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**Master's thesis
in Medieval Icelandic Studies**

Connections to the Monastery at Helgafell
Towards a Localization of AM 346 fol. Based on Production
Features

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ICELANDIC AND COMPARATIVE CULTURAL STUDIES

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Based on Production Features

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Ágrip

Það hefur verið tólmstundargaman fræðimanna í margar kynéðir að bera kennsl á hvenær og hvaðan handrit hafa komið. Það er engu öðru líkt þegar kemur að forníslenskum handritum og þá sérstaklega þeim sem til eru í klaustrinu á Helgafelli. Þessi ritgerð notar framleiðslueiginleika AM 346 fol. til að aukalega rannsaka tengsl þess við kjarnahandritahóp Helgafellshandrita. Með aðstoð Helgafellsverkefnisins og Stofnunar Árna Magnússonar er í þessu verkefni kafað ofan í eiginleika eins og götun, úrskurð, uppsetningu síðna og liti til að kanna hvort AM 346 fol. gæti passað inn í Helgafellshópinn. Með því að skoða framleiðslueiginleika þessara handrita fer þessi rannsókn út fyrir hefðbundnar staðsetningarrannsóknir, sem byggja fyrst og fremst á skrifarahöndum. Þar sem engar haldbærar ályktanir hafa verið gerðar með rannsóknnum fyrri fræðimanna í höndum skrifara sem tengjast AM 346 fol., notar þessi ritgerð nýrri hugmyndir og aðferðafræði til að efla hugsun á þessu sviði með því að skoða framleiðslueiginleikana. Þó að enn sé ekkert ákveðið svar við því hvort AM 346 fol. var unnin á Helgafelli, mun þessi ritgerð og rannsóknir í henni varpa ljósi á tengsl framleiðslueinkenna og veita öðru sjónarhorni til að skoða tengsl handrita.

Abstract

Identifying where and when manuscripts have come from has been a pastime of scholars for generations. The same is true of Old Icelandic manuscripts, in particular those created at the monastery at Helgafell. This thesis uses the production features of AM 346 fol. to further investigate the connection between it and the core group of Helgafell manuscripts. With the help of the Helgafell Project and the Árna Magnússon Institute, this project dives into features such as pricking, ruling, the layout of pages, and colors to examine if AM 346 fol. could fit into the Helgafell group. By looking at the production features in these manuscripts, this study goes beyond traditional localization research, which primarily relies on scribal hands. Since there have been no solid conclusions made with the research of past scholars in scribal hands related to AM 346 fol., by looking at production features this thesis uses newer ideas and methodology to further the thinking in this field. While there is still no definite answer to whether AM 346 fol. was produced at Helgafell, this thesis and the research therein highlights ties between the production features and provides another vantage point to look at connections between manuscripts.

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1. Introduction

Dozens of scholars have tried to identify where medieval Icelandic manuscripts were produced based on scribal hands alone. There are a few scholars, such as Stefan Drechsler and Lena Liepe, who have alternatively attempted to group and localize the Icelandic manuscripts from an art historical standpoint. However, the aim of this project is to specifically analyze AM 346 fol. in order to evaluate whether it could have been created at the monastery at Helgafell in Iceland, based on not only the scribes but also the production means used. The manuscript has been previously tied to Helgafell by scholars such as Guðvarður Már Gunnlaugsson where he includes AM 346 fol. in his scribal map of Helgafell.¹ Additionally, scholars such as Jón Sigurðsson have asserted that this manuscript was written by the same scribe that is found in other manuscripts hypothesized to have been written at Helgafell, creating a theoretical precedent for AM 346 fol. to have been produced at the same monastery.²

Sadly, many of the manuscripts that could have been used for comparison due to their likelihood of Helgafell production have been lost, as there was a large fire at the Helgafell monastery causing many manuscripts to burn in the fourteenth century.³ Burnt and otherwise unrecoverable sources are not the only loss scholars have to surmount when looking at Icelandic manuscripts, however, as there are many sources *about* the manuscripts that have been lost. Supporting documents and writing that would help scholars today better understand medieval book making processes are among the casualties of time and tragedy.⁴ What is extant, though, is the material features that manuscripts themselves preserve, and codicological analysis can reveal these traces of production. Throughout this project, I have examined AM 346 fol.'s production features in comparison to production features in other manuscripts commonly associated with the monastery at Helgafell, as discovered and recorded by the Helgafell Project ("Bókagerð í Helgafellsklaustri á fjórtánu öld"). The Helgafell Project is an interdisciplinary project with the goal to study books connected to that

¹ Guðvarður Már Gunnlaugsson. "Voru Scriptoria í Íslenskum Klastrum?". In *Íslensk Klausturmenning Á Miðöldum*, ed. Haraldur Bernharðsson and Viðar Pálsson, (Reykjavík: Miðaldastofa Háskóla Íslands, 2016), 173-200. Pg 195.

² "AM 346 fol.," Handrit.is, accessed July 6, 2022, <https://handrit.is/manuscript/view/is/AM02-0346/0#mode/2up>.

³ Gottskálk Jensson, "Bishop Jón Halldórsson and 14th-Century Innovations in Saga Narrative: The Case of Egils saga einhenda ok Ásmundar berserkjabana," In *Dominican Resonances in Medieval Iceland: The Legacy of Bishop Jón Halldórsson of Skálholt*, ed. Gunnar Harðarson, and Karl G. Johansson, (Leiden: Brill, 2021), 61.

⁴ Halldór Hermannsson, *Icelandic Manuscripts (Islandica XIX)*, (Ithaca: Cornell University Library, 1929), Pg 27.

monastery by researching them from many different standpoints, including textual, historical, and codicological research.⁵ By including scholars from a variety of different backgrounds, including textual scholars and linguists as well as manuscript scholars, the Helgafell Project is leading the way in manuscript and codicological research in Iceland.

One of my most valuable resources in this research has been the work of PhD candidate Lea Pokorny. Her findings about the production features at Helgafell have been crucial in my work comparing AM 346 fol. to these manuscripts. Pokorny's research, along with the whole Helgafell Project, is unique in codicological studies in Icelandic manuscripts, and I am extremely thankful for her help in this project. Due to the fact that Pokorny's research is still ongoing, many of the manuscript sources I have been using are ever-changing, and are not fully published. Thus, I have included the dates when I extracted my information from her data sets on the Helgafell Project website, so that if her findings change, my conclusions are still explained. The final data in regards to the production features of the manuscripts that Pokorny is working with will be published with her forthcoming PhD dissertation.

2. Previous Scholarship

It is valuable to clearly lay out the existing scholarly insights in the field and to use them to compare to the findings realized with production features. By including the insights of previous scholars, the manuscripts can be more securely grouped to any given location. The easiest way to see how scholars view AM 346 fol. is by looking at maps of scribal hands that they create. For example, Guðvarður Gunnlaugsson includes this manuscript in his article "Voru Scriptoria í ísklenskum Klaustrum?" as a connection to 19. Hand, which was connected to other manuscripts that were more tightly defined as Helgafell manuscripts. Thus, based on hands, Guðvarður believes that AM 346 fol. is a Helgafell manuscript. At the time of his writing, Guðvarður claims that only about 80 Icelandic manuscripts had been tied to a monastery with convincing arguments.⁶ This makes his analysis of AM 346 fol. particularly compelling, since he had studied so many manuscripts and was able to identify the hands from his other works.

⁵ "Bókagerð í Helgafellsklaustri á fjórtándu öld," Stofnun Árna Magnússonar, <https://www.arnastofnun.org/helgafell.html>. Accessed September 6, 2022.

⁶ Guðvarður Már Gunnlaugsson, "Voru scriptoria í íslenskum klaustrum?." Pg 194.

Stefan Drechsler, in his article “Illuminated Manuscript Production in Western Iceland in the Thirteenth and Early Fourteenth Centuries,” labels AM 346 fol. as part of the Barðastrandarsýsla group.⁷ While this does not directly mean that Drechsler is arguing that this manuscript was produced at Helgafell, he does argue for clear ties between it and the area. By looking at hands and artistic features, such as colors and shapes used in initials, Drechsler does argue that there is significant overlap between the Barðastrandarsýsla group and scribes at Helgafell. He argues that despite the Barðastrandarsýsla group being mainly located in the Westfjords, not Snæfellsness, the traveling artistic groups and scribes meant that things could be produced by larger groups of people from all over, including the scribes usually situated at one location, such as Helgafell. According to Drechsler, the Barðastrandarsýsla group and Helgafell were closely related and had lots of artistic and scribal contact, due to “the practice of labour exchange in the rural society of medieval Iceland.”⁸ Therefore, Drechsler's research can be used to support the hypothesis that AM 346 fol. was written around Helgafell, potentially by the same people who were the main scribes and illuminators at the Helgafell monastery.

Despite all of Lena Liepe's work on the subject of the Helgafell manuscripts as an art historian, she does not make a formal statement about whether or not she believes AM 346 fol. to have been produced at Helgafell. While Guðvarður and Drechsler both include AM 346 fol. in their respective hand charts, Liepe does not do the same. Her research focuses more on other manuscripts and how they relate to each other and the Helgafell group. While her research is important to the nuances of AM 346 fol. and the stylistic choices therein, this manuscript is left out from her formal opinion.

Scholars such as Liepe and Drechsler have been looking beyond the scribal hands into the illuminations and marginalia of Icelandic manuscripts. These two art historians have specialized in Helgafell manuscripts, allowing this project to compare the marginalia and illuminations from AM 346 fol. to other Helgafell illustrations. While Liepe and Drechsler also consider the scribal hands in Helgafell manuscripts, they also attempt to distance themselves from the traditional manuscript identification based solely on hands by also examining things such as use of color, layout, and shapes. Liepe highlights the importance of looking beyond the text by saying “[i] markant kontrast till den väl utvecklade och i högsta grad pågående forskningen om texternas

⁷ Stefan Drechsler, “Illuminated manuscript production in western Iceland in the thirteenth and early fourteenth centuries,” *Gripla XXVIII* (2017). Pg 178.

⁸ Drechsler, “Illuminated manuscript Production in Western Iceland.” Pg 185.

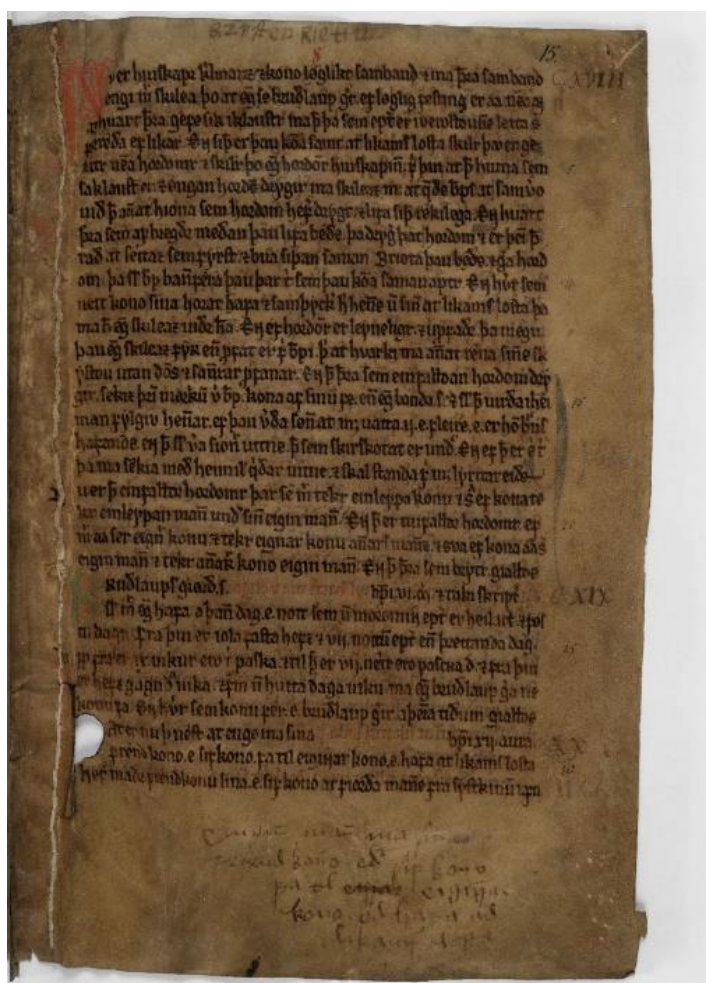


Figure 1: A clear example of writing added later, on f. 8r of AM 346 fol. Photo from handrit.is.

form och innehåll, är påfallande lite gjort i frågan om bokmåleriet,”⁹ (“[i]n marked contrast to the well-developed and highly ongoing research on the form and content of the texts, strikingly little has been done in terms of book painting.”) Liepe includes the ‘form’ of the Helgafell manuscripts among the well-developed research that has been done, but the production of AM 346 fol. and other Helgafell manuscripts have much to be discovered. Additionally, in his chapter “Early Printed Books as Material Objects,” Wolfgang Undorf argues that fragments of aesthetically pleasing things, such as illuminations, are more likely to survive than “boring” things.¹⁰ While I agree that the text is most commonly studied, this is perhaps due to the availability of digitized versions of the

manuscripts, which allow for remote textual studies and analysis. Digitalizing the manuscripts can lead to discoloration, making studying the illuminations more difficult than looking at script.¹¹ It seems likely that the manuscripts and manuscript fragments that are preserved are more visually pleasing, than the less pretty ones which were “sacrificed” when needed. Due to the increase in online presence of manuscripts and other resources it is possible to study the physical script from a distance, without the

⁹ Lena Liepe, “Bild, Text Och Ornamentik I Isländska Handskrifter Från 1300-Talet,” *Kunst og kultur* 90, no. 2, 113-25 (2007). Pg 113.

