nevertheless been criticised. Spurkland (2006:342–343), for instance, opposed the assumption that every language variation is diachronic. Instead, he argued, when innovations arise in language, variants exist side by side until one of them becomes dominant, and finally the single form. The same objection can be applied to runology, where it is assumed that variant X is older than variant Y, and hence that inscriptions in which X is attested are older than inscriptions in which Y is attested. Instead, variants X and Y can be synchronic, i.e. they might appear at the same time.

The strength of a relative chronology in historical linguistics lies in its applicability. It might be the most uncomplicated way of structuring data into a comprehensive theory. Still, theory should never come before the practice – rather, theory should fit reality. It should be recognised that language history is complex, and linguistics becomes abstract and nonsensical when holding
on to a certain diachronic theory of relative chronology. Considering the problems with the principle of uniformity, there are limitations to the usefulness of such a chronology.

In addition to this, it should neither be forgotten that language transition is a theoretical construct. What we call the transitional period is the abstract, systematic result of observed differences between two idealised language stages (Ralph 2002:704). Proto-Norse is to a large extent reconstructed, and Old Norse is to some extent as well (Ralph 2002:704). In dealing with language change, transition should therefore at least be treated as a gradual process, and language phases should be ascribed a fundamental level of variation (Ralph 2002:705). The same can be said for script transition. Runologist Michael Barnes (2006) stresses that the modern rationalisation of standardised futharks does not reflect reality. Accordingly, also the transition from the elder futhark to the younger futhark must be considered at the very least as a gradual process, in which temporal and regional variation are assumed. In reformulating the transitional period, instead of equating variation with transition, transition can be defined as a more profound variation process. Variation can always be found within language and script. Nevertheless, the Merovingian Period in northern Europe appears as a transitional phase between more stable phases (at least when it comes to language) and is transitional on multiple levels. A high degree of synchronic variation is therefore expected in such a phase.

In other words, there is reason to believe that the largely relative chronology for the runic inscriptions is questionable. The transitional inscriptions form a relatively small corpus and are put into the frame of a relative chronology that is meant to represent an entire historical phase. In addition, the chronology depends on the evaluation of only a few significant sources. Considering the importance of variation, the chronological order of sources showing language and/or script transition might as well be different than what is believed today. When an inscription is being made, several variants can be in use, not only because it takes time for the new variant to become dominant, but also because a varying natural and social environment in different areas leads to unique cultural adaptation. Especially in times of turmoil, cultural adaptation is an important process. It enables development in diverse directions and on multiple levels, either more complex or simpler – depending on the social and natural context at that time and place. In this framework, there is room for the variation that is inherent to reality. Such variation is not a sign of diachrony, but rather a different outcome in a different context. Hence, regions will eventually show a different development of script and language typology and a different pace of script and language transition, either subtle or distinct. This hypothesis lies at the basis of this thesis, and will be explored in the analysis of the runic inscriptions of the transitional period.
2.1.4 The social context of linguistic change

Considering the social context of crisis and rebuilding, the transitional period offers a lot of room for cultural and thus linguistic innovation. When populations repeatedly suffer losses, and young people die with each new plague outbreak, there will appear a gap between generations. This is likely to result in the loss of culture, as there at a certain point are no people left to transmit traditions and language. It is possible, therefore, that by ca. 700, when improved circumstances gradually allowed societies to rebuild themselves, significant language changes already had occurred. During the rebuilding phase these were then affirmed and further developed. This might have been the same for script culture, although, considering the general decline in cultural production during the Merovingian Period, it is also possible that runic transition towards a younger futhark developed somewhat later than language change.

2.2 Method

2.2.1 Interdisciplinarity

The analysis focuses on the Merovingian Period, or the centuries up to what generally is regarded the start of the Viking Age, ca. 800. With this, the transitional period at stake in this study takes place between 536 and ca. 800, taking ‘the dust veil’ as a starting point. ‘Transitional’, in other words, does not merely refer to script and/or language change, but takes into account the various levels of transition that coincide.

As the research on the Eggja stone has shown, a runic inscription cannot be studied in isolation. In order to provide a full interpretation, context is of great importance. When leaving aside the framework offered by diachronic typology, the problem is of course how to define a new framework. With a ‘contextual method’ (cf. Imer 2015b:135), the analysis incorporates social circumstances and the investigation of chronology and typology on the level of both linguistics, runology, and archaeology. “Real language history”, as Oskar Bandle (2002:28) put it, includes external, sociocultural circumstances within the linguistic framework.

2.2.2 Carbon dating

The most fruitful method for losing the contradiction concerning the dating of Eggja would be to complement the relative dating arguments with an absolute dating. Together with my supervisor Karoline Kjesrud and Frode Iversen, both employed at the Museum of Cultural History in Oslo, I have tried to organise a carbon-14 dating of wooden pieces that are attached to the knife which was found in the grave, aiming to propose a more reliable dating for Eggja than the relative dating
arguments allow for. Melanie Wrigglesworth, Senior Executive Officer of the Department of Cultural History at the University of Bergen, agreed with us that this would be a valuable examination. After the evaluation of the wooden pieces by two archaeological conservators from the University of Bergen museum, however, it has turned out that such an examination is not possible. The conservation methods that were used when the finds were stored have made the material unsuitable for today’s scientific dating methods. Even if a carbon dating would give results at all, the margin of error would be too large to clarify the origin of Eggja any further.

2.2.4 Sources
Lisbeth Imer’s catalogue and dating (2015a) are taken as a starting point for demarcating the corpus of runic inscriptions from the transitional period (536–800). The analysis studies the inscriptions from what she classifies as the Merovingian Period, starting from 560/570, up to ca. 800. Imer (2015b:52–53) prefers to date the inscriptions to archaeological chronological periods instead of using absolute dates, “because the rune typological and language changes happen gradually” (own translation), and most inscriptions, as well as the relative chronology of single language forms, fit fairly well into such demarcations. In addition, the analysis includes some of the inscriptions Imer dates to the period 520/530 to 560/570 – in archaeology the last stage of the Migration Period, but from the perspective of this thesis primarily the phase during which ‘the dust veil’ fundamentally changed the environment. As the dating of these inscriptions is not very precise, I want to avoid noise in the analysis due to including inscriptions that originated before the events of AD 536. I therefore choose to include only those inscriptions that show clear signs of language or script transition and – according to Imer – cannot be older than 520/530. Included for the analysis are thus three inscriptions that show language change, all through syncopation: the Eikeland fibula, the Istaby stone (dated younger in other sources), and the Strøm whetstone.

2.2.3 Transition versus variation
The analysis uses the concept of cultural adaptation. In times of crisis and rebuilding, this concept allows for synchronic variation in the typology of runic inscriptions. In this approach, a distinction needs to be made between transitional innovations and inherent variation. For language typology this is problematic, as the Proto-Norse language forming the basis for transition is largely reconstructed. Any changes with respect to Proto-Norse are therefore considered transitional – yet, inscriptions generally show at least syncopation, and the analysis will therefore focus on that.
On the other hand, script features that are considered to be transitional with respect to the elder futhark are, essentially, the reduction of signs, the use of ã for oral /a/, and new graphemes for the k-, h-, a-, and m-runes, and short-twig symbols. This interpretation is the result of our knowledge about the elder and the younger futhark. The elder futhark is usually presented like this:

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\begin{align*}
\& \ 
\end{align*}
\]

Fig. 3. Runes of the elder futhark.

From this script, the ï and ñ (ng) are hardly used. Besides, many signs have variant forms. For instance, one variation for k is ý, which seems to be characteristic of the last part of the Migration Period. Other variations are ã for s and ã for r, which become the dominant forms in the younger futhark. The s-rune also appears as ñ, seemingly a sixth-century feature (Spurkland 2005:26). Further common variations are reversed forms of the h-, n-, and s-runes. In order to distinguish between script transition and variation intrinsic to the elder futhark, I follow Lisbeth Imer’s observation that the fact that several runes change form more or less simultaneously, in addition to the disappearance of certain characters, indicates that the futhark really was changing at the start of the Merovingian Period (cf. Imer 2015b:43). The variations mentioned above are therefore not considered transitional, because they precede the phase of significant transition.

The transition towards a younger futhark, then, consists of a reduction of signs, in addition to a graphic change in which all runes acquire one stave (either from being staveless or from having two staves), and probably afterwards a graphic simplification. Whereas the start of script transition is relatively easy to demarcate, it is difficult to draw a line between a transitional phase and the arrival of a younger futhark. It is uncertain whether there at some point has been the idea of a 16-sign script without any further graphic reduction or if the reduction of signs and graphic reduction were processes that happened side by side (cf. Barnes 1985:40). In a 16-signed futhark, the runes for g, w, p, e, o, and d become replaced by respectively k, u, b, i, u, and t.

The younger futhark is characterised by even more variation than the elder, it seems. This is not only due to the difficulty in pointing out its origin, but also because of the development of two 16-sign script types: on the one hand, the long-branch script, mostly used in Denmark, and on the other the short-twig script, mostly used in Sweden and Norway. Especially the short-twig script
had undergone a thorough graphic simplification. They can be rendered as follows (long-branch above, short-twig below):

A central feature for the transitional period between a 24-sign and a 16-sign futhark is the appearance of ḷ (and sometimes ḵ) for oral /a/. This seems to be the result of language change; the name of the elder futhark j-rune, *jāra (‘year’), changes into *āra, and thus the j-rune disappears from the script and becomes oral /a/ instead (designated as ḷ). In this process, the character also gets a stave. The older a-rune ḵ becomes nasal â through syncopation (Imer 2015b:43). Later, ḷ denotes h, and â simplifies to ḷ.

2.2.5 Outline for the analysis
To solve the contradiction in the dating of the Eggia find, the various dating arguments are reinvestigated and tested in today’s research context. The results are combined with an analysis of the runic transitional corpus in light of the sociocultural context of the transitional period. The corpus analysis studies the spatial and temporal spread of language and script development, with the aim to see how they reflect the social circumstance of the transitional period – that is, the crisis and rebuilding phases, including on the one hand a decrease in population and cultural decline, and on the other a growing population, a concentration of power, and urbanisation. If such elements are indeed reflected in the corpus, this supports the hypothesis that cultural adaptation applies to language and runic writing as well. In that case, it could weaken the typological arguments for the dating of the Eggia find.

The corpus analysis focusses on signs within the individual inscriptions of:

- Innovative language (with respect to Proto-Norse, such as syncopation and vowel changes)
- Archaic language (with respect to early Old Norse, not counting the mere appearance of ṱ, as this is a common feature of the language up to the Viking Age)
- Innovative/transitional script (with respect to the elder futhark)
- Archaic script (with respect to the younger futharks)
Script anomalies (unusual forms and variation within single inscriptions; e.g. reversed forms, two signs for /a/, or long-branch/short-twig combinations)

This will be done through distinguishing 0 (no signs), 1 (possible signs), and 2 (definite signs). An overview of the results is displayed in Appendix 1. The distinction between value 1 and 2 is made to separate comprehensible inscriptions from (partly) incomprehensible ones. In some cases, especially with short inscriptions, rune typology is uncertain, because signs have different possible sound values. For instance, it is not possible to decide on a reading of .df as either ʙ of h, or ɹ as either n or a, and hence to mark them as archaic or innovative or not, unless it is semantically obvious.

As such, inscriptions with value 0 for innovation and 2 for archaism, either from the perspective of language or of script, are pre-transitional; value 2 for both innovation and archaism indicates the inscription is transitional; value 2 for innovation and 0 for archaism states the inscription is post-transitional. Here, it should be noticed that the absence of signs (value 0) is not the same as falsification. After all, the inscriptions only show a part of the language and script typology. Especially language typology is extensive and therefore difficult to study this way. To compensate for this problem, very short and incomplete inscriptions that lack clear signs of typology are left out of the analysis when they would distort the results (value 0 for representability). Value 2 is given also when the inscription is short but shows some clear signs. The longer inscriptions are of course more representative. Besides, inscriptions that have not been interpreted will not get a value for innovative and archaic language.

As for script anomalies, reversed forms of the same grapheme are given value 1, because such variation is less significant than unusual forms. However, in case one inscription uses both reversed forms, such internal variation is considered clear variation, and value 2 is given.

In investigating the spatial spread of transition, the focus is on the historical regions in which the inscriptions are found, how many inscriptions are transmitted, and what language and rune typology they have. The temporal spread, however, involves some challenges. As a starting point, I take the most plausible dating of the inscriptions, according to research done so far. The datings offered by Lisbeth Imer (2015a) form the basis and are complemented by Krause and Jankuhn (1966) and others, if applicable. Various dating arguments are combined into a broader dating. I adjust the dating in cases where it does not reflect the arguments. When the arguments diverge too much and contradict each other (as is the case with the Eggja inscription), no conclusion is drawn, and the inscription is not used in the analysis as far as dating is involved. Using the most plausible dating will involve a degree of uncertainty, considering the criticism expressed in this thesis regarding relative dating and diachronic variation. Yet, it goes far beyond the scope of this work.
to propose a new dating for all inscriptions. Rather, by looking for anomalies in the spread of transition, the applicability of the largely relative chronology can be tested. Besides, the inscriptions are seldom dated very precise, which means that the datings might overlap each other, making the chronology more flexible. Therefore, the analysis focusses on the earliest possible dating (EPD) and the latest possible dating (LPD) for the inscriptions. This results in two chronologies. Also the type of dating is categorised, distinguishing between linguistic arguments (rune, language, and inscription typology) and archaeological arguments (including iconography, stratigraphy, and absolute dating methods like dendrochronology and carbon-14).

A qualitative approach, where individual runic inscriptions illustrate the results, complements the quantitative method of counting the various factors within regions and periods. This is especially useful because the marking of language and script transition does not differentiate between few or many features, nor between (supposedly) modest or advanced innovation/archaism. A qualitative method will also enable the analysis to point out variation in language and rune typology.

In short, the analysis will gather conclusions from the interplay between sociocultural circumstances and the runic corpus in the transitional period. The full corpus of transitional inscriptions enlarges the dynamics that were at play when the Eggja stone was carved. Hence, the results from the analysis will be used to propose a new, more comprehensive dating for the Eggja stone.
3. Sources and results

The following presents the inscriptions from the transitional period (ca. 536–800), 46 in total, found so far in Norway, Denmark, and Sweden. The inscriptions are grouped in their historical regions, ordered according to the geographical location of these regions, starting north-west in today’s Norway, proceeding south to Denmark, ending up east in Sweden. The information is taken from Lisbeth Imer’s catalogue of Iron Age inscriptions (2015a), unless otherwise indicated. The runic characters to render the inscriptions are my own readings from pictures (albeit with help from the interpretations given), and also the English translations from Danish and German are my own, except those that come from Danske Runeindskrifter and unless otherwise indicated. The meaning of the inscriptions serves as a background and does not impact the results directly. For this reason, I suffice to render the English translations, and not the translations offered by the sources I cite. The transliterations are also rendered in normalised form, based on available sources. As a result, not the same information is provided for all inscriptions. The normalisations are either of the language stage they represent (according to Danske Runeindskrifter) or of Old Norse (according to Krause 1971, in some cases Krause and Jankuhn 1966). For the remaining inscriptions, Samnordisk Runtextdatabas is used. The normalisations of this database are not always precise and are therefore not given priority. Using several systems for normalisation might obstruct a comparison of language typology between the inscriptions, but I think it is still possible to point out language and script transition, which is the primary aim of the analysis.

The rune and language typology of the Eggja stone are described in more detail, since this is the most important inscription. With this, Eggja will serve as a reference point for the other inscriptions in pointing out language and script transition. When it comes to language change, this is usually attested as syncopation, possibly together with other elements. An overview of the transition typology for all inscriptions can be found in Appendix 1.

Abbreviations
“DR”: Danske Runeindskrifter; “KJ”: Krause & Jankuhn (1966); “LI”: Lisbeth Imer (2015a); “VA”: Viking Age; “MP”: Merovingian Period; “PN”: Proto-Norse; “o.o.”: own observation.

Sør-Trøndelag

1. Strand fibula (KJ18) – The origin of this bronze fibula is uncertain. It is ornamented with braided ribbons. | Inscription (KJ): nikli ná hli | Síglí’s ná-hlé. | ‘The adornment is

2. **Strøm whetstone** (KJ50) – Found in 1908 on a farm in a cairn with charcoal fragments. The inscription and function of the whetstone are disputed a lot. | **Inscription:**\(^{13}\) (A) \(\text{wate } \text{h=ali } \text{hino horn=a} \) (B) \(\text{h=ah=a skápi haþu ligi} \) | Wate halli hino horna. Haha skaþi, haþu ligi. | ‘May the horn wet this stone. May the hay be cut! May the mown hay lie!’ | **Dating: 520/530–600** || LI: 520/530–560/570? – rune typology, based on the reading of \(\Upsilon \beta \kappa \). || KJ (1966:113): ca. 600 – rune and language typology. Syncope in haþu (< *hawiþu), combination of old a-rune and \(\Upsilon \) for \(k\).

3. **Vatn stone** (KJ68) – Found in 1871 as the only object in a grave mound, standing with the runes facing to the centre. | **Inscription:** \(\text{RhoJl}[.]\) \(\text{F}[.]\) \(\text{---} \) | ‘Roald, [I] painted(?)’ | **Dating: 560/570–775/800** || LI: rune typology. \(\Upsilon \) for \(\alpha\) and \(\Upsilon \) for \(\nu\) facing down indicate MP, the use of \(\Theta\) might point to the earliest period. || KJ (1966:153): ca. 700 at the latest – rune typology. Still use of \(\Theta\), but \(\Delta\) is replaced by \(\Upsilon\), and \(\Upsilon \alpha \) is still a consonant (as opposed to the VA y-sound in Norwegian inscriptions). The rune typology might be comparable to Eggja.

Sogn og Fjordane

4. **Eggja stone** (KJ101) – Found in 1917 during ploughing on the Eggjum farm, lying top-down over a grave. Next to the runes, the stone has a carving of a horse figure. The reading and interpretation of the inscription are much debated. For this discussion, see chapter 1. | **Inscription:** (A) \(\text{M}/\text{h}[.]\) \(\text{h}[.]\) \(\text{R}[.]\) \(\text{M}[.]\) \(\text{M}[.]\) \(\text{M}[.]\) \(\text{R}[.]\) \(\text{M}[.]\) \(\text{R}[.]\) \(\text{M}[.]\) | Mín varp násjó villr, máði þeim keipa í bormóða húni. Hverr of kom her á hitt land. Gotna fiskr ór Firney-im, svimandi foki af fenjunga landi, ei ey es yrki. Ne’s sólu sótt, ok ne saxi stein skorinn, ne viti maðr, nokðan es níp rinn, ne viltir menn, lægis!\(^{16}\)

\(^{13}\) English translation according to Spurkland (2005:33).

\(^{14}\) S-rune with middle twig pointing down.

\(^{15}\) Note: two reversed forms for the s-, n- and h-runes.


Innovative script features: † for a, next to nasal ą-rune; furthest evolved k-rune with stave; b-rune for /p/ as shown in warb and kaiba (Spurkland 2005:69). Perhaps t-rune replaces /d/ in ląt (otherwise the t-rune is difficult to explain); perhaps the i-rune replaces /e/ in ląt (Spurkland 2005:69–75). Perhaps t-rune replaces /d/ in ląt (otherwise the t-rune is difficult to explain); perhaps the i-rune replaces /e/ in ląt (cf. suwimąde, sakse), although Grønvik (1985:169–172) argues this is early vowel harmony; perhaps the u-rune replaces /w/ in uim (Bjorvand 2010:226).

Innovative language features: syncopated fisk, mąn, rın, and made instead of fiskar, manir, rinir, and mawíde, also stain instead of staina (Spurkland 2005:70).

Archaic language features: ni for nê; mąn for maðr, -seu for -sjó (KJ1966:234). Furthermore, the distinction between Proto-Norse intervocalic ð and ð is still visible in bormoþa (ON –móða) and made (ON máði) (Bjorvand 2010:210). Additionally, not yet nr>nn and lr>ll, as shown in rın, wilr, and mąn; kam instead of kom (Grønvik 1985:174,176).

Forms that are difficult to explain: preposition ob, one would expect of, besides af is also used on Eggja (cf. Grønvik 1985:175).

Hordaland

5. Setre comb (KJ40) – This comb of bone was found together with ceramics and a fibula in a dwelling area in 1932. It is ornamented with concentric circles and lines. | Inscription: (A) ḡḡḡ (B) ḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡḡገኝን እና ወን ቀኗ">

Reading, transliteration and English translation according to Spurkland (2005:25–27).

Facing upside down.

Telemark

7. \textbf{Tveito stone} (KJ94) – Two grave mounds of stone were found in 1896, one with a rune stone on top. | \textbf{Inscription:} \ mutable \ taitr | \textit{Taitr} (Krause 1971) | ‘The fortunate’ (personal name) | \textbf{Dating: 560/570–775/800} || LI: rune typology. \ for /a/ and \r facing down point to MP but are difficult to date more specifically. The rune stone might be younger than the mounds – the grave objects are not much younger than ca. 500, and both graves contain material from the early fifth century. The \r-rune is still used after a dental, like on the younger Valby stone (KJ 1966:203).

Vestfold

8. \textbf{Valby stone} (N140) – Found in a grave mound during farming activities in 1869. The original position is uncertain, as is the relation between the inscription and the grave (cf. Källström 2007:230). | \textbf{Inscription:} \ mutable \ auarþfaþi \ mutable \ \ mutable \ \ mutable \ \ mutable \ \ mutable \ | \textit{Hávarðr fáði ...} | ‘Hávarðr carved …’ | \textbf{Dating: 675–900} || LI: composition typology. It is impossible to say if the runes belong to the VA or the MP, but the composition indicates MP. \r is still used after a dental (KJ 1966:203).