All translations herein are my own.

¹⁰ Wolfgang Undorf, “The Idea(l) of the Ideal Copy: Some Thoughts on Books with Multiple Identities,” in *Early Printed Books as Material Objects: Proceeding of the Conference Organized by the IFLA Rare Books and Manuscripts Section Munich, 19-21 August 2009*, ed. Bettina Wagner and Marcia Reed, (Berlin: De Gruyter, 2010) 307-19. Pg 112-4.

¹¹ L. W. C. van Lit, *Among Digitized Manuscripts: Philology, Codicology, Paleography in a Digital World*, Handbook of Oriental Studies. Section 1 The Near and Middle East, vol: 137, (Leiden and Boston: Brill, 2020). Pg 67-8.

same on-hands needs as production features often call for. In addition, there has been much more scholarship on the importance of matching scribal hands and how this leads to conclusions in localization and grouping. Marginalia and illustrations do occur in AM 346 fol., both of which can be used to help localize the manuscript. Some of the writing was clearly added later than the original script. On f. 8r (figure 1), for example, there is a different style of writing at the bottom of the page as well as in the right margin.

The Monastery at Helgafell

Helgafell is located on the Snæfellsness peninsula in Western Iceland, North of the Reykjanes peninsula and South of the Westfjords. The monastery located at Helgafell (Helgafellsklaustur) was founded in 1186 and operated until 1554.¹² While it was relatively poor when it started, monk-turned-abbot Ásgrimur Jónsson raised significant amounts of money for the monastery around 1377, mainly by acquiring land.¹³ There were, at one point, around 120 books at Helgafell, a large number for a monastery of the fourteenth century. Hermann Pálsson states that just under one hundred of those were Latin, while the other approximately thirty-five were Nordic books.¹⁴ Herman also states that the number of books at Helgafell was a clear way to show off its newfound wealth.¹⁵ Despite the sheer amount and variety of books found at Helgafell, Helgafell is not known to be the richest Icelandic monastery; scholars Scott Riddell and his colleagues give that title to Þingeyraklaustur in Northern Iceland.¹⁶

It has been widely assumed that all medieval Icelandic manuscripts were written in monasteries of some sort, which is not necessarily true.¹⁷ Early scholars such

¹² Sverrir Jakobsson, "Frá Helgafellsklaustri til Stapaumboðs," in *Íslensk klausturmenning á miðöldum*, ed. Haraldur Bernharðsson and Viðar Pálsson, 83-102, (Reykjavík: Miðaldastofa Háskóla Íslands, 2016). Pg 83.

¹³ Sverrir Jakobsson, "Frá Helgafellsklaustri til Stapaumboðs." Pg 90.; Janus Jónsson, "Um Klaustrin á Íslandi." In *Tímarit Hins íslenzka bókmenntafélags*, 8. árgangur 1887, ed. (Reykjavík: Hið íslenzka bókmenntafjelag, 1887) 174-265. Pg. 231

¹⁴ Hermann Pálsson, *Helgafell : saga höfuðbóls og klausturs*, Snæfellsnes ; 2, (Reykjavík: Snæfellingaútgáfan, 1967). Pg 133.

¹⁵ Hermann Pálsson, *Helgafell : saga höfuðbóls og klausturs*. Pg 60.

¹⁶ Scott J. Riddell et al., "Pollen, Plague & Protestants: The Medieval Monastery of Þingeyrar (Þingeyraklaustur) in Northern Iceland," *Environmental archaeology : the journal of human palaeoecology* 27, no. 2 (2022).

¹⁷ Guðvarður Már Gunnlaugsson, "Manuscripts and Palaeography." in *A Companion to Old Norse-Icelandic Literature and Culture*, ed. Rory McTurk, 245-64 (Oxford: Blackwell Publishing Ltd, 2004), Pg 251-2; Stefán Karlsson, "Íslensk Bókagerð Á Miðöldum," in *Stafrókar : ritgerðir eftir Stefán Karlsson gefnar út í tilefni sjötugsafmælis hans* 2. desember 1998, ed. Guðmundar J. Guðmundsson, (Reykjavík: Stofnun Árna Magnússonar á Íslandi, 2000). Pg 293.

as Lars Lönnroth are among the academics who perpetuated this idea.¹⁸ Even in Iceland there were laymen who were literate and could, and did, write manuscripts. After a plague in 1402 monasteries declined in importance to bookmaking in Iceland.¹⁹ As AM 346 fol. has been dated to before this widespread disease, it is valuable to better understand the importance of monasteries and monks in Icelandic bookmaking. While not all manuscripts pre-plague were written in monasteries, there tended to be production sites, where many manuscripts could be more easily produced due to the centrality of labor such as by monks.²⁰ Limited literacy as well as the steep price of vellum are two reasons why book production in Iceland is primarily associated with ecclesiastical locations.²¹ On the other hand, scholars such as Stefán Karlsson have still attributed some manuscripts to the farm Möðruvellir, not the monastery.²² The abundance of vellum and time are also two factors that could have contributed to the rise of manuscript-making culture in Iceland.²³

Hermann Pálsson proposes that monks at Helgafell would make manuscripts so that they could be sold to create income for the monastery.²⁴ Other scholars have argued that making books was a way to have sins forgiven, and monks would undertake book making as a way to attain spiritual forgiveness, whereby the labor and words written would help cleanse their souls.²⁵ It has even been argued that the monks at Helgafell were creating manuscripts to be sold to Norway.²⁶ Stefán Karlsson uses the inclusion of Norwegian spellings and letters in manuscripts written at Helgafell as evidence that the monastery was exporting books. In fact, Stefán references a hypothetical effort undertaken by the scribes creating books in Iceland in which they attempt to create a written language that can be read by “öllum löndum Norgskonungs,” (“all the land under the Norwegian king”). However, the validity of a blended Icelandic-Norwegian language (post Classical Old Norse) is not necessarily

¹⁸ Stefán Karlsson, “Íslensk bókagerð á miðöldum.” Pg 293.

¹⁹ Stefán Karlsson, “Íslensk bókagerð á miðöldum.” Pg 294; Lena Liepe, *Studies in Icelandic fourteenth century book painting*, Snorrastofa. Rit ; 6, (Reykolt: Snorrastofa, 2009). Pg 115.

²⁰ Guðvarður Már Gunnlaugsson, “Voru scriptoria í íslenskum klaustrum?,” Pg 194.

²¹ Jónna Louis-Jensen, “Frontiers. Icelandic manuscripts,” in *Frontiers in the Middle Ages: Proceedings of the Third European Congress of the Medieval Studies* 477-482, (Jyväskylä, 10-14 June 2003). ed. O. Merisalo, and P. Pahta, (Louvain-La-Neuve: Brepols, 2006), Pg 480.

²² Liepe, *Studies in Icelandic fourteenth century book painting*. Pg 115.

²³ Louis-Jensen, “Frontiers. Icelandic manuscripts,” Pg 477-8.

²⁴ Hermann Pálsson, *Helgafell : saga höfuðbóls og klausturs*. Pg 142.

²⁵ Michael Gullick, “How Fast did Scribes Write?” in *Making the Medieval Book : Techniques of Production: Proceedings of the Fourth Conference of The Seminar in the History of the Book to 1500*, Oxford, July 1992, ed. Linda L. Brownrigg, (Los Altos Hills: Anderson-Lovelace Publishers, 1995), Pg 41.

²⁶ Stefán Karlsson, “Helgafellsbók í Noregi” in *Opuscula 4* (1970). 347-9 (Reykjavík: Bibliotheca Arnarnaghnæana). Pg 349.

provable, due to the fact that many more manuscripts were lost in Norway than were lost in Iceland, and Stefán himself argues against it at points in his career.²⁷

Guðvarður Már Gunnlaugsson goes as far as to say that it was likely that Icelandic monasteries such as Helgafell included *scriptoria*, even if they were just a room, that were dedicated specifically to manuscript making.²⁸ Guðvarður points to the fact that there seems to have been so many different stories written at Helgafell in a short time as evidence for Icelandic *scriptoria*, that the scribes must have worked together to create such a variety.²⁹ Indeed, “Helgafell var tengt við sagnaritum frá upphafi fræðaiðkana á Íslandi,” (“Helgafell was associated with historiographies from the beginning of scholarly practice in Iceland,”) having scholars such as Ari fróði (“the learned”) Þorgilsson grow up there.³⁰ Hermann argues that monasteries in Iceland were multi-tooled places, operating as centers for farmers, as well as for cultural activities such as book making and places where monks could engage in more godly pastimes. Riddell, on the other hand, says that “monasteries in Iceland were little more than retirement homes for the wealthy.”³¹ In some ways, the creation of manuscripts at Helgafell was a cyclical way of creating and displaying wealth within the monastery. Assuming that the monks were creating the manuscripts for income to the monastery, and the books were a way to show wealth, no matter how the manuscripts were used, sold, or displayed, they were there to create status for Helgafellsklaustur.

²⁷ Norwegian changed more quickly than Icelandic, and so the older texts were harder for modern audiences to read, and the original manuscripts were repurposed. On the other hand, P. A. Munch argues that the scribes’ Icelandic hands could just be a result of Icelanders being used as production copiers, not that they had any real say in what they were making to send to Norway. For future research it will be worthwhile for scholars to look into the production features of different manuscripts and see how they compare with intention tied to the production. In the sixteenth century, there was a push to distinguish between Norwegian and Icelandic-made manuscripts, and much scribal hand comparison was done at that time. The base idea of studying production to understand more about Iceland and why they produced manuscripts, as opposed to Norway as well as compared to each other, can be expanded on when we look at why they were produced. If they were being produced to be sold, it seems likely that they could be of lesser quality than if they were made to repent for sins. The production features could help reflect how much time and effort was being put into each manuscript.

Stefán Karlsson. “Íslandsk Bogeksport Til Norge I Middelalderen.” In *Maal Og Minne*, (Oslo: Novus Forlag, 1979). Pg. 1

²⁸ Guðvarður Már Gunnlaugsson, “Voru scriptoria í íslenskum klaustrum?,” Pg 188.

²⁹ Guðvarður Már Gunnlaugsson, “Voru scriptoria í íslenskum klaustrum?,” Pg 188.

³⁰ Hermann Pálsson, *Helgafell : saga höfuðbóls og klausturs*. Pg 133.

³¹ Riddell et al., “Pollen, Plague & Protestants.” Pg 1.

3. Theory and Methodology

Theory

One major theory that needs to be considered when discussing the origin location of any made object, is M. A. Michael's Theory of Constant Place.³² This theory assumes that the manuscript, in this case, has been worked on in a single place by many people. On the contrary, it would be possible for clear lines to be drawn to and from a single illuminator or scribe, but the Theory of Constant Place allows for more artistic and literary influences to be accounted for. This theory also allows for a better understanding of the manuscripts if, for example, the illustrations were done hundreds of years after the text was written.³³ Constant Place allows for scholars to connect manuscripts to production sites through similarities in the manuscripts. Of course, the connection is stronger the more links between the manuscripts, and so scholars look for not one but many connections to the Constant Place that they feel fits their object. Michael specifically looked at the construction of the English Gothic manuscripts he was studying when developing his theory of Constant Place, and so it clearly applies to the construction and grouping of AM 346 fol. and Helgafellsklaustur.

Patrick Conner also brings up an important theory, which is the Theory of Matched Hands.³⁴ While Conner does talk about the recurring ideas of matching scribes based on orthographic features, he additionally analyzes the potential for scribes to have astonishingly close handwritings, making it near impossible, if not impossible, for modern scholars to tell the difference. Conner discusses "*habitus*" which he describes as a "starting point for examining cultural production of the sort that matched hands imply."³⁵ *Habitus*, as Conner means it, is the idea that all scribes trained at the same location would have been taught exactly the same and would thus have nearly identical writing styles. The cultural production in question is the monastery or production center in which the scribes are learning to produce manuscripts. According to Conner, monastic tradition helped create what he, and other social theorists, call "a community of practice," in which the scribes identified with each other and were thus able to better connect to the work and become better at it. The

³² M. A. Michael, "Oxford, Cambridge and London: Towards a Theory for 'Grouping' Gothic Manuscripts," *Burlington magazine* 130, no. 1019 (1988). Pg 108; Liepe, *Studies in Icelandic fourteenth century book painting*. Pg 158.