Bohuslän

9. \textbf{Rävsal stone} (KJ80) – Found before 1746 on level ground standing in line with five other, runeless stones, ca. 300m from the shore. | \textbf{Inscription:} \ mutable \ haripulfs : stainaþ | \textit{Haripulfs stones} | \textbf{Dating: 675–775/800} || LI: rune typology. VA a- and s-runes, and \r facing down indicate a young dating. The genitive formula points to MP. There is no syncopation attested in this inscription, but innovative language forms are visible in genitive -s instead of PN -as (KJ 1966:184), and suffix -ar in \textit{stainað}, which is an innovation for the masculine a-stem nouns (cf. Grønvik 1987:168).

Jylland

10. \textbf{Hammel stone} (DR70) – Found in 1863 as a bearing stone of a church wall. | \textbf{Inscription (DR):} \ mutable \ ulfs : st... | \textit{Ulf’s stone} | ‘Ulf’s stone’ | \textbf{Dating: 675–900} || LI: rune/language

\textsuperscript{19} Imer states 525, but usually denotes the start of the latest phase of the Migration Period with 520/530.
typology. The composition with the genitive indicates that this is one of the oldest runestones in Denmark. Yet, no characteristic rune forms indicate something more specific. The language is Old Danish (‘olddansk’) (DR).

11. Laurbjerg stone (DR105) – Found at a church yard, its origins are unknown. | Inscription (DR): (A) BъNuN lױr lѣl lѣl lѣl | (B) lѣl lѣl | (A) bulnausanstain (B) uili | Bolnau[t]s(?) sanstæinn(?)


12. Ribe cranium (SJy39) – This skull fragment was found in a cultural deposit layer during archaeological excavations in 1973 of the old marketplace in Ribe. The object is pierced with a hole, which probably originated together with the runes (Stoklund 2004:27–28). The unique circumstances made it possible to give an absolute dating of the inscription.


| Dating: ca. 725–ca. 760 | LI: 700–750 – archaeology (dendrochronology). The object was placed right above a piece of wood that is dendrochronologically dated to 719, and right beneath two pieces of wood that are dendrochronologically dated to ≥730 and ≥759. || Stoklund (2010:240): ca. 725–ca. 760 – dendrochronology. The object was deposited soon after it was carved (Stoklund 2004:34). The h- m- and a-runes are elder futhark forms (Stoklund 2004:29). Attests to changes in the consonant system, syncope, assimilation, umlaut and breaking – features that are also visible in the Helnæs-Snoldelev group, so all of them belong to the time after 700 (Stoklund 2010:245).

uþin (probably Óðinn) indicates that the distinction between intervocalic ᵁ and ᵃ had disappeared (Bjorvand 2010:210–211). The language is Old Danish (DR).

13. Scheelsminde fibula (NJy60) – This fibula of gilt-bronze was found in 1964 during the digging of a sewer. | Inscription (DR): lѣl lѣl lѣl | kutis | Gutis/Gotis(?) | ‘... Gutir's/Gotir's’ (man’s name?) | Dating: 675–725 | LI: iconography of style D. The language is Old Danish (DR).
14. **Sofiendal fibula** (NJy76) – This fibula of gilt-bronze was found in 1987 close to a trading area, the runic inscription was discovered in 2004. It is uncertain whether the signs are runes or Latin letters. | **Inscription:** [P]-[-] [p]-/- [‘...’ | **Dating:** 750–810 | **LI:** 775–810 – iconography of style F. | **Stoklund (2010:243):** ca. 750–800 – archaeology/typology.

15. **Starup stone** (DR17) – This stone was found in 1914 as a church doorstep. | **Inscription** (DR): [Éi]ri[k](:) [kub]l | [Æi]r[iks kumbl] | ‘Eiríkr's monument’ | **Dating:** 675–900 | **LI:** typology (rune; composition; reading direction). Written in the 16-sign futhark, but no runic signs that indicate either MP or early VA. The ą-rune with high twigs, composition, and reading direction indicate 900 at the latest. The Ħą is surprising, either the pronunciation was nasal, or the inscription is written in the elder futhark (DR). The language is Old Danish (DR).

**Fyn**

16. **Avnslev stone** (DR189) – The origins of this stone are uncertain, but it is said to come from a grave mound. Only a drawing is left. | **Inscription** (DR): [A]n[i] r[i] | āsl[a]k | ‘Áslakr.’ | **Dating:** 700–900 | **LI:** rune typology. Indicated by the high twigs of the ą-rune and the short character of the inscription. The language is Old Danish (DR).

17. **Faaborg stone** (Fyn51) – This stone was found as part of a coast protection wall, its origin is unknown. | **Inscription** (DR): [A]ft [R]ūl[f] st glGen | sasi sist | ‘In memory of Hróðulfr(DR)/Roulv stands this stone; he was {nu} priest/chief. Sons placed in memory.’ ‘Ávarr coloured.’ | **Dating:** 675–775/800 | **LI:** rune typology. Inscription of the Helnaes type.

18. **Flemlose 1 stone** (DR192) – This stone was found in 1963 at a church yard. Its original place was possibly on a mound close by. | **Inscription** (DR): [A]ft [R]ūl[f] st Gen | sasi stæinn sāsi, es vas {nu} goði. Sattu syni æfti | ‘In memory of Hróðulfr(DR)/Roulv stands’ ‘this stone; he was {nu} priest/chief. Sons placed in memory.’ | **Dating:** 675–775/800 | **LI:** rune
typology. Some signs from before the 16-sign futhark, like †.\(^{20}\) \[ DR: probably 700–800 – rune and language typology. Both ṭ and ō for /al/; ṛ still after a dental. The language is Old Danish.

19. **Flemløse 2 stone** (DR193) – Found around 1840 at the entrance to a farm, its origins are unknown. | **Inscription** (DR): ṛuufř sis | ṛuufř {sis}. | ‘Hróðulf’s …’ | **Dating**: 675–775/800 | LI: rune typology. Same type as Avnslev, Flemløse 1 and Helnæs. The language is Old Danish (DR).

20. **Helnæs stone** (DR190) – Found in 1860 during agricultural activities on the Helnæs peninsula. | **Inscription** (DR): (A) ṛuufř saṭi stæin nura | (B) kuþi aft kuþumut brupur | (C) sunu sin truknaþu …. | (D) a dúair faþi | ‘Hróðulf, {nu}—priest/chief, placed the stone’ ‘in memory of Guðmundr, ‘his nephew. They drowned …’ ‘Ávarr coloured.’ | **Dating**: 675–775/800 | LI: rune typology. Some older script features, like the m- and h-runes. Same type as Ribe. \[ DR: probably 700–800 – rune and language typology. The language is Old Danish, with some archaic language forms: sunu; still use of h in /hr/ (although carved in wrong order), extra u in kuþumut (Guðmundr); the verb faþi (fá) for carving runes.

21. **Sønderby stone** (DR Br23) – Found in 1809 in a stone wall but said to be dug up from a mound. | **Inscription**: ṛuufř | pauriþ | ‘…’ (personal name?) | **Dating**: 675–900 | LI: rune typology. The dating depends on the reading of the second last rune: as a it is type Helnæs-Ribe, as h it is Gørlev (younger). Possibly both ṭ and ō for /al/ (o.o.). | DR: probably 700–1100 – rune and language typology. As most runestones from Fyn are dated 700–900, this stone probably belongs to this period as well. The language is assumed to be Old Danish.

**Sjælland**

22. **Hoje Tåstrup stone** (DR250) – Found in 1827 close to three large ruined stone walls, which are called Jættetinget (‘giant assembly’). | **Inscription** (DR): (A) hurnbura | (B) stæinn Svīðings. | ‘Hornbori’s’ ‘stone, of Sviði’s
line.’ | **Dating: 675–775/800** || LI: rune typology. Older h-rune, † for /al/. The language is Old Danish (DR).

23. **Kalmergården fibula** (Sj45) – This tin-coated bronze fibula fragment was found in 1995 during a metal detector search of an old craft and trade area. **Inscription:** H...ul...is | ‘Walis(?)’ (genitive of the male name *Walirx) / ‘is well’. **Dating: 630–675/700** || LI: iconography. † for /al/. Same s-rune as on the Scheelsminde fibula, which makes it natural to compare the two (Stoklund 2010:242). The language is PN (DR).

24. **Lejre bone** (Sj108) – This bone fragment was found in 2005 during the archaeological excavation of a dwelling place. **Inscription:** H | ‘...’ | **Dating: 475–600** || LI: stratigraphy.

25. **Nørre Herlev stone** (DR254) – Found in 1876 in a stone wall. There are doubts about the authenticity of the inscription because of the unusual rune and language typology (DR).

   **Inscription:** (A) áslaikr : raisti stæin : (B) ikisafaisinąþ (C) in : ukunitįfaslokas--i | iškaftiñuŋr-nši | Aslaikæn reisti stæin ... (DR) | ‘Ásleikr raised the stone’ ‘... (in memory of …)’ | **Dating: 700–900** || LI: rune typology. Impossible to say whether this is the 16-sign futhark with graphic simplification of h and m, or an older script. The language might be Old Danish (DR). The s-rune is facing in both directions, and r is still used after a dental (o.o.).

26. **Snoldelev stone** (DR248) – This stone was found close by a MP and VA graveyard. **Inscription** (DR): (A) kunu:altstain : sunar (B) ruhalts : ūlar : a salhaukp | Gunvalds stæinn, sonar Hróalrds, ūlar ā Salhaugum. | ‘Gunnvaldr's stone, son of’ ‘Hróaldr, reciter of Salhaugar.’ | **Dating: 675–775/800** || LI: rune typology. Typologically like Ribe. Some elements from before the 16-sign futhark, e.g. a- and h-runes. Loss of w before /al/, which comes after the loss before a labial. The language is Old Danish (DR).

27. **Tune stone** (DR249) – This lost inscription is said to be found at the Balder mound around 1773. Only a drawing is transmitted, on which the stone appears to be a fragment. It is unclear whether the inscription is authentic. In the lower right corner, some indefinable signs are carved
Inscription: [---][.] /*.kK|  [---]ʌ́nʌ | [---.k : rA21una ...Auna] | ‘…’ | Dating: 700–800
LI: rune typology. If  is  , there are two runes used for /a/ (o.o.).

28. Vester Egesborg comb (Sj103) – Discovered in 2011 when the Vester Egesborg finds were published. | Inscription: //| | | |  | ?oarr/Iwar(?’ | Dating: 600–800 | LI: archaeology/rune typology. Found together with objects from 600–1000. Difficult to date more precisely, but the runes suggest MP.  facing up indicates an older dating (DR).

29. Vordingborg stone (DR221) – This stone was discovered in the wall of a custom house in the early seventeenth century. | Inscription (DR): (A) /rährhurήνην/ R (B) /rährhurήνην/ | (A) karpi πιαπυρ (B) afit aþisl umarutkau | Gærði Píðóvně/Píðóvně æft Aðísl ... | ‘Pjóðvén/Pjóðvén made’ ‘in memory of Aðísl ...’ | Dating: 675–950 | LI: rune/language typology. Typical runes for the 16-character futhark, but nothing decisive. The language is Old Danish (DR).

Skåne

30./31. Hörup rib-bone 1 & 2 (Sk40 & Sk136) – Two rib-bone fragments found during the archaeological excavation of a pithouse. On Hörup 2, only a t-rune  can be read. | Inscription (Hörup 1) (DR): húhuríðir(∫ | .i|h| 22t-itirk | ‘…’ | Dating: 675–900 | LI: archaeology. The pithouse is dated to late MP or early VA.

32. Lilla Köpinge comb (Sk34) – This bone fragment could be a comb or comb holder piece. Found during the archaeological excavation of a pithouse in 1983. | Inscription (DR): (A) //hurír(D R ) | /hurír( C ) | /hurír( C ) | /hurír( C ) | (A) urmhitr kuþ̄ ōat (B) kku (C) ̄= exploits | Ormhildr said this/that ‘…’ | Dating: 750–850 | LI: archaeology. Ceramics from the same excavation date to the late MP or early VA. Still  after a dental indicates ca. 800 (Salberger 1984:136). Archaeology, language and rune typology combined leads to 775–825 (DR). The language is Old Danish (DR).

33. Skabersjö fibula (DR263) – Found around 1885 under unknown circumstances. The fibula is made of gilt-bronze, is unusually large and the front side contains animal ornamentation (DR).

21 As the inscription is not interpreted, the reading of  as  uncertain to me; it might as well be a younger  .
22 Marking the  as an uncertain reading is my own observation. It might also be an  .
34. Örja stone (DR333) – This stone was found in a church wall in 1867 during restoration work.

**Inscription (DR):** (A) [---] [---] [---] [---] [---] [---] [---] [---] [---] (B) [---] [---] [---] [---] (A) ... Rāði tōk {fauka} from his wealth, but therewith have I rewarded Ása ‘...’ | Dating: 675–775/800 | LI: rune typology. * ergju (ergi) *hjarmlauss, úti þat (i.e. the monument).’ ‘I prophesy destruction.’ | Networking: 520/530 – 700 | LI: rune typology. * for /al. The language is Old Danish (DR).

Blekinge

35. Björketorp stone (KJ97) – This standing stone was found ≤1627 on a grave field (Williams 2001:511), together with two other raised stones without inscription, and they are still standing there.

**Inscription (DR):** (A) [---] [---] [---] [---] [---] [---] [---] (B) [---] [---] [---] [---] (A) haizrunu runu falk heðra, ginn-rúnar. *ergju (ergi) *hjarmlauss, úti er (?) vél-dauði, sá er þat (= þetta) brýtír. Óþarf-spá (Krause 1971). | ‘A row of brightness-runes I hid here, mighty runes. Unceasingly (?) encumbered by sorcery, {utiar} to death through malicious guile [is] he who breaks it (i.e. the monument).’ ‘I prophesy destruction.’ | Networking: 520/530–700 | LI: rune typology. * for k and r facing up point towards the end of the Migration Period, yet *A points to ca. 600 or younger. The language is late PN (DR). | KJ (1966:217): ca. 675 – slightly younger than Stentoftener. No † used.

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23 I could not find an image showing this part of the fibula; hence the inscription is not rendered in full.

24 Marking this a as uncertain is my own reading. This rune might be an h – even though a is sensible interpretation considering it is attested elsewhere in the inscription, we cannot exclude internal variation.

25 Note n-rune in both directions; twig of h-rune facing up.
36. Gummarp stone (KJ95) – This stone was found ≤1627 in a meadow close to a fortification. The monument was lost during the Copenhagen fire in 1728, a drawing is left. It is the same area as the Istaby and Stentoften stones and probably the same group of people (Williams 2001:509–510). | **Inscription**: (A) ḡjaþuþwulfár (B) ḡjaþuþwulfar (C) [..] (D) PPP PPP | (A) ḡaþuþwulafár (B) sate (C) štaþa þrija (D) fff | ḡaþuþwulafá ḡaþuþwulafá satte staba þria fff (DR) | ‘(For) ḡaþuþwulfár(Hōðulfr)’ ‘(are) placed’ ‘three staves fff.’ | **Dating**: 560/570–700 | LI: rune typology. ḡ for /a/ points to the seventh century. No k- or r-rune to compare it to the other Blekinge stones (o.o.). The language is late PN (DR). | KJ (1966:208): ca. 600 because there is still short ‘a’ in an unstressed syllable.

37. Istaby stone (KJ98) – The origin is unknown, probably found in a yard. | **Inscription** (DR): (A) ḡjaþuþwulfár (B) ḡjaþuþwulfar (C) [..] (D) PPP PPP | (A) afatr hariwulafár ḡaþuþwulfar haeruwulafár (B) wārāit runar þiajar | eftir Herjólf – Hálfr Hjǫrðolfsson reit rúnar þær (Krause 1971) | ‘In memory of Hariwulfr (Herjólfrr), ḡaþuþwulafar (Hōðulfr), descendant of Heruwulfár (Hjǫrðolfrr),’ ‘wrote these runes.’ | **Dating**: 520/530–650 | LI: 520/530–560/570? – rune/language typology. ḡ like VA s-rune ḡ is unknown from archaeologically dated inscriptions and indicates a somewhat older dating. E-rune with angled twigs and r facing up point to Migration Period (perhaps the latest phase). Syncope in ḡaþuþwulafár. | KJ (1966:220): ca. 625, between Gummarp and Stentoften. | KJ (1966:208): ca. 600 because there is still short ‘a’ in an unstressed syllable.

38. Stentoften stone (KJ96) – Probably found in 1823, lying with the inscription facing down, amidst five other stones. The interpretations of the content vary, but there is an obvious relation to Björketorp. | **Inscription** (DR): (A) ḡjaþuþwulfár (B) ḡjaþuþwulfar (C) [..] (D) PPP PPP | (A) niu haborumr (B) niu hægestumr (C) ḡaþuþwulafár gaf j (D) hariwolafar [ma–u snuh-e] (E) hiderrunono feþah eka h edera ginoronor (F) heramalasar arageu weladudså þat hariutip | niu haborumr, niu hægestumr ḡaþuþwulfr gaf j[ar], Hariwulfr ... hiderrunono, felh eka hedera ginnoronor. Heramala[ul]sar arageu, welad[u]ps= =sa þat hariutip. | ‘With nine bucks’ ‘[and] nine stallions,’ ‘Ḥaþuwulfr (Hōðulfr) gave fruitful year,’ ‘Hariwulfr (Herulfr) ...’ ‘A row of brightness-runes I hid here, mighty runes.’

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26 Instead of ‘Ḥaþuwulfr(?)’, as it probably is not nominative.

27 Note: twig of ḡ-rune pointing up.
‘Unceasingly (?) encumbered by sorcery, to death through malicious guile [is] he who breaks it (this monument).’

| Dating: 520/530–700 | LI: rune typology. Some older features and some younger. Ы for k points to the end of the Migration Period; yet, r facing down, and þ for /a/ point to the MP. The language is Late PN (DR). | KJ (1966:213f): ca. 650. Younger than Gummarp and Istaby. |

39. **Sölvesborg stone** (DR356) – Found in 1748 (DR) as part of a monastery wall. | **Inscription** (DR): (A) [...](Tag[...] (B) [...]Tag[...]: | (A) urti : (w/b²)λp- ... (B) - : ṣm=ut : | (A) sunu sin : | Orti Vað[i] [æft] Ásmund, sunu sinn. | ‘Vaði wrought [in memory of]’ ‘Ásmundr, his son.’ | **Dating: 560/570–775/800** | LI: rune/language typology. A younger dating up to 800 presupposes reading ḟλp- instead of ṡλp-, in which case the stone is of type Ribe-Helnæs (700-800). | KJ (1966:218ff): 750–800. * for /a/, and VA s-rune. | DR: probably 600–750 – language typology. The language is Old Danish, contrary to the other Blekinge inscriptions. Elder futhark Ṽm. |

**Bornholm**

40. **Lousgård bead** (Bh47) – This wooden bead with tin-coated bronze was found in a female grave in 1886, together with several other adornments. In 1954 the runic inscription was discovered. The tin, including the inscription fragment, is assumed to be reused for the bead (DR). | **Inscription:** [...]Tag[..][...] [...][...][...] [...][...] [...]- [...]- [...]-[...]t[..] | ‘…’ | **Dating: 600–700** | LI: 650–700 – archaeology. The grave is dated to 660-700, but the runes are older, probably still from the seventh century. | Stoklund (2010:243): 600–700 – rune typology. She reads n instead of a, considering the runes on Eggja and Setre. |

**Öland**

41. **Borgholm whetstone** (NOR2003;26) – Found before 2002 at a fortification, close to a historical site from the VA. | **Inscription:** ‘Hain | ‘Whetstone’ | **Dating: 560/570–775/800** | LI: rune typology. Still using the older h- and a-rune, which indicates the same period as Setre and Ribe. |

²⁸ B-rune instead of w-rune suggested by Magnus Källström.
Östergötland

42. Ellestad stone (KJ59) – Found on level ground with other stones during agricultural work in 1934/1936. | **Inscription:** (A) ÆKJ1½vr[---] (B) [---]vr[---] (C) ÆKJ[---] (D) Y¥-¥£ ¥£ ¥£ | (A) eka sigimarr af ... (B) ...ka raisidoka (C) stainar ... (D) (-) kk : kiìi : kkk ... | **Dating:** 520/530–700 | **LI:** rune typology. Y for k indicates an early dating, but perhaps it was in use longer in Sweden. ¥ for /a/ points to the MP. The s-rune looks like the one on Stentöften/Björketorp but is used facing both ways (KJ 1966:59). The r is facing both down and up (o.o.).

Uppland

43. Tomteboda stone (NOR2002;32) – This stone fragment was found in 2001 on a graveyard from the Migration Period and MP, as part of a stone wall surrounding a grave with burnt bones, a clasp, and a Vendel period comb. | **Inscription:** [---]m:rn[---] | ...e : ru ... | ... [wurt]e(?) ru[noc]z(?) ... | ‘... [mad]e [the] ru[nes]...’ | **Dating:** 375/400–675 | **LI:** rune typology. The grave goods are dated to the seventh century, but the grave type with burned bones is older. The angular twig of the e-rune indicates a dating to the Migration Period or early MP.

44. Vallentuna dice (U HG1989;44 U²⁹) – These burnt dice fragments of dear antler were found in grave mound, belonging to a rich male grave. | **Inscription:** (A) €lJèJèJu Kj7Jlbu[---] (B) [---]J | (A) hḷa h₃ h₃ h₃ ũk ᵀb ... (B) -n₄ | H[I]ahahuakz(?) albu[inn](?) ... | ‘Hlahahauk (personal name – ‘Laughing hawk’) is] fully prepared (?)’ ‘...’ | **Dating:** 570–700 | **LI:** 600–700 – carbon-14. Two carbon datings show 615 +/- 85 and 655 +/- 85 (i.e. 530–700 and 570–740).