³³ Michael, "Towards a Theory for 'Grouping' Gothic Manuscripts." Pg 109-10.

³⁴ Patrick W. Conner, "On the Nature of Matched Scribal Hands," in *Scraped, Stroked, and Bound: Materially Engaged Readings of Medieval Manuscripts*, ed. Jonathan Wilcox, 39-73, (Turnhout: Brepols, 2013). "On the Nature of Matched Scribal Hands." Pg 43.

³⁵ Conner, "On the Nature of Matched Scribal Hands." Pg 46.

Theory of Matched Hands is not about connecting several manuscripts to one scribe, or matching a scribe with all their work; it is instead about matching scribes to other scribes with similar enough handwriting. By matching scribes to each other, scholars can reveal communities who worked or trained together. Creating communities allows for more threads to be connected and for the possibility for localization to occur. For example, by looking at manuscripts containing a certain shape of f, a group of manuscripts that were likely created by a community who knew of each other's style or were perhaps taught by each other is formed. Due to the fact that there are several variations on how the letter f can be formed, paleographers can pick out how groups of scribes wrote it, thus creating a way to tie manuscripts together. By focusing on the communities that made manuscripts instead of the individual scribes, scholars can better understand the entire manuscript making process.

The Theory of Matched Hands can also be applied to other aspects of manuscript production. By looking at how different manuscripts were made we can compare them and extrapolate whether or not it seems feasible that they were made at the same location. By using this theory, we assume that those producing the manuscripts used the same method to produce multiple manuscripts, that they had a system that worked and that they stuck to. By looking at the pricking marks on AM 346 fol. and comparing them to other manuscripts' pricking marks, we can see if they used the same tools to prick each sheet of vellum. If they used the same tools, it is more likely for the manuscripts to have been made at the same location. The same sentiment can be applied to ruling. In AM 346 fol. there is only dry ruling. If there is another manuscript that only has lead ruling, then it would seem less likely that they were made at the same location based on differences in production. However, many manuscripts carry an abundance of types of production features. As will be discussed below, AM 346 fol. has, for instance, several types of pricking marks, which means that there needs to be other strong evidence tying it to Helgafell to consider it localized. In fact, the variations in pricking can also be a clue as to where the manuscript was produced. The same ideas can also be applied to the number of columns, what colors of ink, and the text areas used when creating these manuscripts.

In addition to seeing non-contemporary evidence as potentially worrisome for scholars, Webber finds localizing manuscripts based on contents to be "treacherous."³⁶ Not only does localizing based on contents disregard the frequent changes of hands

³⁶ Teresa Webber, "Where Were Books Made and Kept?," in *The Cambridge Companion to Medieval British Manuscripts*, ed. Orietta De Rold and Elaine Treharne, (Cambridge: Cambridge University Press, 2020). Pg 224.

that books were under, but it also minimizes a community to one interest, when in fact that was probably not the case. There is the possibility that because manuscripts needed to be copied from one another they were made in close proximity to other manuscripts of the same content, but because each manuscript is an archive in its own sense, they could be filled with different stories and texts.³⁷ In addition, each manuscript was commissioned and so the future owner would get to dictate what would be in the manuscript, unlike modern producers who, when given a book to print, decide a number of copies and make many of the same. On the other hand, there are some values to looking at contents when localizing manuscripts. For example, Hermann Pálsson argues that because both *Laxdæla saga* and *Eyrbyggja saga* mention Helgafell and the surrounding areas in detail, and because their manuscripts have similar age that they were likely created around Helgafell, even around the same time.³⁸ Of course, these are not the only things used when localizing the manuscripts, and they are almost like an afterthought when comparing the two. Content can thus be an indicator of location that the original manuscript was made, but should not be the basis for major conclusions.

In their book, Patrick Andrist, Paul Canart, and Marilena Maniaci discuss how studying a manuscript is akin to studying archaeological stratigraphy.³⁹ Scholars must look at how each part of the manuscript fits together and how they date relative to each other. They argue that “[l]a complexité du manuscrit est elle aussi une notion complexe,” (“[t]he complexity of the manuscript is also a complex notion,”) and even encourage future scholars, and readers of *La syntaxe Du Codex* to revise the system they set forth to further understand the complexity and nuance of each manuscript.

Manuscript scholars must look at every aspect of the manuscript and how they relate to one another. Erik Kwakkel in his article “Towards a Terminology for the Analysis of Composite Manuscripts,” look specifically at different types of compiled manuscripts and analyzes the difference between manuscript parts such as production units and considers the historical usage of any given part.⁴⁰ Taking one production feature on its own is not substantive for the study of the whole manuscript and its localization; production features must be taken into consideration together to provide fruitful hypotheses. Paleographers and codicologist Teresa Webber drives home this

³⁷ Van Lit, *Among digitized manuscripts*. Pg 17.

³⁸ Hermann Pálsson, *Helgafell : saga höfuðbóls og klausturs*. Pg 134-6.

³⁹ Patrick Andrist, Paul Canart, and Marilena Maniaci, *La syntaxe du codex : essai de codicologie structurale*, *Bibliologia*, 34, (Turnhout: Brepols, 2013). Pg 3.

⁴⁰ Erik Kwakkel, "Towards a terminology for the analysis of composite manuscripts," *Gazette du livre médiéval* 41, no. 1, 12-9 (2002). Pg 14.

same point, saying “[a]ny explicit form of evidence of place of production or subsequent location in any kind of composite manuscript must therefore only be applied to those elements of the manuscript that were structurally united at the time from which that evidence itself dates.”⁴¹ In other words, Webber wants scholars to be wary of trying to use evidence that is not indicative of the entire manuscript as a way to localize the whole book. The later-added foliation in AM 346 fol. is an example of the expanded production that Kwakkel and Webber were warning scholars to be wary of. Stefán Karlsson includes an example of a multi-production unit manuscript from Helgafell in his article entitled “Helgafellsbók í Noregi.” In this article, Stefán argues that some manuscripts that have been produced at Helgafell contain quires that were actually made in Norway, and thus are not able to be tied securely to Helgafell.⁴² By studying these “foreign” quires, we are able to more fully understand the motives behind manuscript production at Helgafell and see why certain production features might have been taken. This is also closely related to the previously discussed intentions of manuscript production: the potential that scribes and monks were making them to sell to Norway.

As is laid out in the following sections, there is a great deal of variation between the production features of manuscripts connected to Helgafell. This variation can be viewed in a negative or positive light by those searching to localize manuscripts such as AM 346 fol. In one sense, there are not yet any distinct patterns that can be applied to every manuscript to see if it was created at one location. If, for example, scholars had found that every manuscript known to be created at Helgafell used the same exact ruling and number of lines per page, it would be significantly easier for them to determine if a manuscript had been produced there. Unfortunately, other than the two main scribes ascribed to Helgafell, there is no such pattern yet found. Even if a pattern is found, it must be taken with a grain of salt. Occurrence of the same scribal hands or illuminators in multiple manuscripts can point to a production center, but only if they are repeated with consistency to each other as well as the other production features.⁴³

On the other hand, a lack of pattern allows for more creativity in connecting manuscripts to production spaces. Since there are many different ways that the manuscripts connect, some have the same colors while others have the same pricking marks, it is a matter of weighing the production features’ values against each other to determine whether or not it seems likely to have been produced at the same place.

⁴¹ Webber, “Where Were Books Made and Kept?.” Pg 216.

⁴² Stefán Karlsson, “Helgafellsbók í Noregi.” Pg 348.

⁴³ Webber, “Where Were Books Made and Kept?.” Pg 215-6.

Despite Hermann Pálsson's claim that "[h]andrit frá Helgafelli eru gerð af stakri vandvirkni, fagurlega reituð og smekklega skreytt,"⁴⁴ ("manuscripts from Helgafell are made with unique meticulousness, beautifully written and tastefully decorated,") these features are not unique enough for easy identification.

Localization

While looking at scribal hands, and thus who wrote which manuscripts, can lead to some localization, it is known that scribes often moved around from one location to the next.⁴⁵ Not only does the movement of scribes influence the location of the manuscripts, but makes it so researching hands is not the most reliable method in discovering the history of manuscripts. In addition, changes in script can be a result of other factors, not only from different scribes being at work. As Patrick Conner argues in his article "On the Nature of Matched Scribal Hands," changing scripts can also be due to a new pot of ink, a new or recut quill, or even something as simple as a more difficult passage causes the scribe to change the rhythm of their writing.⁴⁶ There has also been research done on whether scribes could write in many different styles, depending on what the book owner wanted.⁴⁷ If several manuscripts were written by the same scribe, but no one is able to pinpoint where any of them were made, there is no localization, only grouping of what said scribe has worked on.

Manuscript localization has been discussed by many scholars, and yet it continues to be studied and fretted over. In his work "The Idea(l) of the Ideal Copy: Some Thoughts on Books with Multiple Identities," Wolfgang Undorf highlights the fact that there are other important features in any manuscript, that the history does not necessarily need to be complete for it to be studied and cherished. He also acknowledges the limits of localization, saying that time and ownership changes can all have influences on a manuscript, not just the place of origin.⁴⁸ Currently, the lack of known and understood history can even be seen as part of the reception of AM 346 fol. We regard this manuscript in a certain light due to the mystery of its past and how little we concretely know about it. On the other hand, by more fully understanding its history, such as where the manuscript was produced, we can more fully appreciate the object as a historical object itself. Even as far back as the 1960's, scholars were

⁴⁴ Hermann Pálsson, *Helgafell : saga höfuðbóls og klausturs*. Pg 142.

⁴⁵ Jón Helgason. *Handritaspjall*. Reykjavík: Mál og menning, 1958. Pg 18.

⁴⁶ Conner, "On the Nature of Matched Scribal Hands," Pg 40-1.

⁴⁷ Stefán Karlsson, "The Localization and Dating of Medieval Icelandic Manuscript," in *Saga-Book*. Vol. XXV, (Exeter: Short Run Press, 1999). Pg. 146.

⁴⁸ Undorf, "The Idea(l) of the Ideal Copy," Pg 308.

questioning why we care so much about localizing manuscripts. Ólafur Halldórsson, for example, writes that perhaps we look for the source because so frequently there is no known author tied to these manuscripts, and so we desire a deeper connection to the text and its creation.⁴⁹

In his article “Íslensk Bókagerð á Miðöldum” Stefán Karlsson briefly looks at the library at Skálholt, and how it was assumed that the manuscripts Árni Magnússon retrieved from therein were originally made there just because that’s where they remained.⁵⁰ Stefán argues that, like Helgafell, there was a fire that destroyed many of the manuscripts that were housed at Skálholt, which meant that the library had to be replenished. Thus, we can not assume that the manuscripts that remained there were originally produced there. The same goes for AM 346 fol. and Helgafell. While this manuscript was not retrieved by Árni from Helgafell, it is important to consider the possibility that these biases may lie in the other manuscripts that are supposedly from Helgafell.

Not only does determining where manuscripts came from help us have a better understanding of scribal culture and Icelandic literary culture, as well as being able to connect more fully with it, but it also helps us with Icelandic genealogy and creating a more cohesive narrative of the country’s history.⁵¹ By creating a map of where different manuscripts were created, scholars can more clearly visualize what parts of the country were interested in different things. A map similar to this has been created, it is called the *Handritakort Íslands*, but it is not as fully fleshed out as it could be for research purposes.⁵² This map consists of basic information about the location and importance of the places where manuscripts are known to have been produced. Additionally, it lists a few of the manuscripts that have been localized to each site.⁵³ If we were to add production features to this map, we could further secure any bonds that exist between production features and types of manuscript. Returning to the prospect of whether production sites can help scholars determine the interests of medieval Iceland, perhaps if, let’s say, the Western monastic groups were creating largely legal texts while the Southern ones were writing King’s sagas, then we could extrapolate that the West was

⁴⁹ Ólafur Halldórsson, *Helgafellsbækur fornar*, Studia Islandica = Íslensk fræði, 24, (Reykjavík: Heimspekideild Háskóla Íslands og Bókaútgáfa Menningarsjóðs, 1966). Pg 8.

⁵⁰ Stefán Karlsson, “Íslensk bókagerð á miðöldum.” Pg 293.

⁵¹ Stefán Karlsson, “Medieval Icelandic Manuscript.” Pg 139.

⁵² Guðvarður Már Gunnlaugsson, *Handritakort Íslands = Det islandske håndskriftkort = Manuscript map of Iceland = Die isländische Handschriftenkarte*, (Reykjavík: Mál og menning, 2013).

⁵³ Guðvarður Már Gunnlaugsson, *Handritakort Íslands*.

the law writing group while the South was interested in history, allowing those questions to be explored more fully.

By studying where manuscripts came from, we are also able to create a fuller linguistic history of the country.⁵⁴ While this is more difficult to do by looking at manuscripts, which are easily moveable objects, by localizing where they were produced and transcribed, we can potentially see local dialects. Major challenges arise when looking at Icelandic dialects, of course, being a communicative country (annual Þing meetings, for example) as well as the general lack of manuscripts. There is also the added trouble of differentiating between local dialect and overall language changes. On top of these challenges, the manuscripts are heavily abbreviated, making looking into the original orthographic spellings of specific words challenging, and thus pronunciations. Scribes often spelled things differently from themselves a few pages earlier, never mind other scribes. The added complication of spelling and abbreviation makes looking at linguistics through text even harder than it already is.