Gotland

45. Hallbjäns amulet (G361) – This copper amulet was found in a grave during an archaeological excavation in 1966 (Snædal 2002:43), together with other adornments. | **Inscription:** [---]m:n[m]n[---] | [---]tt̲[---] [---]m:n[m]n[---] | puŋp̲p̲ur̲p̲ur̲sus:--₃⁰₃q₄rn-- ... | ‘...’ | **Dating:** 700–750 | **LI:** 675–775/800 – archaeology. Refers to Snædal. | **Snædal (2002:43):** 700–750 – archaeology of the grave goods. The runes look like the ones on Ribe, from around the same period, hence the reading of ‡ as A.

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³⁰ Marking this interpretation as uncertain is my own observation. ‡ might also be a younger h-rune.
46. **Roes stone** (G40) – Found during the cultivation of heath ≤1899. It is ornamented with the figure of a horse and the first lines of a human figure. | **Inscription** (KJ): ινλιτη:ηρυτρρι | **iu þin** : u=d=rαk : | ιυ þin(n) Ud(d)r rak | jό þenna Oddr rak (Krause 1971) | English: ‘This horse drove Od’ | **Dating**: ? | LI: 560/570–675 – rune typology. The use of d-rune and ṣ for /a/ indicate the earliest phase of MP. | **KJ** (1966:236): most likely ca. 750 – rune typology. K- and a-rune as on Eggja, although this a is also visible on the oldest Danish runestones. The language is Old Gutnish. | **Snædal** (2002:48): ca. 775–850, probably 800–850 – rune and language typology. ṣ for /a/ indicates ca. 850 at the latest, although elder futhark signs might have been used longer on Gotland, even into the tenth century. No w before r in rαk indicates ca. 800 at the earliest.

31 Snædal (2002:46) points out the twig of the k-rune is an uncertain reading.
4. Analysis

4.1 The dating arguments

The dating of Eggja has been puzzling; the methods have all been relative and point to different periods. A relative dating has been suggested for the archaeological grave context, the iconography, the script, and the language. As it turns out, this relativity involves uncertainties for all of them, which seems to make an unambiguous dating of Eggja impossible.

4.1.1 Grave typology

According to Håkon Shetelig, the simple grave on level ground, with scanty grave goods and no coffin, was typical for the seventh century on the west coast of Norway. Shetelig’s dating is still accepted today, but it seems no longer up-to-date. During the course of later decades, new archaeological techniques have made it possible to discover graves that were invisible before. Although Shetelig's classification still holds, more recent finds show that level ground graves with scanty grave goods in the western part of Norway likewise are typical for later centuries, and continue into the Viking Age (Diinhoff, personal communication 2019). There are indeed examples to be found of such later graves similar to Eggja: a Viking Age grave from Rydland (Hordaland) with an axe (B14218), or a grave from Voss (Hordaland) with a sword (B6225), dating to the eighth century (Helgen 1982:27) or to the Viking Age (Universitetsmuseenes samlingsportaler). Also the bronze tub (B13293) from Hordaland might belong to a Viking Age grave on level ground. Archaeologist Søren Diinhoff stresses that all Merovingian Period and Viking Age graves that are being discovered today in western Norway are level ground graves, not visible for the naked eye, and that it is difficult to date them more precisely (personal communication 2019, cf. Diinhoff, forthcoming). Diinhoff also confirms what Lis Jacobsen suggested already in 1931, that many graves on level ground might have been covered by a small mound, which over time was levelled out by ploughing or trampled by livestock. The grave typology is, in other words, not very helpful in determining a dating for Eggja.

Another obscure discussion concerns one of the grave goods, the fire striker of type R426. In Rygh’s catalogue (1999(1885)), type R426 belongs to the period ca. 800–1050, i.e. the Viking Age. Also this argument was already challenged by Lis Jacobsen (1931:100), who argued that both grave goods fit Viking Age graves as well. Later on, some researchers have nevertheless argued that R426 points to the seventh century too. Gutorm Gjessing (1934:183), for instance, maintained...
it was used over a long period, but most typically around 700. Furthermore, according to Geir Helgen (1982:20–21), the ‘early form’ of the fire striker with its rolled ends refers to the seventh century. Comparing the X-ray image of the Eggja fire striker (Helgen 1982:20 fig. 14) with Rygh 426, the X-ray image shows the ends roll somewhat further compared to the image of Rygh. Generally, however, both fire strikers look very similar. In light of the discussion on typology and relative chronology in chapter 2.2, it is questionable to arrive at a relative chronology for the development of an object on the basis of such subtle variations. It is, in other words, striking that the same object led Helgen to the seventh century, and Rygh to the Viking Age.

4.1.2 Iconography
As discussed in the chapter 1, the argument of the grave typology is backed up by the iconographic dating of the horse carving on the Eggja stone. Although the grave typology was the first and widely accepted argument for the dating of Eggja, it is not given the most weight. More importantly, therefore, has been that the typological dating from an art-historical point of view confirms the seventh century. The Eggja horse is said to be carved in the elder Vendel style, which also is found in the Veggerslev horse. This argument is primarily advanced by Gjessing (1934) and Nerman (1947), the latter claiming there could be no doubt that the Eggja horse originated between 650 and 700.

Neither the art-historical argument is as irrefutable as it might seem. To begin with, one problem is that it is not determined, like with the Skokloster runestone, whether the horse and the runes on the Eggja stone originated simultaneously. The unclear relation between the horse figure and the runes supports a possible different origin of the two. Bjorvand (2010:212), who leaves room for a younger dating, does not see a connection between them, apart from that a horse was a status symbol. On the other hand, it seems unlikely that the runes are younger than the horse. Jacobsen (1931:105), Nerman (1947:121), and Kiil (1955:133) maintained they originated simultaneously because their carving style and preservation are very similar. In line with this, scholars have understandably tried to explain the horse carving. Some included the figure in their interpretation of the runes, as discussed above. Others referred to the cultic or religious significance of the horse in pre-Christian rituals, as for instance Pär Olsén (1945:85), who discussed the magical powers of horses and horse figures. Furthermore, Kiil (1955:132–134) explained the Eggja horse as a protection motif, and Grønvik (2000:14) assumed a horse sacrifice during the burial ritual of Eggja.

Whether or not the runes and the horse were carved together, the iconographic argument itself as a foundation for the dating of Eggja can be disproved. Firstly, the exact dating of the
iconographic style Eggja is said to belong to is unresolved. Pär Olsén (1945:81,84) dated the Veggerslev horse not to 650–700, but to ca. 700 because of its big eye. He thought Eggja therefore originated ca. 700 as well or a bit later. What follows from this ambiguity, is that it is unclear to what extent stylistic features are part of one specific period only. This problem was stressed by Jacobsen (1931:105–108) in her defence of a younger dating, mainly illustrated by the Skokloster runestone.

Diving deeper into research on the Scandinavian iconography of horse figures, more examples surface that show the Eggja horse carving just as well fits in later times. One example is the recent find of a little horse amulet from Ultuna (Uppland, Sweden) (cf. figure 5). This object, originally a brooch and transformed into a pendant, dates to ca. 700–800 (Hulth 2013:39). The motif of animal figures with symbolical meaning is known from jewellery, picture stones and amulets from the later Vendel Period and the early Viking Age (Hulth 2013:40). The Ultuna horse has indeed, in line with the Eggja and Veggerslev horses, a beak-like chin (although it also has a hole), quite a thick neck and quite a sharp transition to the back. Also the style of the head is similar.

![Ultuna horse pendant. Picture: Markus Andersson](image)

Other examples extent the boundary even further. Birger Nerman, one of the scholars who claimed a certain dating for the Eggja stone, also discussed a set of Gotland picture stones with horse and ribbon imagery including runic inscriptions; Tjängvide (G110), Lokrume (G252), Lillbjärs (G268), Hangvar (G310) (Nerman 1947:113–139). He dated these stones simultaneous to Eggja, because the horses are of the same type, and the dating of the ribbon style leads to the same period. However, more recently new datings have been proposed for these stones. Thorgunn Snædal (2002:50–52) concludes on a much younger dating for the Tjängvide, Lokrume, and Hangvar stones – between 825 and 950 or even later – on the basis of their rune typology or composition. She also points to younger iconographic datings up to the tenth century that have been proposed for the Lillbjärs stone (Snædal n.d.). Snædal’s viewpoint is likely to be more
plausible than Nerman’s, considering the knowledge that has been gathered since 1947. No matter who is right, it is at least clear that the dating of the Eggja horse to 650–700 is disputable.

In other words, these examples make the entire foundation of the iconographic argument in the dating of the Eggja stone very unstable. The Gotland picture stones and the Ultuna pendant show that the style of the Eggja horse is not limited to the seventh century. On the contrary, a younger dating of Eggja up to the tenth century would from an iconographic perspective be possible.

The iconographic dating of Eggja thus reflects the theory on diachronic vs. synchronic variation in linguistics. The use of small details as markers of successive stages in iconographic styles emerges as a questionable method. It seems more accurate to state that, as within linguistic development, variants often appear simultaneously. Besides, it is unlikely that such small details were at a given point spread through the entire Nordic area; the style used for Veggerslev in Denmark towards 700 does not imply the same style in western Norway at that time. Social and geographical factors might increase the degree of variation on a synchronic level, following the principle of cultural adaptation. The ambiguous dating of the Eggja horse illustrates that style details hardly can be considered diachronic. This calls into question the archaeological and iconographic relative chronologies which underlie the corpus of runic inscriptions from the transitional period, including the Eggja stone. This discussion will be taken further in the corpus analysis.

4.1.3 Ship technology
If the Eggja inscription according to Grønvik’s interpretation testifies to a ship with a sail, it is indeed unlikely it originated before the mid-eighth century, as Bjorvand (2010:212) concluded. This argument can be complemented with the find of the Salme ship burials, dated to ca. 750 (Price et al. 2016:1022), that are found in Estonia. In their discussion of the Salme I ship burial, Allmäe et al. (2011:122) suggest that it might have been possible that this ship used a sail, building on the placement of the bodies in the ship burial, in addition to evidence of sails and rigging on Gotland picture stones from the eighth century onwards. Moreover, the Salme II ship seems to have had a keel for sailing (Price et al. 2016:1024). These ships are at present the earliest evidence for sailing technology in northern Europe, but the evidence is not certain. According to Allmäe et al. (2011:122), “[i]t is common knowledge in seafaring history that before 800 AD sail power was not used in northern Europe.” Hence, if Grønvik has interpreted the content in the runic inscription correctly, either ship technology must have advanced earlier than what is assumed now, or the dating of the inscription should be younger than what is assumed today. In the latter case, Eggja
originated after ca. 750 or even 800. Nonetheless, in light of the many uncertainties surrounding the content of the Eggja inscription, also Grønvik’s interpretation should be approached with reservation.