Grouping

“Grouping” is a common way to examine manuscripts that have similar features. It is important not only because it allows us to localize manuscripts, but also because, according to Ezio Ornato “jafnvel þótt sérhverft handrit sé einstakt eiga handrit sem hópur sér samkenni sem hægt er að rannsaka í því skyni að einhverju um tæknilegar og hugmyndalegar forsendur þess að þau urðu til og gátu orðið til”⁵⁵ (“even though each manuscript is unique, manuscripts as a group have shared characteristics that can be researched in order to find out something about the technical and conceptual basis for their creation and how they came into being). In other words, by looking at each unique individual manuscript as part of a bigger whole, we are able to see common threads that would not be visible by looking at the one manuscript alone. In addition, by looking at groups of manuscripts Már Jónsson is arguing that scholars can see more clearly the intention behind creating them. As previously discussed, examining the manuscripts in groups also helps to further define what each group is. In addition to comparing manuscripts to their own group, it is vital to be able to compare them to manuscripts in other groups so that we can see not only how they are similar, but also how they are different. As scholars Orietta Da Rold and Marilena Maniaci say in their article “Medieval Manuscript Studies: A European Perspective,” “comparing practices

⁵⁴ Stefán Karlsson, “Medieval Icelandic Manuscripts,” Pg 139.

⁵⁵ Ornato, Ezio, Birgisdóttir Björg, and Jónsson Már. *Lofræða Um Handritamergð*, Pg 7.

and phenomena belonging to different book cultures brings out similarities and differences and enables scholars to hypothesize and define, wherever possible, the reasons for book production,” showing that not only the similarities between manuscripts, but also the differences from other groups help to identify the history and understand why and how manuscripts were produced.⁵⁶

There are sixteen manuscripts⁵⁷ that are generally considered to be the “core Helgafell group,” and they contain texts of various topics including “copies of the Icelandic law book *Jónsbók*, saints’ sagas, bishops’ sagas, kings’ sagas, and the Old Testament translation *Stjórn*.”⁵⁸ They are also considered the core group because they have the same two scribal hands in early production units and date to around the same time period: the second half of the fourteenth century. AM 346 fol. follows along in this pattern, containing *Jónsbók* along with other law texts, but is dated slightly earlier, to the middle of the 14th century.⁵⁹ The idea of a “Helgafell Group” was first introduced in 1966 by Ólafur Halldórsson, in his book *Helgafellsbækur fornar*.⁶⁰ As discussed above, Drechsler identified AM 346 fol. as part of the Barðastrandarsýsla group, contrary to the many who have identified it as part of the Helgafell group.⁶¹ Drechsler came to this conclusion based on art historical analysis.

The group of manuscripts associated with Helgafell has been adapted and refined by scholars since, some going as far as to call it “possibly the most impressive group of vernacular Icelandic manuscripts from the fourteenth century.”⁶² Ólafur spends a large portion of his text examining the hands of several manuscripts and comments on how they relate to both Helgafell and Skarð, another medieval manuscript production site.⁶³ However, Ólafur was largely hesitant to say that any

⁵⁶ Orietta Da Rold, and Marilena Maniaci, “Medieval Manuscript Studies: A European Perspective,” in *Writing Europe, 500-1450: Texts and Contexts*, ed. Aidan Conti, Orietta Da Rold, and Philip Shaw, (Cambridge: Boydell & Brewer, 2015). Pg 11.

⁵⁷ While Most estimates are around 16 manuscripts, in Guðvar Már Gunnlaugssons article “Voru scriptoria í Íslenskum Klastrum?” he claims that there were between 20 and 25 manuscripts written at Helgafell in the middle of the 14th century.

Guðvarður Már Gunnlaugsson, “Voru scriptoria í íslenskum klastrum?.” Pg 187.

⁵⁸ Lena Liepe, “Image, text and ornamentation in the ‘Helgafell’ manuscripts,” in *From Nature to Script: Reykholt, Environment, Centre and Manuscript Making*, ed. Helgi Þorláksson and Þóra Björg Sigurðardóttir (Reykholt: Snorrastofa, 2012). Pg 246.

⁵⁹ “AM 346 fol.,” Handrit.is, accessed July 6, 2022, <https://handrit.is/manuscript/view/is/AM02-0346/13#page/4v/mode/2up>.

⁶⁰ Ólafur Halldórsson, *Helgafellsbækur fornar*. Pg 56.

⁶¹ Stefan Andreas Drechsler, *Illuminated manuscript production in medieval Iceland : literary and artistic activities of the monastery at Helgafell in the fourteenth century*, Manuscripta Publications in Manuscript Research, (Turnhout: Brepols, 2021) Pg 162; Liepe, *Studies in Icelandic fourteenth century book painting*. Pg 235-41.

⁶² Drechsler, *Illuminated manuscript production in medieval Iceland*. Pg 25.

⁶³ Ólafur Halldórsson, *Helgafellsbækur fornar*. Pg 35-8.

manuscript was *definitively* produced in one location over another. This hesitancy is generally still practiced, and many scholars merely “hypothesize” that manuscripts were produced or inked in specific locations.

At times, there are examples of notes where a scribe has written where the manuscript was housed. There is such a note in AM 239 fol., one of the core Helgafell manuscripts, but it is a later addition that simply marks that the manuscript was owned at Helgafell, not that it was produced there.⁶⁴ This manuscript is hugely influential in the Helgafell group, as it contains one of the two main hands tied to the manuscripts of this group and says in a note “[...] at helga felli aa bok þessa,” (“[...] at Helgafell owns this book”) meaning that AM 239 fol. was owned at Helgafell at the time of this note’s writing.⁶⁵ Some scholars have taken this quote out of context and have used it to tie AM 239 fol. to Helgafell securely.⁶⁶ Additionally, because of this, the other manuscripts associated with the Helgafell scribes in AM 239 fol. solely on this note also are connected to Helgafell with insufficient proof.

One of the recurring themes in this project is wariness against comparing manuscripts and studying them closely without understanding the whole context. Herbert Köllner argues that while it is important to compare across boundaries, scholars must not freely assign labels that they do not fully understand.⁶⁷ Köllner states that terms coined in small studies, reminiscent of the Helgafell Project, cannot simply be transferred to a wider dataset that does not fit into the original parameters of study. This would mean that Köllner is arguing against applying the unique findings of the Helgafell project directly to other manuscripts so that we can better understand them. It is advisable that scholars fully understand the terms they are using, but it seems foolish to limit the comparative factors that we can use. By looking at what similarities and differences exist in the broadest level of comparison, we can better understand what makes each production site and manuscript unique. By applying other unique categories, we can create more links between medieval manuscript production. Similarities between vastly different manuscripts tell us more about the past than similarities between already closely related manuscripts will.

⁶⁴ Reykjavík, Stofnun Árna Magnússonar, AM 239 fol.

⁶⁵ Lena Liepe, “Bild, Text Och Ornamentik.” Pg 113.

⁶⁶ Lena Liepe, “Bild, Text Och Ornamentik.” Pg 113.

⁶⁷ Clemens Köttelwesch, *Zur Katalogisierung mittelalterlicher und neuerer Handschriften*, Zeitschrift für Bibliothekswesen und Bibliographie. Sonderheft ; 1 Sonderheft, (Frankfurt am Main: Klostermann, 1963). Pg 139.

Methodology

For this study, I work closely with both the physical manuscript AM 346 fol., as well as the online images of it and other manuscripts. It is helpful to see the manuscript in person, and if this were a longer project it would be valuable to further study the other manuscripts in person as well. AM 346 fol. was the most important for me to carefully examine because it was the focus of this project, and by viewing it in person, more valuable connections are made with the online images. For example, the watermarks on the end pages of AM 346 fol. would not have been seen simply through online image analysis.

For the manuscripts that were unattainable to inspect in person, the use of Pokorny's tables alongside the digital images were extremely valuable. Pokorny makes liberal use of the structure and guidelines for examining manuscripts set forth by Partick Andrist, Paul Canart, and Marilena Maniaci in *La Syntaxe Du Codex: Essai de Codicologie Structural*, and uses the base parts of the method laid out there to create the tables studying manuscript production at Helgafell. The features she analyzes include, but are not limited to: material support (parchment, paper, etc), quire structure (number of quires, how many pages per quire), ruling, mise en page (physical arrangement of the text such as number of columns, lines per column), scribal hands, foliation and pagination, content, and decorations (illuminations, colors used, types of initials etc.).⁶⁸ In this way, the connection to archaeological stratigraphy continues. By using the guidelines set out by Andrist et. al, and enhancing them by using the additional nuance brought by Kwakkel, this comparison hopes to look at every part of the production that it can.

To get the best understanding of each manuscript, I used the tables first to get an understanding of what features I should be looking for in the digital versions of the manuscripts. From there, I was able to locate examples of similar and dissimilar production features. Using the tables as a guide was the best way for me to find and compare similar aspects of every manuscript, since they had the production features laid out as raw data sets for me to apply analysis to. Since the Helgafell project is looking at the core group of manuscripts, Pokorny includes which of the two main scribes are in each manuscript to tie them to Helgafell, however, I largely didn't concern myself with the scribes because I wasn't focusing on the scribal hands in AM 346 fol.

⁶⁸ "Handrit til rannsóknar (kjarnahópur)," Stofnun Árna Magnússon, updated July, 2022, accessed July 26, 2022, <https://www.arnastofnun.org/helgafell.html>.

In Pokorny's research, she divides the manuscripts into their production units to look only at the original production features. By doing this, she takes out some of the room for error, such as later production techniques. Of course, there are still many features that had been added later, such as writing. Marginalia is treated with caution, and Pokorny leaves these potentially problematic elements out of her research tables.

The importance of production features in comparative manuscript studies is not a new revelation, though it has not been as valued as it could have been. In a 1970 study by John McKinnell, he looked at the production features of Icelandic manuscripts to determine if AM 564 a 4to and AM 445 c I 4to were originally part of the same manuscript.⁶⁹ In addition to studying the hands found on these fragments, McKinnell looked at production features such as the binding and the writing column measurements. Looking at the text area can be far more useful than looking at the size of the leaves, for example, because the leaves of manuscripts are often trimmed by owners and later book-binders. His findings not only proved that those two fragments were from the same original manuscript, but also that AM 445 b 4to was as well.⁷⁰ By not solely relying on scribal hands, McKinnell helped to open the door to better compare and research Icelandic manuscripts. While he was not the first scholar to use production features to better understand connections between manuscripts, his findings were significant enough to change how important codicology and production features are deemed in the field.

One important production feature that I struggled with, as have many scholars, is identifying the colors used. While each scholar may create their own guidelines to what each color may look like, the lines between colors can be thin, and not well defined. One major difficulty with looking at colors in the manuscripts is that there are few non-destructive methods of studying them other than just visually describing and comparing, and, unfortunately, none of the available methods were feasible for this project. Humans' understanding of colors is subjective, and oftentimes each person has different abilities to see color variation. That means when looking and comparing colors needs to be purely visible so as to not destroy manuscripts, it can be difficult to go into acute detail. In her chapter "You Can't Tell A Pigment by its Color" Cheryl Porter argues that scholars need to use science in looking at the colors of manuscripts, because the pigments that are used are arguably more telling about the processes

⁶⁹ Ezio Ornato, *Lofræða Um Handritamergö : Hugleiðingar Um Bóksögu Miðalda*, trans. Björg Birgisdóttir and Már Jónsson, Ritsafn Sagnfræðistofnunar 36, (Reykjavík: Sagnfræðistofnun Háskóla Íslands, 2003). Pg 8.

⁷⁰ Ornato, Björg, and Már, *Lofræða um handritamergö*. Pg 8.

behind making the manuscripts than the lasting colors that we see.⁷¹ While we may see two different shades of green in AM 346 fol. there might only be one pigment, but the application could have been different, or perhaps the particles of the pigment are of different sizes, or even that when the manuscript was rebound some of the paint flaked off, creating a different shade than what was once there.⁷² As an example, Porter shows that

Recent non-destructive analysis (using Laser Raman microscopy and visible reflectance spectroscopy) of a fourteenth-century Icelandic manuscript revealed that the pigment vermilion was used for the bright red text and the initial N on f. 60r [of AM 350 fol.], but the darker red areas proved to be vermilion also. Its different appearance seems due solely to the amount of medium used to bind the pigment.⁷³

While this example does not deal with areas of the vellum being eaten away by the pigments used it does show that judging manuscripts based on color can be nearly fruitless endeavors unless we are using scientific means to study the chemical compositions of the pigments therein.