4.1.4 Language and script

It can be concluded from the above that a dating of Eggja depends on the linguistic circumstances of the monument. It turns out that archaeological arguments are of little value in this case, although they have been decisive in the research history. As Magnus Olsen’s initial dating to ca. 700 already shows, the seventh century is early from a linguistic point of view. Language historians were forced to rewrite the history of the Nordic languages after the discovery of the Eggja stone. Whereas the transition from Proto-Norse to Old Norse was thought to have completed in the Viking Age, the early archaeological dating of the Eggja stone and grave meant that it had happened several centuries earlier. However, leaving the iconographic arguments behind, there is suddenly nothing drawing Eggja to before ca. 700. Perhaps a younger dating can be considered. Linguistic arguments, however, are as much as archaeological ones, based on relative chronology and diachronic typology. The question is, therefore, how certain a linguistic dating is.

Important to the linguistic dating of the Eggja inscription is its relation to the Ribe cranium (SJy39) from Denmark. These two inscriptions are often discussed together as the two most substantial sources to the transitional period. Based on their archaeological datings, Eggja is usually presented as the earliest witness to a language in development still using signs from the 24-signed futhark, and the Ribe cranium as a younger source in which also the sign reduction of the script is completed (cf. Spurkland 2005). The Ribe cranium has an absolute dating, which builds on a dendrochronological dating to ca. 725–760 of the layer the amulet was found in (Stoklund 2010:240). This puts a finite date to when runic script reduction and syncopation are completed in Denmark – ca. 760 at the latest. Consequently, the Eggja monument with its archaic script must be older than the Ribe cranium, it has been argued.

This relative dating does not take into account the geographical contexts of Eggja and Ribe, which are very different. Ribe is located in the south of Denmark and is considered Denmark’s earliest town. It is easy to assume that a vivid market place is likely to present a new runic inventory and the last phase of language development from Proto-Norse to Old Norse. This would fit the strong position of the Danish regions during the rebuilding phase as mentioned in chapter 1. The location of the Eggja farm, on the other hand, is in the innermost of a fjord in the western part of Norway, far from the central towns in Denmark. In other words, it would be striking if the earliest signs of language and script development come from rural Norway and spread to a town in
Denmark. This is the implicit suggestion underlying the relation between Eggja and Ribe as it is accepted today. Yet, it would be more likely that this development completed in the central towns before it spread to the rural areas. The relative dating has not considered the implications of these sociogeographical contexts. As will become clear, the corpus analysis in the next section reflects this temporal relation between Eggja and Ribe. In this broader perspective, the implications of the relative dating become more distinct and turn out to be problematic.

Some scholars have recognised the importance of regional variation. Regarding the transition of the runic script, language scholar Brit Mæhlum (1987:107) pointed out the possible geographical and social variations in the use of the elder and the younger futhark. She suggested that the inner part of the Sogn fjord might have been an isolated ‘relict area’ (reliktområde) where the elder futhark was in use much longer than elsewhere. This would, as Mæhlum mentioned, explain the discrepancy within the Eggja inscription between the almost completed language transition and the early stage of the script transition. Grønvik (1985:168) also mentioned the conservative character of this language area. In response to this, Barnes (1998:460) stresses that, in understanding the transitional inscriptions, “we should always remember that changes in speech and writing must have happened at different times in different parts in Scandinavia.” Furthermore, runologist Marie Stoklund (2010:246) states it is very likely that there have been regional differences and overlapping traditions in the use of runic script variants. In line with these ideas, Bjorvand (2010:210) recognises the difficulty in linking Ribe and Eggja. However, apart from such acknowledgements, very little is known about the concrete reality of regional differences. It seems striking that regionality is noticed, but not incorporated in the theory of language history. This is of course not an easy task, but the situation illustrates the abstract level on which linguistics often is practiced. It would be a healthier claim to state that regions might develop in diverging ways and thus leaving room for temporal uncertainty, than to force all variations into a structured pattern.

The uncertainty about the dating of the Eggja monument puts questions to the relative dating of the Ribe and Eggja inscriptions – and thus opens up for an investigation in which synchronic variation is an important factor. Perhaps another explanation of the relation between the Eggja stone and the Ribe cranium can be proposed, taking into account the social circumstances of the transitional period. Within this context, the Danish areas provided the most suitable circumstances for rebuilding society after the population crisis, with the establishment of the Ribe town in the early eighth century as a marker. It is plausible to expect that script innovation accompanied the development of Ribe. In other words, it seems unlikely that script transition had advanced much before the Danish areas were able to rebuild themselves and urbanisation took place.
As it turns out, rune and language typology are difficult to judge in the dating of the Eggja inscription. After a re-evaluation of the research history, the relative chronology of which the Eggja stone is part appears questionable. This follows both from the archaeological arguments and from the relation to the Ribe cranium. Taking into account the sociocultural circumstances of the transitional period – i.e. the crisis of AD 536, the following LALIA, and the rebuilding phase – a new perspective might be offered, leading to a more comprehensive and reliable dating of the Eggja monument.

4.2 The runic corpus and society during the transitional period

The corpus from the transitional period consists of 46 runic inscriptions, of which 27 are dated on a relative linguistic basis, 15 on an archaeological basis (13 relative, 2 absolute), one inscription combines archaeological and linguistic arguments, and three have a diverging dating. The following section investigates the applicability and limitations of the largely relative chronology for the runic inscriptions within the broader framework of the social circumstances of crisis and rebuilding. The results will form the basis for dating the Eggja stone.

4.2.1 Inscriptions with uncertain dating

There are two other inscriptions next to Eggja in the corpus that are difficult to date. Both the Laurbjerg stone and the Roes stone have such diverging dating arguments that a most plausible dating could not be determined. These stones illustrate that it can be a difficult task to point out a secure dating for a runic inscription, thus showing the limitation in setting up a relative chronology. On the Laurbjerg stone, rune and language typology seem to point to the ninth century, but the type of inscription (being carved on the narrow side of the stone and using the genitive formula) indicates it is older than other Danish runestones. The case of Roes is similar to Eggja; it has a young language stage with typical Old Gutnish forms (Old Gutnish diverges from Old Icelandic and thus testifies to a development away from the common Nordic language), but an older rune typology (using a and d). Although the d-rune appears in an unusual context, being part of a monogram, it shows that runes from before the sign reduction were known and used after the transition.
4.2.2 Language precedes script transition

The transition towards early Old Norse appears to have developed somewhat earlier than the transition to a younger futhark, according to the chronology of inscriptions (cf. figure 6 and 7).

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<thead>
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<th>Innovative script</th>
<th>Archaic language</th>
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Fig. 6. Inscriptions with innovative/archaic features in the EPD chronology. The percentages are derived from the number of inscriptions with value 2 for either innovation or archaism in relation to a total of inscriptions with value 2 and 0 combined (i.e. not counting value 1). Only representable inscriptions (value 2 for representability) are counted.

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<th>Innovative script</th>
<th>Archaic language</th>
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</tbody>
</table>

Fig. 7. Inscriptions with innovative/archaic features in the LPD chronology. The percentages are derived from the number of inscriptions with value 2 for either language or script in relation to a total of inscriptions with value 0 or 2 combined (i.e. not counting value 1). Only representable inscriptions (value 2 for representability) are counted.

This is in accordance with the hypothesis that language change precedes script change, as scholars believe, and which makes sense considering the period of cultural decline. The inscriptions show a high percentage (>80%) of innovative language features from the very start, both in the latest possible dating (LPD) chronology and the earliest possible dating (EPD) chronology. For script innovation this is similar within the EPD chronology, but within the LPD a high percentage of innovative features starts from 700 onwards. Likewise, the language contains a high percentage of archaic features up to 700 (LPD), the runic script up to 800 (LPD), and the corpus shows lower percentages for inscriptions with archaic language features than for script, both before 675 (85% vs. 100%) and after 675 (29% vs. 58%) (EPD). Of course, in accordance
with the relative chronology, the archaic features in younger inscriptions tend to be less-archaic than those in the oldest inscriptions. For instance, the youngest inscriptions usually show archaic graphics (such as the use of \(\text{蜎} \)) and no longer signs from a 24-signed futhark.

### 4.2.3 Spatial spread of inscriptions

The demographic crisis and its cultural decline are visible in the corpus of runic inscriptions, considering the relatively low number of inscriptions (46) in the area during the period 536–800. Most Merovingian Period inscriptions come from southern Scandinavia. The regions Jylland, Fyn, Sjælland, Skåne, and Blekinge account for 65% (30/46) of the finds. In the North-West, there is little activity; there are single inscriptions in various coastal regions, and the finds are somewhat more dense (3 inscriptions) in the northernmost area Sør-Trøndelag. This relative density could be related to the trading route the area had with Ribe in the South, which would provide better circumstances for an increase in cultural production during the rebuilding phase compared to other Norwegian areas. Furthermore, in the East of the area there is likewise little activity; some inscriptions have been found in coastal regions of southern Sweden. In this regard it is worthy to note that especially Gotland testifies to a decline in writing culture as a result of the LALIA crisis. The area shows much activity during the Migration Period (cf. Imer 2015b:155), but from the transitional period only two inscriptions are transmitted, and one of them even has an obscure dating. Generally, the relative distribution of inscriptions through the area is in line with the Late Roman Iron Age and especially the Migration Period, during which there is also a higher density of inscriptions in the South (cf. Imer 2015b:154–155).

### 4.2.4 Temporal spread of inscriptions

The corpus also reflects the rebuilding phase after the LALIA, taking the (largely) relative chronology of the inscriptions as a starting point. According to their most plausible dating, 16–44% (6–19/43 datable inscriptions) of the inscriptions originated \(\leq 675\), whereas 56-86% (24–37/43) of the inscriptions is dated \(\geq 675\). Consequently, there are more inscriptions from the latter part of the Merovingian Period than from the LALIA. This could be the result of growing population and increasing cultural production. According to the growing number of grave finds, the rebuilding phase started from the seventh century onwards. The slightly diverging demarcation of 675 offered by the corpus is not to be taken as absolute; this year is an earliest boundary date for many inscriptions given by Imer, based on relative archaeological chronology.

Combining the temporal and spatial distribution, however, a surprising picture emerges.
According to the relative chronology, most inscriptions from the West and the East originated in the earliest part of the Merovingian Period: 63% (12/19) has an LPD of 700, 21% (4) fits at almost any point in the period, and only 16% (3) dates to ≥675 (EPD). Furthermore, nearly all southern inscriptions – that is, those from the typical Danish regions Jylland, Fyn, Sjælland, and Skåne – originated during the latter part (≥675). 1–3 older inscriptions from Sjælland are the exception, primarily dated on an archaeological basis. The case of the Blekinge inscriptions is remarkable in this regard, as the area must have had an active writing culture at some point (considering the group of related runestones concentrated in Blekinge). Compared to the other denser areas in the South, however, these related Blekinge stones (Gummarp, Istaby, Stentoften, and probably Björketorp) have a different rune and language typology (showing elder futhark signs and unsyncopated words), and therefore appear to be significantly older. This otherness could illustrate that this region was not a part of Denmark during the Merovingian Period.