For example, both AM 346 fol. and AM 233 a fol. have green, which in AM 346 fol. had eaten away at the vellum and created holes, but did not in AM 233 a fol. The discrepancy between how the green pigment reacted to the vellum might point to separate production features. Since the pigment didn't react the same way then it could have been made out of different ingredients. Due to the different reactions between inks in shades of green, it is possible that AM 233 a fol. was made just using the lighter shade of green, or something close to it. There are instances in both manuscripts where green ink seeps through the vellum, making it visible on other leaves or even through to the other side of the same leaf.

Some of the colors in the core Helgafell manuscripts were researched using X-Ray Fluorescence (XRF) and Fiber Optic Reflectance Spectroscopy (FORS), two non-invasive color analysis techniques. However, since not all the manuscripts were analyzed, for example none of the manuscripts in Copenhagen were analyzed, the data surrounding the core group is incomplete, and could not be used in this thesis.⁷⁴

In her book *Piety in Pieces: How Medieval Readers Customized their Manuscripts*, Kathryn M. Rudy not only focuses on dating and grouping manuscripts

⁷¹ Porter. "You Can't Tell a Pigment by its Color" Pg 111.

⁷² Porter. "You Can't Tell a Pigment by its Color" Pg 116.

⁷³ Porter. "You Can't Tell a Pigment by its Color" Pg 113.

⁷⁴ Personal Communication with Lea Pokorny, September 4, 2022.

on things other than hands, but she goes in depth with her reasoning for repositioning the focus from hands to later additions to the manuscripts she studies.⁷⁵ Rudy focuses on fifteenth century Netherlandish manuscripts, not on Icelandic manuscripts, but the insights she draws are valuable nonetheless to Icelandic manuscript study. In particular, *Piety in Pieces* looks at how medieval people interacted with books and changed them. She notes that “[when] a manuscript enters a public collection, it is stabilized, preserved, frozen. In the Middle Ages, however, the manuscript was not a static entity, but rather an object whose content and structure were dynamic.”⁷⁶ By viewing AM 346 fol. as a now-static object that was once interacted with, we can gather more from the physicality of the book. Processes such as production, the focus of this study, were also human-run and subject to changes and external pressures that reveal more about how these works came to be.

Teresa Webber also warns against using unsteady hypotheses to further study other manuscripts, saying “[i]t is unwise to extrapolate directly from the evidence that may survive about a book or books from one context in order to establish the history of those from another for which such evidence is lacking.”⁷⁷ In her article “Where were Books Made and Kept?” Webber examines challenges in localizing manuscripts, including the problem of how uncertain any of the field's speculation can really be. By tying the localization of AM 346 fol. to other manuscripts that have only been *projected* to have been written at Helgafell, the conclusions that we come to are ultimately less stable than if they were based on more concrete facts. One of the major warnings of Webber is to be cautious when dealing with non-contemporary evidence. For example, if foliation was added after the initial inking as it was in AM 346 fol., it must not be compared to foliation that was added at the time of writing because they are so vastly different. However, since there are no clear patterns in the Helgafell production features that have been found, this thesis outlines the major similarities and differences between manuscripts in hope of cataloging the factors that can be weighed in order to reasonably localize AM 346 fol. to Helgafell or not.

When researching for this project, I was hoping to compare the production features at Helgafell to other production sites around Iceland. There are no other such projects like the Helgafell project that look at codicological data for their grouped manuscripts specifically regarding production centers. Már Jónsson is one scholar who has investigated a similar topic as this thesis, and he has some data relating to

⁷⁵ Rudy, *Piety in Pieces*. Pg 6.

⁷⁶ Rudy, *Piety in Pieces*. Pg. 2.

⁷⁷ Webber, “Where Were Books Made and Kept?.” Pg 214.

codicological production features. Már's research allows AM 346 fol. to be compared to the common manuscript features of the time, not only other manuscripts believed to have been produced at the Heglafell monastery.

4. AM 346 fol.

The Basics

AM 346 fol., housed in the Árni Magnússon Institute in Icelandic Studies (Árnastofnun), Reykjavík, measures 248 by 180mm, and was written between 1340 and 1360 on eighty-five leaves, with a later addition on f. 85r.⁷⁸ According to Guðvarður Már Gunnlaugsson, only between 20 and 25 Icelandic manuscripts survive from the middle of the fourteenth century, potentially making this a small minority from before the Golden Age of manuscripts.⁷⁹ This manuscript is a law book, containing six sections of different law related texts: *Járnsíða*, *Kristinréttur Árna biskups*, *Grágás*, *Jónsbók*, *Réttarbætur*, and *Lagaformálar* (see table 1). AM 346 fol. as well as other core Helgafell manuscripts contain *Jónsbók* (more information in table 9), a common law text that has been found in over 260 Icelandic manuscripts.⁸⁰ It has one scribe, who has been hypothesized to have worked at Helgafellklostur.⁸¹ The main body of the text in AM 346 fol. is written in Gothic Textualis, which was the popular writing style from about 1250 to 1400 in Iceland.⁸² Characterized by its short ascenders and descenders, this manuscript fits in nicely; though the common trait of bold strokes followed by hairlines are not as pronounced as in some other manuscripts.⁸³

Árni Magnússon (1663-1730), the archivist and collector for which the institution is named, received AM 346 fol. from Björn Jónsson in 1685 when it was being kept at the farm Staðarfell, giving it the nickname Staðarfellsbók.⁸⁴ This short history is recorded in AM 435 a 4to, on f. 182r where Árni briefly lists the contents of

⁷⁸ Kristian Kålund, *Katalog over den Arnemagnæanske håndskriftsamling* vol 1. (Copenhagen: Gyldendalske Boghandel, 1889) Pg 281; Reykjavík, Stofnun Árna Magnússonar, AM 346 fol.

⁷⁹ Guðvarður Már Gunnlaugsson, "Manuscripts and Palaeography," (Oxford, UK: Blackwell Publishing Ltd, 2004), Pg 249.

⁸⁰ *Jónsbók: The Laws of Later Iceland*. Translated by Jana L. Schulman. Bibliotheca Germanica, Series Nova, vol: 4. Saarbrücken: AQ-Verlag, 2010. Pg xxiii.

⁸¹ Guðvarður Már Gunnlaugsson, "Voru scriptoria í íslenskum klaustum?," Pg 195.

⁸² Guðvarður Már Gunnlaugsson, "Manuscripts and Palaeography," Pg 245-64.

⁸³ Þórdís Edda Jóhannesdóttir "Medieval Icelandic manuscripts: Basic letter forms and development of Icelandic script Orthography in the earliest manuscripts," Class Lecture, Íslensk miðaldahandrit, University of Iceland, January 25th, 2022

⁸⁴ "AM 346 fol.," Handrit.is; Drechsler, "Illuminated Manuscript Production in Western Iceland in the Thirteenth and Early Fourteenth Centuries." Pg 178.

AM 346 fol. and writes “Bokin er i litlu folio. komin til min anno 1685 fra Birne Jonfyne að Staðarfelle,” (“the book is in little folio; came to me [in the] year 1685 from Björn Jónsson of Staðarfell.”) Árnastofnun received AM 346 fol. on the fifth of June, 1981, about one month after it went through repairs.⁸⁵

Like the majority of medieval Icelandic manuscripts, AM 346 fol. was written on vellum, and is unfortunately no longer in its original binding. The new binding, in which the original leaves are bound, might be from the sixteenth to seventeenth century, based on the style.⁸⁶ While dating the binding is not necessarily possible, spitsel binding (as is visible on AM 346 fol.) was common in the sixteenth and seventeenth centuries. This binding was constructed with parchment that previously bound a different book.⁸⁷ There are three visible sewing supports from the exterior. There are also two strings attached to the front cover, along with what used to be two additional strings on the back cover, to tie the book closed and keep it secure. The back strings appear to be much shorter or they have been severely damaged and cut short over time.

The paper used for the end leaves of this manuscript shows a watermark, which could be used to discover more about the re-binding and history of AM 346 fol.

Watermarks were used to show who made the paper. The watermark on AM 346 fol. is of two lions facing each other with open mouths, in between them is a monogram

containing the initials “AA” and a crown with a cross. The image (figure 2) is from the end leaf in the back of this manuscript, as the watermark on the end leaves in the front is partially concealed by writing, though still visible.

Upon looking for other examples of this watermark in databases such as Memory of Paper, I was not able to find a direct match.

The closest marks have the same two lions on the sides supporting



Figure 2: Watermark in AM 346 fol., consisting of two lions, a crown and a stylized “AA.” Photo by author

⁸⁵ “AM 435 a 4to,” Handrit.is, accessed July 16, 2022, <https://handrit.is/manuscript/view/en/AM04-0435-a/0#mode/2up>.

⁸⁶ Personal Communication with Vasarè Rastonis, September 8 2022.

⁸⁷ Personal Communication with Vasarè Rastonis, September 8 2022.

a shield with a crown over it. The shield in these watermarks sports three crosses, making it the coat of arms for Amsterdam, which is not applicable to AM 346 fol.⁸⁸ Unfortunately, lion monographs were popular watermarks, and so no clear history can be drawn from it without further research, which is outside of the scope of this work.

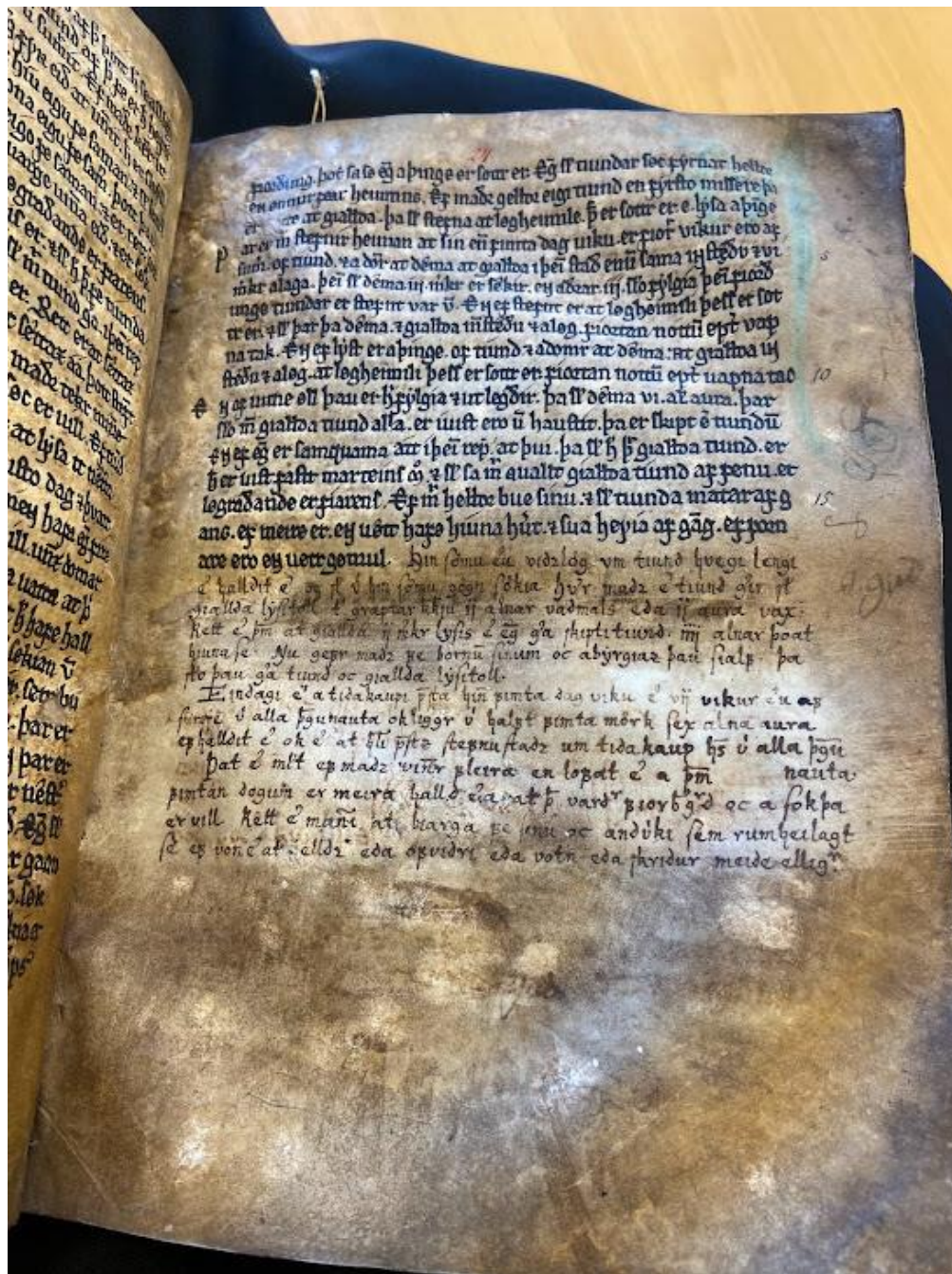


Figure 3: 24r of AM 346 fol. where the bottom half of the text has been scraped off and rewritten. Photo by author.

⁸⁸ "The Bernstein Consortium, Commission for Scientific Visualization." May 14, 2021, Austrian Academy of Sciences, September 6th, 2022.
https://www.memoryofpaper.eu/BernsteinPortal/appl_start.disp#.