The question is why there is a lack of typically Danish inscriptions during the LALIA. One suggestion is that this could be a sign of heavy cultural decline as a result of the crisis. Yet, the effects of AD 536 comprised the entire area. Considering that some inscriptions are attested across the coastal areas of Norway and Sweden and taking into account that the Danish regions in various historical periods show a relatively high density of runic inscriptions, one would expect more inscriptions. An explanation could be to assume that the Justinian plague only reached the South of Scandinavia, and the crisis as a result was heavier there than in the other regions. This scenario is difficult to uphold, however, because if language and script transition were able to spread through the area, the plague is expected to have followed. Also the relatively high activity of runic writing in Blekinge countermines this possibility.

The temporal distribution with the older inscriptions in the West and the East, and the younger inscriptions in the Danish regions in the South, is therefore hard to believe. This is a first sign indicating that the temporal relation between the Eggja stone and the Ribe cranium might have been different.

4.2.5 Implications of the chronology
With the younger inscriptions located in the South, the relative chronology thus implies that sign reduction, which is visible in most inscriptions (those that do not show it tend to be short and incomplete), started on the coast either in the East or in the West before 675, and spread to the Danish regions mainly after 675. In this scenario, script transition would have travelled an implausibly long way during the period of cultural and demographic crisis, leaving hardly any
signs in the areas in between. It would also be unlikely that the same script transition started independently in various regions.

When it comes to the relationship between Norwegian and Danish inscriptions, the corpus thus reflects the relation between the Eggja stone and the Ribe cranium scholars have tried to figure out. This is no surprise, as these two inscriptions are key sources in the development of a chronology for the runic inscriptions in the transitional period. The argument is that the script on the Eggja stone is more archaic and therefore Eggja is older than Ribe. Indeed, the rune typology of the Norwegian inscriptions is generally more archaic than that of the Danish ones, hence they are given an older dating. However, when looking at the larger picture of all the transmitted inscriptions, including their distribution and the social circumstances of the transitional period, this relationship appears questionable.

4.2.6 Analysis of the corpus without dating

A different picture can be outlined when letting go of the relative dating system. Looking at the corpus without taking the dating of the inscriptions into account, it becomes clear that nearly all (11/12) inscriptions without archaic script signs come from the Danish regions (Jylland, Fyn, Sjælland, and Skåne). The one inscription not from the South is the Valby stone from Vestfold (dated on the basis of inscription composition). Valby is near the coast in the South-East of Norway, which is relatively close to Denmark. The inscriptions that contain possibly archaic features show a similar pattern; one is found in Jylland, one on Fyn, two on Sjælland, and one on Gotland. This means that nearly all inscriptions from the West (including Bohuslän) and the East (including Blekinge, Bornholm, and Öland) contain archaic script features. Next to this, there is relatively much runic writing activity in the Danish regions, showing substantial innovation. The absence of archaic signs is, in other words, confirmed by the appearance of script transition, and thus becomes significant information rather than a mere coincidence caused by the short character of the inscriptions. Not only is script reduction attested a lot, also the younger futhark と思った for a is mainly found in the Danish areas (attested in nine inscriptions, next to one in Vestfold, in Bohuslän, and possibly on Bornholm – i.e. regions close to Denmark). In other words, the innovative, active character of the Danish regions combined with the archaic character and scarcely distributed inscriptions elsewhere suggests that script transition developed in southern Scandinavia and spread from there to the other areas.
4.2.7 The chronology enables the new perspective

Already from the perspective of the largely relative chronology itself, which states the western and eastern inscriptions are older than the southern ones, it is possible to claim a different chronological correlation in the corpus, thereby enabling the script typology of Norwegian and Swedish inscriptions to be a result of script transition from the South. With a more simultaneous temporal distribution, also the spatial distribution would make more sense. This becomes clear when looking at the LPD for the supposedly older inscriptions and the EPD for the supposedly younger ones. In this perspective, the use of † for ꞏ – perhaps the clearest marker of script transition, visible in many inscriptions – is attested from 630 onwards in the South (cf. Kalmergården (Sjælland) (iconographic dating)), but first in 650 in the West (cf. the Setre comb (Hordaland) (archaeological dating)). In the East the earliest inscription could be even up to 700, as can be seen on the Stentoftsen stone (Blekinge) (rune/language typological dating) or the Vallentuna dice (Uppland), which has an absolute LPD of 700 (carbon-14). Therefore, the use of ꞏ did not necessarily start in the North nor in Blekinge according to the relative chronology. As to the dating of the general appearance of ꞏ, it must be noticed that the chronology can also be criticised, using the Örja stone from Skåne as an example. This stone is dated to 675–775/800 on the basis of its rune typology. However, the only significant sign is ꞏ. Considering that this rune is found in various inscriptions that are supposed to be older than 675, the question is why the Örja stone cannot be possibly older.

Also from the perspective of runic character reduction, script change can be said to have developed in the South. The only clear sign of this in the north-western inscriptions (apart from Eggja) is found on the Strand fibula (Sør-Trøndelag), dated to 650–700 (iconography). In Blekinge this is the Sölvesborg stone, LPD 775/800, which thus could be carved at the end of the Merovingian Period. Otherwise, sign reduction in the East is attested on Roes (Gotland), but the dating of this stone is uncertain. In the southern regions, on the other hand, sign reduction could be attested from ca. 675 in numerous inscriptions. The earliest traces of character reduction could therefore come from the Danish regions, according to the relative chronology. In other words, without violating archaeological chronology or rune typology, one can claim that script transition started in southern Scandinavia.

4.2.8 Transition from the South in a sociocultural context

The social background of the transitional period supports this hypothesis and suggests in addition that script transition developed mainly in the rebuilding phase. Firstly, it is a plausible assumption that there was hardly any writing production during the crisis of ca. 150 years after AD 536. Moreover, the strong position of the southern areas (cf. chapter 1) with the concentration of power
and the development of towns and trading networks offered suitable circumstances for the occurrence of script change during the rebuilding phase. Finally, the early runestones from Jylland, Fyn and Sjælland connect to the numerous Danish runestones from the Viking Age. This Viking Age tradition thus seems to have started during the Merovingian Period. Hence, these stones might reflect the same sociocultural environment that formed the background for runic writing culture during the Viking Age. This would indicate an early increase of cultural production in these areas, with an advanced sociocultural transition, in turn stimulating script transition.

If script transition developed in the Danish areas during the rebuilding phase, that is, from ca. 700 onwards, the ‘older’ inscriptions from the West and the East can be interpreted more towards their latest possible dating. This works well for most of the corpus, but there are two northwestern inscriptions showing script transition with a LPD of 700 or earlier; the Strand fibula from Sør-Trøndelag (650–700) and the Setre comb from Hordaland (560/570–650). I am, however, inclined not to take these boundaries as absolute. The Strand fibula has an iconographic dating, a method the discussion on the Eggja horse has weakened. The Setre comb assumes the simultaneous deposition of certain objects. In both cases, therefore, there is room for a somewhat later dating.

Considering the language transition towards Old Norse, it is the expectation that during the crisis period significant changes already occurred. The corpus suggests that this led to inscriptions from the rebuilding phase onwards, at least in the Danish regions, with a much-altered language compared to the Proto-Norse inscriptions in the elder futhark. Still, language transition was not completed by then, as archaic forms on Ribe and even unsyncopated forms on the Rök stone after 800 (rune typological dating) indicate.\(^{32}\) Therefore, the situation is not black and white. The Norse language was subject to transition continuously, and archaic language forms with respect to Old Norse can be expected at any time during the transitional period, in all regions.

### 4.2.9 Remarks

One remark to the scenario in which the Danish regions developed script transition is that the language typology of the Blekinge inscriptions (all but the Sölvesborg stone are related to each other) is closer to Proto-Norse than in most other inscriptions. As these inscriptions are among the longest in the corpus, they are among the few inscriptions showing a clear language typology. The many unsyncopated forms would make it improbable that they are much younger than the earliest Danish inscriptions in the corpus. At the same time, the Blekinge stones show the runic innovation of \(\ddagger\) for \(\text{A}\). It is therefore possible that script transition started shortly after AD 536 or even slightly

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\(^{32}\) The Rök stone is discussed in more detail below.
before in the Blekinge area and was further developed later on in the Danish regions before it spread to the other areas. Alternatively, both language and script change accelerated in a later phase during the LALIA, in which case the Blekinge stones could be from the seventh century. If script transition indeed sprouted in a community in Blekinge, it is still plausible that the transition mainly developed in and spread from the central Danish areas, for the reasons outlined above.

4.2.10 The spread of transition and the Eggja stone
Applying this to the Eggja stone, it is improbable that the inscription originated before 700. It would take some time for the script transitions to reach this remote area. Besides, the presumed low runic activity during the crisis period clashes with the rich character of the inscription. Finally, in case the related Blekinge stones belong to the seventh century, the Eggja language must be considerably younger than that. When taking into account that the inner Sogn area is known for being conservative in language, the EPD boundary for the Eggja stone might easily be even younger than 700.

4.2.11 Variation within the relative chronology
The discrepancy on the Eggja stone between the advanced language transition and the early stage of the script transition suggests there might have been (regional) differences in the use of script typology. The theory of cultural adaptation, in which synchronic variation becomes of importance, supports this suggestion. Here, the question is whether the corpus of runic inscriptions fits into this new perspective of synchronic variation. This would support the hypothesis that transition spread from the South, and hence a younger dating for Eggja.

If variation is a significant, synchronic feature of the transitional period, the largely relative chronology of the runic inscriptions would not be very reliable. One way to test this reliability is to compare the linguistically dated inscriptions with the archaeologically dated ones, to see if the latter group shows the same development in language and script that is visible in the first group. However, the small volume of the corpus – of which the short and incomplete inscriptions (value 0 for representability) are left aside – obstructs this comparison. Especially the inscriptions within the archaeologically dated group are few, which means that their distribution through time can hardly be measured and percentages are not significant. Still, even though the results are not capable of falsifying the relative chronology, it is interesting to see that the relative chronology for language and script change neither is confirmed from an archaeological perspective. The temporal distribution of archaic script features will serve to illustrate this. Whereas the linguistically dated
inscriptions show fewer archaic script features in every EPD stage – 100% before 675, 78% between 675 and 699, 0% from 700 onwards – the archaeologically dated inscriptions evolve from 100% to 0% to 50%. Hence, archaeologically dated inscriptions follow to a lesser degree the expected language and script development suggested by the relative linguistic chronology. Once again, such results do not have much impact, but they might suggest that either rune and language typology, archaeological typology, or both, are ambiguous factors in dating runic inscriptions.