There are a few pages in AM 346 fol. that have been written on later than the original inking, such as the last leaf in the manuscript. There is limited information on who wrote this last page, but the ink appears to be younger than the rest of the manuscript (it is darker and less faded), and the hand is significantly different than the majority of the text. Oddly enough, it has about the same amount of lines as the rest of the manuscript, but the scribe's handwriting is slanted, unlike the rest of the professional inking, and in general does not seem to align with the rest of the script. Another example of inconsistent writing is on f. 24r, where the bottom half of the original writing appears to have been scraped off and re-written by a younger hand (figure 3). The scraping marks are clear on the vellum, and the script is thinner and in a lighter ink than the rest of the text. It is possible that this section is in Árni Magnússon's hand, as he did write notes and marginalia in AM 346 fol.⁸⁹ However, it is unclear why Árni, or the scribe who wrote this section, would have scraped the original writing off and replaced it. One hypothesis includes that the laws that were scraped off had changed, and so the newer writing was amending the lawbook to reflect such changes and replace the outdated rules and punishments. Comparing Árni's signature on the inside of the front cover to this writing, the shape of the n's and r's is remarkably similar, with feet turning up and to the right at the baseline. However, the hand on f. 24r appears to be heavier, with thicker lines and different crossing lines on the capital letters used throughout.

Blank pages could have allowed for the quire structure to stay consistent throughout the manuscript, and also allowed for extra room to write should the scribe need it. In this manuscript, what were once blank pages have been written on. While it is not clear who wrote on them, the text shows an owner of the manuscript who felt they could use the book as they pleased. In her book *Piety in Pieces*, Rudy mainly looks at mainland European manuscripts, but the theory behind her observations can be applied to Icelandic manuscripts as well. Rudy argues that book owners "defaced" books for many reasons, including

[...] a desire to personalize the book; a desire to respond to newly available texts and visual subjects; a desire to show devotion to new feasts and cults; a desire to make the book reflect the financial strength of the book owner; a desire to raise the level of decoration to make the book more colorful; a desire to systematize

⁸⁹ "AM 346 fol.," Handrit.is

the decoration; a desire to incorporate loose images, sometimes given as gifts, into the book, thereby turning it into a memory album.⁹⁰

Any of these reasons can also be applied to the marginalia and writing found on the previously blank pages of AM 346 fol. and other manuscripts. By looking at the ways that previous authors have changed the manuscript, scholars can continue to draw connections between the manuscript history and how it came to be where it was found. Detailing a manuscript's history allows for scholars to make a map of what influences the manuscript could have been under, as well as creating a trail to a production site. Similar to how researching the watermark in AM 346 fol. will create a fuller picture of where this manuscript has been, studying the marginalia in a way that treats it as a part of the production, albeit late, will allow scholars to see how the manuscript changed hands and progressed through time. Also, by looking at how people changed their books, it becomes more clear how they might have used them. By studying the physicality of the book, such as the production features, the history of those who owned it, potentially all the way back to its original production, can also be studied.⁹¹

AM 346 fol. has one production unit (table 1). While there are later additions added in writing, the definition of production unit that I am working with, provided by Andrist et al., says that a production unit is any parts of the codex that was created in the same act of production.⁹² The physical manuscript was all created at one time, with later additions that do not change that fact.

⁹⁰ Rudy, *Piety in Pieces*. Pg 9.

⁹¹ Rudy, *Piety in Pieces*. Pg 6.

⁹² Andrist et al., *La syntaxe du codex*. Pg 59.

Despite some later repairs, there are pages missing and damages on many leaves. Some of the holes in the vellum have been filled in with additional skin, while others have clearly been worked around by the scribe (figure 4). Because the words are written around the hole, and the formation of the hole did not impact the writing at all, it is clear that it was

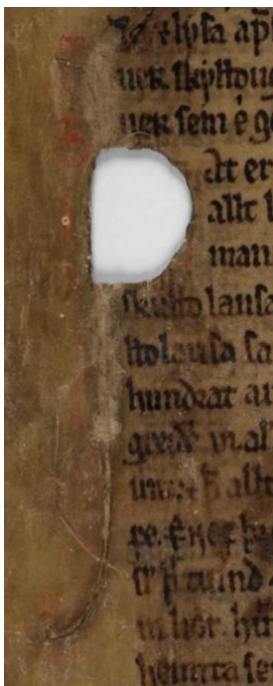


Figure 5: Vellum that has been eaten away, potentially by the pigment, on 5r of AM 346 fol. Photo from handrit.is

original to the vellum as it was being worked on. If the hole had damaged the script, then it could have been later damage. There are other holes in AM 346 fol.

where that, however, is not the case and the text has been damaged by the later-formed

holes, for example on f. 6v. The damages on f. 6v have been repaired and filled in with more vellum to make the leaf more whole, but in the process of doing so, the repairs have obstructed some of the text. One of the most frequent damages to AM 346 fol. is where there were once illuminated initials and the parchment has been eaten away (figure 5). A possible explanation is that the pigment in the green ink used in parts of this manuscript that was too harsh for long term stability and has been damaging the parchment.⁹³ There are leaves, for example on f. 13r, where the ink has not fully eaten away at the vellum but has left it partially damaged and raw.



Figure 4: A hole from f. 70v of AM 346 fol. demonstrating that the scribes wrote around holes in the original vellum. Photo by author.

⁹³ Cheryl A. Porter. "You Can't Tell a Pigment by its Color" in *Making the Medieval Book : Techniques of Production: Proceedings of the Fourth Conference of the Seminar in the History of the Book to 1500, Oxford, July 1992*, ed. Linda L. Brownrigg. 111-6. (Los Altos Hills: Anderson-Lovelace Publishers, 1995). Pg 114.

A separate feature that is worth mentioning is damage to the rubrics in AM 346 fol. Many of the rubrics still are visible, but many have been damaged and are hardly visible. It appears as though a reagent has been rubbed on significant portions of the rubrics. Some of the damaged rubrics appear to have been re-written (figure 7). In this example, the red rubric on the right has faded over time, and then it was later written over in a darker red color. Figure 9 does not have the reagent applied to it, but is an example of the rubrics fading over time and later being redone. Upon close inspection, the faded red underneath the current readable red is visible.

In other examples, it is possible that the reagent used on the rubrics at one point made them

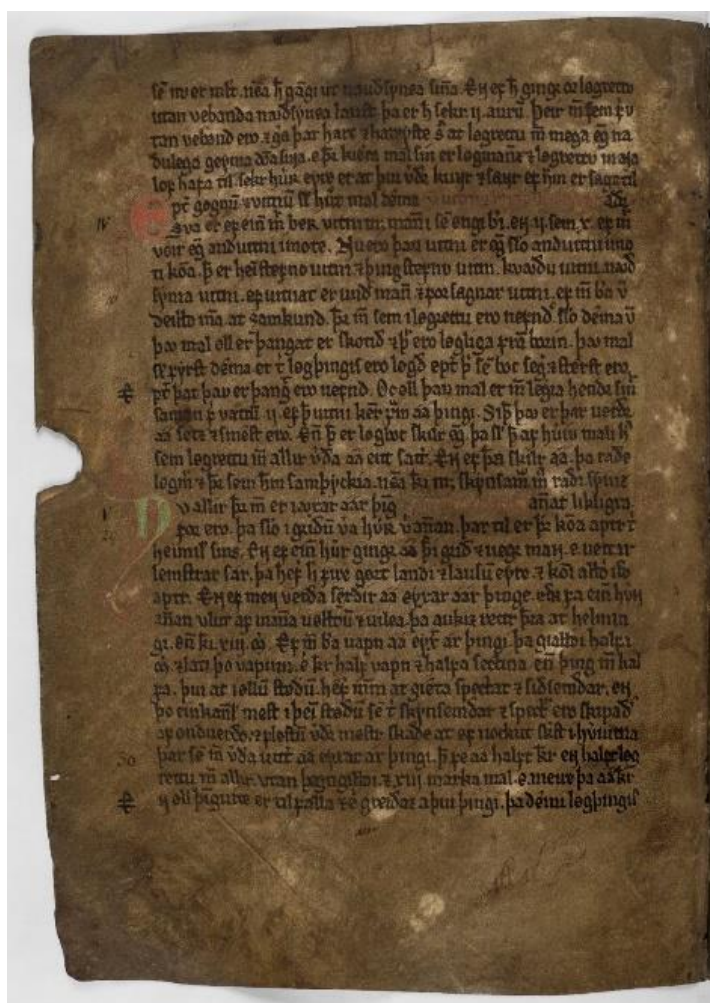


Figure 6: f. 26v of AM 346 fol., where there are obvious dark stains around the places where rubrication once was. The initial in red was not harmed, and does not appear to have been subjected to the same substance. Photo from handrit.is.

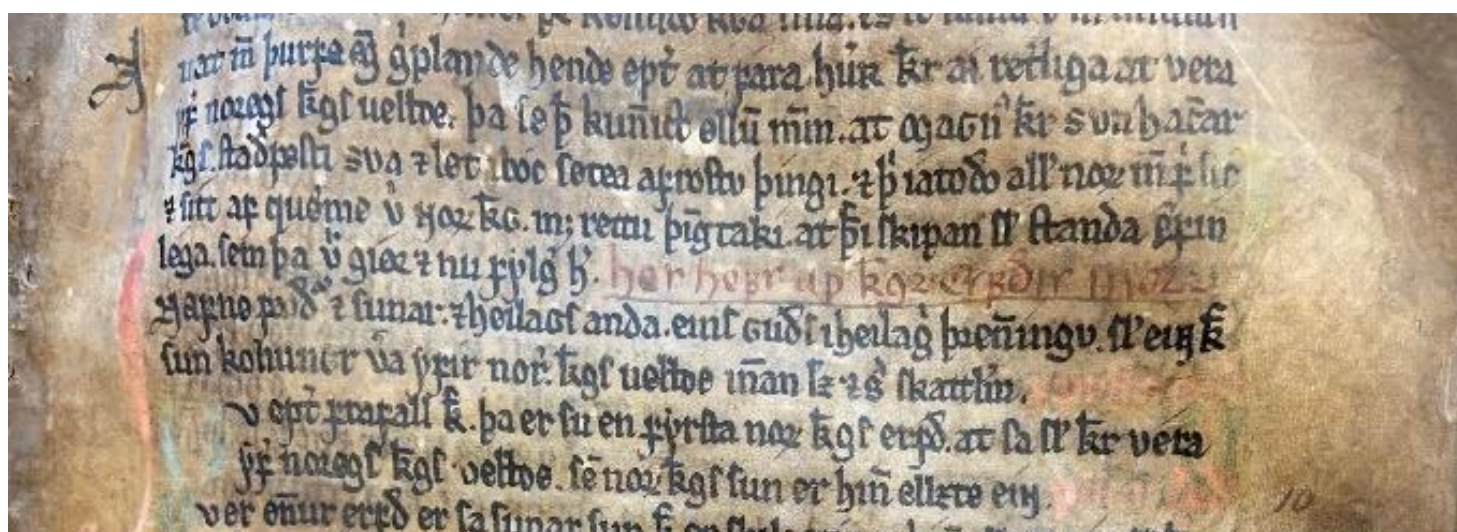


Figure 7: A damaged rubric originally written in red and rewritten over in a darker shade of red. Photo by author.

stand out, rather than degrade them, but over time the opposite proved true (figure 6). It seems as though whatever reagent was rubbed on the rubrics impacted the red ink disproportionately to the black ink where it was affected, as the black ink was not harmed in the same way that the red ink was. This is visible, for example, on leaf 26v. The dark area extending from the faded rubric on line 19 is likely from the reagent rubbed on the rubric, and it clearly covers areas of black ink as well as the faded red.

In contrast to some other manuscripts, such as AM 73 b fol., the red ink where this reagent was rubbed has degraded. In AM 73 b fol. any red ink that was there has severely faded, as shown in figure 8. On f. 26v of AM 346 fol. there is still other red ink present, such as the E initial on line six. There is no evidence of the same

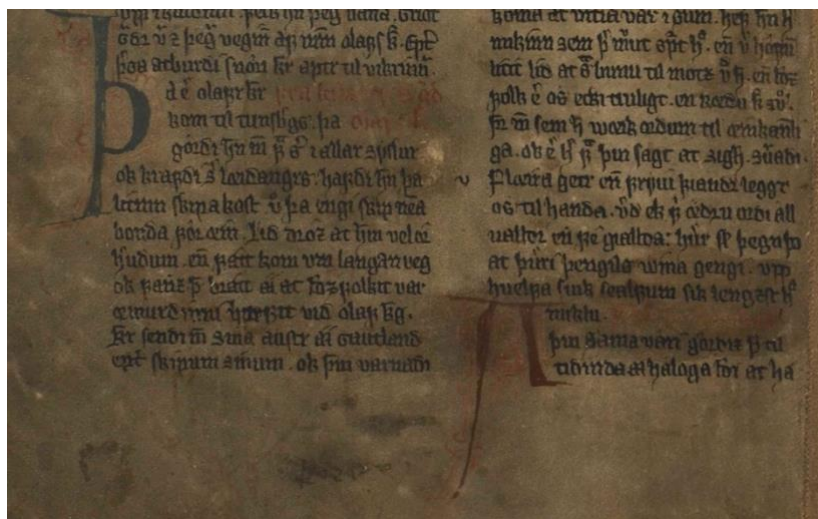


Figure 8: f. 1v of AM 73 b fol. where the reagent degraded red rubrications. Photo from handrit.is

reagent that was rubbed on the rubrics having been rubbed on the initial, indicating that the ink itself is not what faded on this page, but the substance interacting with the ink. The fact that the substance was not rubbed on the initials in AM 346 fol. can be seen as evidence to support the hypothesis that it was used to make the rubrics stand out—the initials were already bold and different enough from the text to not need to stand out. Additionally they could be guessed, but the rubrics could have been difficult to read, especially if they had started fading by the time the substance was applied, so their contents could not be as easily guessed.

Production Features

To better understand the nuances of AM 346 fol., I hope to create a detailed picture of its production features before discussing the manuscript's potential ties to the monastery at Helgafell. In this section, I also more fully describe and analyze some key production features that may not otherwise fit into the codicological comparison with the other core Helgafell manuscripts.







QUIRE 1	ff	hair or flesh	QUIRE 2	ff	hair or flesh	QUIRE 3	ff	hair or flesh	QUIRE 4	ff	hair or flesh	QUIRE 5	ff	hair or flesh	QUIRE 6	ff	hair or flesh
	1	R H V F		5	R H V F		13	R F V H		21	R H V F		29	R H V F		37	R H V F
	43	R H V F		49	R F V H		57	R H V F		65	R H V F		73	R H V F		81	R H V F

Figure 9: Quire Structure of AM 346 fol. Structure by: Vasarè Rastonis

Table 1: Production Feature Breakdown for AM 346 fol.

Quire Number	Quire Size	Writing Support	Marks of Succession	Mise en Page	Pricking/ ruling	Running titles	Content	Illumination Colors	Rubrication	Hand
1 (1-4)	2 bifolia	Vellum	Leaf numbers, added later	1 column	Slit like pricking No visible ruling	No visible running titles	<i>Járnsíða,</i> <i>Kristinréttur</i> <i>Árna biskups</i>	Bright red, dark red, blue	Bright Red	One main scribe, potentially H2.
2 (5-12)	3 bifolia, 2 singletons		Occasional page				<i>Kristinréttur</i> <i>Árna biskups</i>	Bright red, blue, dark green		

3 (13-20)	4 bifolia		numbers, added later		No visible pricking or ruling		<i>Kristinréttur</i> <i>Árna biskups,</i> <i>Grágás</i>	Dark red, blue, light green, dark green				
4 (21-28)					No visible pricking Dry Point Ruling	Running titles in black, added later though potentially by the same scribe	<i>Grágás,</i> <i>Jónsbók</i>	Blue, bright red, light green		One main scribe, potentially H2. Additions by unknown additional scribe, potentially Arni Magnusson		
5 (29-36)							<i>Jónsbók</i>	Dark red, bright red, blue, light green, dark green		One main scribe, potentially H2.		
6 (37-42)	3 bifolia				Dry point ruling Slit like pricking	Potential running titles, too much cut off to see if upper marginalia is titles						
7 (43-48)					Round and triangular pricking (as though with a knife) Dry point ruling	Running titles in black, added later though potentially by the same scribe						
8 (49-56)	4 bifolia				Slit like pricking Dry point ruling			Blue, dark blue, light green, bright red, dark green, dark red				

9 (57-64)					Triangular pricking, round, and slit-like pricking, Dry point ruling			Light green, bright red, blue, dark red		
10 (65-72)					Round pricking, Dry point ruling	No visible running titles		Dark green, bright red, dark red, blue, dark green, dark blue		
11 (73-80)					Triangular and slit-like pricking, Dry point ruling	Potential running titles, too much cut off to see if upper marginalia is titles	<i>Jónsbók, Réttarbætur</i>	Bright red, light green, dark blue, dark green, light green, blue, dark red		
12 (81-85)	1 bifolia, 3 singletons				Slit like pricking No visible ruling	No visible running titles	<i>Réttarbætur, Lagaformálar</i>	Bright red, blue	Black, thin	One main scribe, potentially H2. Additions by unknown additional scribe

There are twelve quires in AM 346 fol., with the majority consisting of four bifolia each (figure 9).⁹⁴ Five of the twelve quires are not strictly four bifolia: the first is only two bifolia, the second is made up of three bifolia and two singletons, the sixth is three bifolia, the seventh is three bifolia, and the twelfth is one bifolium between three singletons. The average page in AM 346 fol. is 240mm tall, 165mm wide with writing taking up an 180 by 120mm rectangle in the middle, about 25mm from the spine. There appears to be at least five missing leaves, two at the beginning of the text, two leaves after f. 4, and one after f. 40.⁹⁵

There are marks of succession in this manuscript, but it is clear that the leaf foliation is in a younger ink, and Danish librarian Kristian Kålund is most likely to have

⁹⁴ Quire structure by Vasarè Rastonis

⁹⁵ Kålund, *Katalog over den Arnemagnæanske håndskriftsamling*. Pg 281-0.

added the bright red foliation in the manuscript.⁹⁶ All of his numbers are centered on the top of the page, as opposed to other common places such as the top right corner. They are also in a bright red ink, drawing more attention to the leaf numbers than would be if they were in a duller color, or black, for example. Kålund was a major proponent in the study of Icelandic manuscripts, furthering research by creating a comprehensive catalog of the Árni Magnússon collection as well as translating many sagas for the public to read.⁹⁷ He also writes about AM 346 fol., which is not comparatively highly decorated —there is only one significantly decorated initial— and it has two animals encircling it. While it has been called a “særlig udmærket initial,”⁹⁸ by Kristian Kålund, a “particularly excellent initial,” it is much simpler than many other examples of initials found in Helgafell manuscripts.

Where ruling marks can be seen at the top of the page, the scribe always starts writing below the top line. In mainland Europe, including Norway, scribes wrote above the top line until the late 13th century, when they switched and started writing below the top line.⁹⁹ Iceland followed a slightly different pattern, namely with a majority of the manuscripts studied having above top line, but the tight connection between Helgafell and Norwegian influences is clear, and so must be considered.¹⁰⁰ AM 346 fol. fits into the larger European pattern as well as the Icelandic pattern, being written in the fourteenth century with writing below the top line.

Table 2: Lines Per Page in AM 346 fol.

Folio (v)	Lines	Quire Break	Folio (r)	Lines	Folio (v)	Lines	Quire Break	Folio (r)	Lines
			1	27			/	43	32
1	27		2	27	43	32		44	32
2	27		3	27	44	32		45	32

⁹⁶ Bogi Th Melsteð, "Kristian Kålund Bókavörður Við Handritasafn Árna Magnússonar," In *Ársrit Hins íslenska fræðafélags í Kaupmannahöfn*, no. 5 (1920).

⁹⁷ Bogi Th, *Kristian Kålund bókavörður við handritasafn Árna Magnússonar*.

⁹⁸ Kålund, *Katalog over den Arnemagnæanske håndskriftsamling*. Pg 281.

⁹⁹ Már Jónsson, "Manuscript design in medieval Iceland." In *From Nature to Script: Reykholt, Environment, Centre, and Manuscript Making*, 231-243 ed. Helgi Þorlálsson and Þóra Björg Sigurðardóttir. (Reykholt: Snorrastofa, Cultural and Medieval Centre, 2021). Pg. 237-8.

¹⁰⁰ Már Jónsson, "Manuscript design in medieval Iceland." Pg 237.; Stefán Karlsson. "Helgafellsbók í Noregi." Pg 349.

3	27		4	27	45	32		46	32
4	27	/	5	31	46	32		47	32
5	31		6	31	47	32		48	32
6	31		7	31	48	32	/	49	32
7	31		8	31	49	32		50	32
8	31		9	31	50	32		51	32
9	31		10	31	51	32		52	32
10	31		11	31	52	32		53	32
11	31		12	31	53	32		54	32
12	31*	/	13	31	54	32		55	32
13	31		14	31	55	32		56	32
14	31		15	31	56	32	/	57	32
15	31		16	31	57	32		58	32
16	31		17	31	58	32		59	32
17	31		18	31	59	32		60	32
18	31		19	31	60	32		61	32
19	31		20	31	61	32		62	32
20	31	/	21	31	62	32		63	32
21	32		22	32	63	32		64	32
22	31		23	31	64	32		65	32
23	32		24	17**	65	32		66	32
24	32		25	32	66	32		67	32
25	32		26	32	67	32		68	32

26	32		27	32	68	32		69	32
27	32		28	32	69	32		70	32
28	31	/	29	32	70	32		71	32
29	32		30	32	71	32		72	32
30	32		31	32	72	32	/	73	32
31	32		32	32	73	32		74	32
32	32		33	32	74	32		75	32
33	32		34	32	75	32		76	32
34	32		35	32	76	32		77	32
35	32		36	32	77	32		78	32
36	32	/	37	32	78	32		79	32
37	32		38	32	79	32		80	32
38	32		39	32	80	32	/	81	32
39	32		40	32	81	32		82	32
40	32		41	32	82	32		83	32
41	32		42	32	83	32		84	31
42	32	/			84	0		85	***
					85	0			

* Has 1 additional line added non-contemporaneously

** Has 12 additional lines added non-contemporaneously

*** Has 34 additional lines added non-contemporaneously

Table 2, above, looks at the number of lines per page in AM 346 fol. It also marks where the quires are divided, allowing us to look at the breakdown of each quire and how it was produced a bit closer. The first quire, though short, gives us a clearer picture of how the production went. It is possible that this quire is produced separately

from other quires because it has its own distinct line count. There are 27 lines per page in the first quire, which does not happen in any other quire. This is also the only quire with two bifolia, making it doubly unique. In the second quire, there are only pages with 31 lines, while in the third and fourth quire there are 31 and 32 lines per page. In the fifth through eleventh quires there are 32 lines with the last quire having mostly 32 lines save for the last page with original script, where the text ends before a 32nd line is needed. By looking at how the quires compare to each other, especially the first to the others, we can reasonably hypothesize that the quires were made individually, especially potentially in multiple initiatives, and then later bound together. This idea will return later in this thesis when I discuss potential tacketing marks found in AM 346 fol. and compare them to other Helgafell manuscripts. In the data presented on the Helgafell's project website, there are no detailed line numbers listed for each manuscript, making it difficult to compare to AM 346 fol. If we could compare the quire and line numbers to other manuscripts, we could see if they were also produced in individual quires or as one cohesive unit.

Another comparable aspect of AM 346 fol. is the pricking and ruling done to prepare the vellum for writing. Throughout the whole manuscript there are many instances of dry point ruling, some more obvious than others. According to Lea Pokorny, lead ruling used at Helgafell, can at times look like dry point ruling, though dry point ruling usually leaves an indent in the surface of the vellum from the pressure

needed to leave the mark.¹⁰¹ On the other hand, lead ruling, when it is first carried out, leaves a silver residue behind, similar to pencil graphite, that can be more easily seen in low light for the scribes.¹⁰² Close inspection of AM 346 fol. reveals that it has dry point ruling as opposed to lead ruling by looking for such indentations created by the pressure of the stylus. There was no indication of left behind lead in AM 346 fol., which once again points to dry-point ruling.

There are instances of both round and slit-like pricking in AM 346 fol. For the most part, the difference in tools is divided by quire, so it can be reasoned that producers were pricking entire quires together at one time, not just single leaves. Additionally, this supports the evidence shown with line counts that quires were produced separately. Since both line counts and pricking tools vary by quire, it is likely that they were produced separately and that is why they have variables depending on quire, not on the manuscript as a whole. In fact, in the ninth quire it looks as though whoever pricked it pricked the whole quire at once, but was misaligned. Then, they adjusted and repeated the pricking but switched the tools partway through. There are two lines of pricking marks, though the outer line becomes impossible to see by the end of the quire. The pricking marks match throughout the quire halves, making it look as though the initial pricking was done all the way through and then it was adjusted in halves. In the first half of the quire the inner row of pricking is round all the way down. In the second half, the inner line of pricking is round at the top of the leaf, but then becomes slit-like at the bottom (figure 10).¹⁰³ This signifies a change in tools and how the pricking was being done. During the adjustments, in which the scribe changed tools during the second half, one can see the pricking all the way through to the end of the quire.

One peculiarity in the pricking of quire nine is it appears as though the first half of the quire is pricked from the recto, while the second half of the quire (with the change of tools) is pricked from the



Figure 10: 61r of AM 346 fol. where the pricking changes from round to slit-like, as well as being double. Photo by author.

¹⁰¹ Michael Gullick "How Fast did Scribes Write?" in *Making the Medieval Book : Techniques of Production*, 39-58, (1995). Pg 40-1.