4.2.12 Variation within the runic inscriptions

Another way to test the reliability of the relative chronology is to study the level of variation in the corpus. The runic corpus reveals that variation in script typology was not uncommon. Script anomalies are found in 33–52% (15–24/46 inscriptions), in various regions and with varying dating. The most notable internal script variation is the simultaneous use of ᚥ (ㅿ) and ᚣ (ᚢ) for oral /ə/ in some inscriptions from Sjælland and Fyn. Hence, the variation between ㅿ and ᚢ is not per se diachronic. Other striking anomalies are some elder futhark signs in younger inscriptions. The Vester Egesborg comb (Sjælland), dated to 600–800 (archaeology combined with rune typology), uses the upward-facing ᵉ-rune Ṵ. This rune is said to be turned upside down in the Merovingian Period (Imer 2015b:43). Moreover, if one accepts a younger dating for the Roes stone (Gotland), the use of the ᵀ-rune is surprising. The lack of uniformity indicates that there was no one right way of writing runes. This is a problem for the principle of relative dating and raises the question whether rune typology always is a useful indicator for dating an inscription.

The transition towards a short-twig futhark supports the common status of variation. The only sign of the younger short-twig futhark appears in the transitional period on the Hallbjäns amulet (Gotland), but is combined with long-branch forms and possibly even the transitional ᚥ for ㅿ. Hence, Hallbjäns also adds to the discussion on the spread of transition. The short-twig futhark is typical for Swedish and Norwegian inscriptions in the Viking Age, whereas the Danish inscriptions are based on a long-branch futhark. The fact that the earliest short-twig sign appears in the easternmost region, supports the hypothesis that linguistic innovation generally did not start in the North-West.

Variation in language is more difficult to study than variation in script, considering the complexity of language and the limited information provided by the corpus. Still, when comparing the Eggja and Ribe inscriptions, both contain language forms that are archaic with respect to the other. Ribe testifies to the innovation nmr > ḏr in uipr (cf. Grønvik 1999:111), whereas on the Eggja stone mār is carved. But Ribe is also more archaic than Eggja in attesting to auk instead
of ok (uk on Eggja). Besides, also tiur on the Ribe cranium is an archaic form relating to Old Norse tyr, but there seems to be nothing in the Eggja inscription to compare this with. Combining the language forms with the social context underlying the spread of inscriptions, Eggja might therefore be simultaneous or even younger than Ribe, carved before the script transition had reached the inner Sognfjord.

An example from the early Viking Age shows that archaic features continued even after the Merovingian Period. The well-preserved, long inscription on the Rök stone from Östergötland (Sweden), already mentioned a few times above, is a striking example of variation concerning both language and script, and thus supports that Eggja could have a younger origin. The stone dates to 800–850, and contains archaic, of which some unsyncopated, language forms, such as sunu instead of sun, sitir instead of sitr, karur instead of gorr, and the appearance of h before r (Wessén 1958:76). Linguist Elias Wessén (1958:76) defined the language stage like the one on Eggja. In other words, if Rök indeed is from the ninth century, syncopation was not completed around 700, as is stated in handbooks (cf. Birkmann 2002:696), or at least not in the entire language area. The lack of unsyncopated forms on the Eggja stone would thus either imply that the monument is younger than the Rök stone, or that there is regional variation during the process of syncopation.

The rune typology of the Rök stone is remarkable. The largest part of the inscription is written in short-twig runes, but on the backside also the elder futhark runes are used: 24 signs before the graphic transformation, using hs and hr and some decorative forms (cf. Wessén 1958:16–17). It is disputable what the status of these older runes was, and the relation between rune forms and sound values is untraditional: the o-rune replaces u where one would expect a w-rune (e.g. hoar interpreted as hvar). The elder futhark runes might therefore have an unusual purpose. Nevertheless, one thing is clear: the elder futhark runes were known and used in eastern Scandinavia at the time when the Rök stone was carved. Considering that also the Eggja stone had a special context, placed beneath the earth surface with the runes facing down, it seems very well plausible that elder rune forms still were used after the development of a new runic script of sixteen signs.

4.2.13 Dating the Eggja stone
The runic corpus of the transitional period and the Rök stone as an example of a late period present elements that contradict the strict temporal distinction between the elder and the younger futhark. Variation within and between runic inscriptions contradict the principle of uniformity on which the relative chronology is based. This affirms the argument that script transition spread from the
South, allowing archaic western and eastern features to be simultaneous with southern innovation. As a result, there is a more flexible starting point for the dating of the Eggja stone. Next, if it linguistically makes sense to date Eggja younger than 700, a younger dating should not be rejected on rune typological grounds. In this regard, a certain level of variation in language forms is easily visible from the comparison of Eggja with the Ribe and Rök inscriptions. Combined with the sociohistorical background of the Merovingian Period, therefore, the survey motivates a dating to ca. 700–850. Earlier than 700 is implausible considering the ongoing crisis and the likely spread of language and script transition from the South. The rural character of the inner Sogn area, combined with the possibility that the language there indeed was conservative, could suggest that the EPD might easily be even younger, say 750. The demarcation to 850 derives from the dating of the Rök stone. Within the scope of this thesis, it is difficult to conclude on something more precise.
5. Conclusion

In this thesis, an attempt has been made to redefine the transitional period in runology from a broader sociocultural perspective. A reconsideration is motivated by the puzzling character of the Eggja monument. This work aimed to sort out the various dating arguments for Eggja and to conclude on the most plausible dating. At present, it is accepted by most scholars that the stone was carved 650–700. The broader perspective shows that, next to linguistic changes, also sociocultural changes occurred in Scandinavian communities during the Merovingian Period, characterised by crisis and rebuilding. After AD 536, a colder climate, crop failure, starvation and plague outbreaks probably caused a catastrophic decrease in population. When the population was growing again from the eighth century onwards, a new social structure was established. The concept of cultural adaptation allows the various coinciding transitions to be related. As such, the drastic language changes of the transitional period might have been motivated by this changing environment. Moreover, the new perspective leaves room for regional variation in the development of script and language, analogous to diverging sociocultural circumstances within the entire Nordic area.

As an absolute dating of Eggja is not possible, the analysis focussed, on the one hand, on a reinvestigation of the arguments which underlie the dating of Eggja. It turned out that none of the arguments are reliable in light of today’s research. This opens up to a more flexible dating with no reason to claim that Eggja originated before 700. Besides, the reinvestigation raised the question whether regional differences might influence rune, language, and art typology. Especially the comparison between the Eggja stone and the Ribe cranium illustrates this problem. On the other hand, a corpus analysis of the runic inscriptions dated to the transitional period explored the value of the relative chronology of runic inscriptions. With Eggja as a case study for the dynamics of the transitional period, the full corpus of runic inscriptions functions as a ‘sounding board’ for these dynamics. Hence, a survey of the spread of linguistic transition against the background of sociocultural circumstances can throw light on the origin of the Eggja monument. The results affirmed the criticism towards relative dating methods expressed in the analysis of the dating arguments. The distribution and character of the runic inscriptions within the corpus support the idea that language and script change mainly developed in the southern regions during the rebuilding phase (from ca. 700 onwards) and spread from there to the other areas. This distribution does not follow from the relative chronology.
The corpus analysis thus invites us to let go of the idea of a purely diachronic development. This has been suggested by others but has hardly been incorporated into research. Synchronic variation in language and script typology, as well as sociocultural differences, weaken the argument that the archaic script of the Eggja stone belongs to the earliest phase of the transitional period. Instead, considering the ongoing crisis and its cultural decline, in addition to the innovative character of the Danish regions and the conservative character of the inner Sognefjord, it is most likely that the Eggja monument originated during the rebuilding phase, so at least after 700. The rural, isolated character of the inner Sogn area provides a different context for cultural adaptation, and a later language and script transition might therefore be expected there than both in the South and the north-western areas closer to the coast. Considering the innovative language stage on the Eggja stone and at the same time archaic language features in both the Eggja, Ribe and Rök inscriptions, a dating up to 850 seems to be possible.

Future research could further develop the knowledge on the transitional inscriptions and perhaps narrow down the dating for Eggja. Ultimately, it remains difficult to make certain claims, not least when allowing for synchronic variation. If the relative chronology for runic inscriptions is unreliable, the corpus might not have reflected the circumstances accurately. It seems very well possible that some inscriptions included in this study in fact originated before 536 or after 800. Conversely, there might be inscriptions that originated during the transitional period but have not been included here because their present dating suggests something else. Further research could reconsider the relative chronology even more and propose a new dating for other inscriptions too. If that makes the corpus look different, it might alter the results presented here. Moreover, it would be particularly interesting to extend the analysis into the ninth century or the entire Viking Age. Transition continued after 800, and archaic features can still be encountered. In this thesis this is mainly illustrated by the Rök stone from Östergötland, where both archaic language and archaic script, i.e. pre-transitional features, are attested. Further research on these inscriptions in their sociocultural context could probe the plausibility of a dating for Eggja after 800. More in-depth research on regional differences in language typology is also needed. In this study, this has been dealt with rather superficially, considering its complexity.

As such, the incorporation of sociocultural circumstances in the understanding of the transitional period sheds new light on the Eggja monument. At the same time, the Eggja case contributes to reframe the transitional period. It has been the character of the stone itself ‘asking’ for this new framework. The ambiguity in the dating of Eggja illustrates how difficult it can be to date runic inscriptions or archaeological finds and suggests that the existing framework of typology and relative chronology is inadequate. This impacts our understanding of language and script
development in northern Europe, as well as our knowledge of how societies react to changes in their environment. It seems as if transition on one level triggers transitions on other levels too. Within the transitional dynamics of the period at stake, the radical language changes can be said to demonstrate the significance of the environmental shift. A changing climate is capable of disrupting societies – by altering its social organisation and power relations – and changing the worldview of people. This is reflected in a deeply transformed language.

The interdisciplinary approach of this thesis has thus proven to be fruitful. Combining dating attempts and perspectives from archaeology, iconography, runology, and linguistics shows that the individual disciplines benefit from each other, and even seem to be dependent on each other. This stimulates a more holistic way of studying the past.
Bibliography


Büntgen et al. 2016. “Cooling and societal change during the Late Antique Little Ice Age from 536 to around 660 AD.” Nature Geoscience 9, 231–237.


Appendices

Appendix 1. The runic corpus from the transitional period

The following tables show an overview of the data used in the corpus analysis. “Type of dating” lists archaeological (A) or linguistic (L) dating arguments on which the EPD and LPD are based. “L. represent.” and “S. represent.” indicate the representability for language respectively script. Language innovation is not specified, as nearly all inscriptions at least show syncopation (the one exception is the Rävsal stone, which is specified in chapter 3). Archaic language is specified with examples. The quantitative analysis regards the transitional period in language as one phase, not distinguishing between successive stages from Proto-Norse to (early) Old Norse. Instead, certain examples are highlighted in the qualitative analysis.

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Appendix 2. Collections

**Objects**

B Bergen

**Inscriptions**

KJ Krause & Jankuhn (1966)
N Norges innskrifter
DR Danske Runeindskrifter
NJy North-Jylland
SJy South-Jylland
Fyn Fyn
Sj Sjælland
Sk Skåne
Bh Bornholm
NOR Nytt om runer
U Uppland
G Gotland