¹⁰² Michelle P. Brown and Patricia Lovett, *The historical source book for scribes* (London: British Library, 1999). Pg 15.

¹⁰³ Reykjavík, Stofnun Árna Magnússonar, AM 346 fol. 61r.

verso. It seems counter intuitive for the producer of this quire to flip over the vellum to prick each half individually, rather than just pricking both sides from the recto (or verso, if for some reason that was desired). It would indeed make more sense if the first half was pricked from the verso and the second from the recto, because if that was the case then the quire could have simply been opened from the middle and pricked from there. One possibility is that the quire was flipped outwards, having what would become the fold facing up and pricking each half like that. This could allow for the vellum to be laid flatter for pricking.

One aspect of AM 346 fol. that has gone practically unstudied is the possibility of tacketing in the quires. Tackets are thin strips of parchment or strings that hold together manuscripts before they are fully bound, allowing for the scribes to work on single leaves or individual quires instead of working on a full manuscript at a time.¹⁰⁴ Tackets are not commonly found in fully bound manuscripts, but more often in fragments or incomplete scribal works, which can make them more difficult to find evidence of in manuscripts like the ones we have access to. However, it is possible to look for the signs of what used to be tackets- for example, the tacketing marks that appear on either side of the spine. Tacketing appears to be most common in Ethiopian manuscripts, or at least most studied, according to J P Gumbert, author of “The Tacketed Quire: An Exercise in Comparative Codicology,” though Gumbert also lists that tackets were used in Coptic, Greek, and Slavic manuscripts. Gumbert notes one Hebrew manuscript where tackets have been found, though he does not consider them common in this case.¹⁰⁵ He argues that in Western manuscripts the tackets are more easily studied, if the researchers know what they are looking for.¹⁰⁶

There is at least one study that includes tacketing regarding Old Icelandic manuscripts, which is “Gráskinna: Material Aspects of a Pocket, Patchwork *Njála*” by Emily Lethbridge. The author looks at *Gráskinna*, another Icelandic manuscript that has been dated to around 1300.¹⁰⁷ *Gráskinna* has evidence of tackets connecting the quires to the



Figure 11: Potential tacketing marks surrounding the center binding on f. 25v and f. 26r of AM 346 fol. Photo by author

¹⁰⁴ J. P. Gumbert "The Tacketed Quire : An Exercise in Comparative Codicology." *Scriptorium* 65, no. 2, 299-320 (2011). Pg. 299-300.

¹⁰⁵ Gumbert "The Tacketed Quire." Pg. 304.

¹⁰⁶ Gumbert "The Tacketed Quire." Pg. 300, 303.

¹⁰⁷ "GKS 2870 4to," Handrit.is, accessed July 28, 2022, <https://handrit.is/manuscript/view/is/GKS04-2870/0#mode/2up..>

binding. The tackets are not the typical sewing that binding would entail, and these tackets are made of sinew holding the manuscript together.¹⁰⁸ Seeing as how GKS 2870 4to (*Gráskinna*) has tackets that are still visible in the manuscript, it is reasonable to consider the possibility of tacketing in AM 346 fol.

There are several instances in the manuscript where there are identical holes on opposing leaves, potentially where tackets had previously been. For example, when the manuscript is open to f. 25v and f. 26r, there are four slits in the inner margin, close to the binding, that appear to be mirrored over to the next page. Two of these mirrored slits, four holes total, are pictured in figure 11.¹⁰⁹ It is clear upon looking at these holes in the manuscript that they are intentional, and not simply damage that has been done to the manuscript. It is also clear that they are not, for example, pricking marks. According to Vasaré Rastonis, in AM 346 fol. there are “a variety of quire tacket hole styles scattered throughout the bookblock. They occur at the head and tail ends of most all of the quires, in some instances it is difficult to be sure on account of mends and fills.”¹¹⁰ The inclusion of tacket marks in AM 346 fol. is noteworthy because it can be difficult to definitively identify them. The holes do not align well with the writing to be pricking marks, and they are not frequent enough either. In AM 346 fol. there are only pricking marks in the outer margins, also making these holes different in that way, due to the fact that they are only on the interior margin, close to the binding.

Tacketing is a production method about which, especially in Nordic manuscript studies, little is known. The understudied nature of tackets also allows for this discovery to be a strong tie to other manuscripts, if they are found. By studying tacketing in manuscripts, scholars will be able to look at yet another production measure that could lead to more similarities between manuscripts and potential localizations. Similar to line counts, tacket marks can be windows into the production features at Helgafell. Both the distinction of line numbers between quires, as well as the inclusion of tacket marks imply that writing the manuscript was done in the individual quires, and that they were temporarily held together before the official final binding.

Upon looking at the other manuscripts in the Helgafell group, there do appear to be other examples of tacketing. In AM 239 fol. there are potential tacketing marks on

¹⁰⁸ Emily Lethbridge. "Gráskinna: Material Aspects of a Pocket, Patchwork *Njála*" in *New Studies in the Manuscript Tradition of Njáls saga: The historia mutila of Njála*, ed. Emily Lethbridge and Svanhildur Óskarsdóttir, 55-85, (Kalamazoo: Medieval Institute Publications, 2018). Pg 61.

¹⁰⁹ Reykjavík, Stofnun Árna Magnússonar, AM 346 fol.

¹¹⁰ Personal Communication with Vasaré Rastonis, September 8, 2022.

f. 16v and f. 17r.¹¹¹ Other marks, such as those on pages f. 26v and f. 27r are difficult to determine if they are from previous tacketing or from the current binding by looking at them via the online sources. In communication with Pokorny and the conservator of Árnastofnun, Vasarè Rastonis, it was discussed that the marks in AM 239 fol. are in the correct spots to be tacketing, but they are not on every quire, making the conclusion difficult.¹¹² Additionally, if a more detailed quire structure was available then it would be easier to assess what different marks in the manuscript could mean. Since the tacketing seems to appear more around the ends and beginnings of the quires, so that they could hold each other to the next quire, it would be easier to understand the marks if scholars were able to look at how the book around it was formed.

Running titles are frequently trimmed away post-production, and so are not visible when they have been passed down through many owners. They are a unique feature that can potentially show production techniques used. If any particular manuscript producers were adding running titles, it could be valuable to group them together. Running titles are located on the top of the leaf, and are usually on every page so that it is

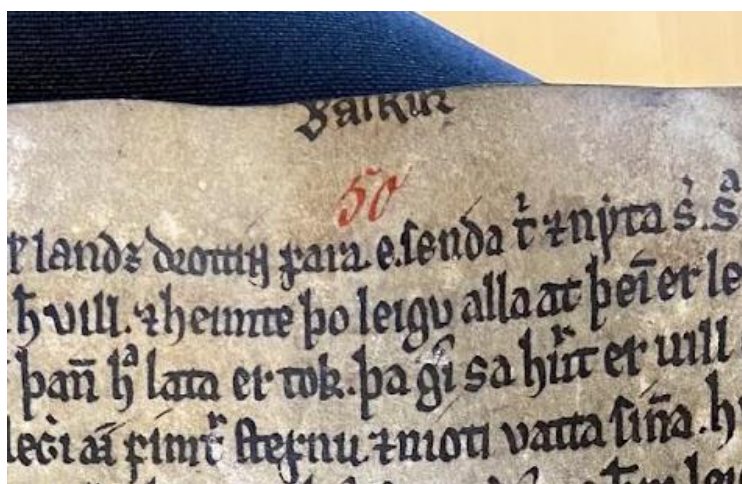


Figure 12: Running title on 50r of AM 346 fol., partially cut off. Photo by author.

clear what section of the book the reader is in. AM 346 fol. appears to have running titles, though some appear like they are in a younger hand than the rest of the script and they are trimmed on most pages. Other running titles appear to be in the main scribe's hand, begging the question of whether the titles are original or not. As will be discussed later, there is also a divide between the contents of the core Helgafell group, and this divide could potentially lead to a divide in the inclusion of running titles as well.

It is possible that some of the missing running titles were trimmed off when the manuscripts were rebound or changed owners. There is evidence of trimming in AM 346 fol. as many of the running titles are only half visible (figure 12). Running titles, like tacket holes and line numbers, help scholars see not only how this book was made

¹¹¹ "AM 239 fol.," Handrit.is, accessed July 26, 2022, <https://handrit.is/manuscript/view/is/AM02-0239/63#page/26v/mode/2up>

¹¹² Personal Communication with Lea Pokorny, September 4, 2022.

but also how it was interacted with before it was sold or otherwise used. Running titles, especially in a law book such as AM 346 fol., allow for more easy access of the text when the reader is not necessarily reading the book straight through. The fixed running titles in AM 346 fol. were not added terribly late in its history because they are trimmed, meaning that they were an expansion that was then modified by a later owner. In fact, it appears as though the trimming happened before the current binding, indicating that the running titles were added sometime between the manuscripts creation and the early 17th century when the binding was redone.

One production measure that has caught the attention of many scholars studying manuscripts is the placement of hair and flesh sides of the writing support. Many manuscript producers, at least in continental Europe, tried to follow “Gregory’s rule,” where hair sides face hair sides and flesh sides face flesh sides in the bound quires.¹¹³ AM 346 fol. has a strange relationship with Gregory’s rule—some quires follow it while others do not. As shown in Rastonis’ quire structure, quires 1, 3, 4, 7, and 10 follow Gregory’s rule perfectly, with all the leaves facing like sides (figure 9). Other quires, such as 6, 9, 11, and 12 nearly follow the rule, but have leaves that face the opposite type of writing support side. It appears as though one or two of the leaves, when put into the quire, were put in the opposite way than would be intended, making those bifolia “backwards” in terms of Gregory’s rule. The result of one backwards bifolia is that four of the leaves face opposite support sides while the rest remain facing like sides. Finally, quires 2, 5, and 8 have the writing supports always facing the opposite side, except in the very middle of the quire when the bifolia is facing itself.

From the lack of consistency in the quire building, it could be possible that different people created the quires that make up AM 346 fol., however it is also possible that the quires were formed at random, and simply happened to follow Gregory’s rule in some instances. If the manuscript only had the first two types of quires, ones that follow Gregory’s rule and one that almost do, then I could not make this argument because that could simply be human error playing into the production of this manuscript. Additionally, if the different quire structures aligned with other production features that are visible, then I could argue that this meant that the different producers had different preferences in regards to Gregory’s rule and other features. The quires that follow Gregory’s rule do not have any other clear patterns in regards to production features, and so no significant conclusion can be drawn from this. In order to use this

¹¹³ Þórdís Edda Jóhannesdóttir “Medieval Icelandic manuscripts: Manuscript descriptions and cataloguing,” Class Lecture, Íslensk miðaldahandrit, University of Iceland, March 1st, 2022

information to tie AM 346 fol. to Helgafell there would need to be proof of both types of quire-making visible in other Helgafell-localized manuscripts, and for them to have patterns within the manuscripts.

To date, there is no published information about the core Helgafell group's relation to Gregory's rule. According to Björk Þorleifsdóttir, in her BA thesis on Icelandic Manuscripts, 20.8% of her selected manuscripts did not adhere to Gregory's rule.¹¹⁴ If Björk's sample was representative of all medieval Icelandic manuscripts, then AM 346 fol. is in the minority regarding how the quires were structured. Additionally, Björk specifically looks at how the composition of AM 346 fol. follows Gregory's rule, and found that "[a]lls brutu því 36 blaðsíður af 144 í bága við reglu Gregorys eða í 25% tilvika,"¹¹⁵ (a total of 36 pages out of 144 violated Gregory's rule, or 25% of the cases). She argues that Icelandic bookmakers did not take Gregory's rule as seriously as elsewhere in Europe, and that when the hair was sufficiently scraped off, it became harder for bookmakers to tell which side was hair and which side was flesh. Aesthetically, Björk claims, there was value in having the same sides be open together, but realistically, the vellum was expensive enough that if it was made backwards, then it likely would not be repaired or remade.¹¹⁶

5. Comparison

This section of the project will compare the core Helgafell manuscripts, specifically the core group as defined by the Helgafell project, to AM 346 fol. by looking at tables made by Lea Pokorny that describe in detail the production features used on each manuscript.¹¹⁷ For this project, I have examined the twelve manuscripts that Pokorny has published data on at this point, and use those to compare to AM 346 fol.

Throughout this section I aim to identify the key elements of production that can be seen in the core Helgafell group as well as AM 346 fol. I analyze each production feature and how they compare to each other, and whether this can be useful for localizing AM 346 fol. In the tables below, only the earliest production units of the manuscripts are considered because they are the most likely to have been made at Helgafell, while later production units could have been added elsewhere, and use

¹¹⁴ Björk Þorleifsdóttir, "Af bókfelli. Smásjárahuganir á íslenskum handritum" (bachelor's thesis, Háskoli Íslands, 2003), Pg 42.

Thank you to Pokorny for pointing me to this study.

¹¹⁵ Björk Þorleifsdóttir. *Af bókfelli*. Pg 33.

¹¹⁶ Björk Þorleifsdóttir. *Af bókfelli*. Pg 43.

¹¹⁷ "Handrit til rannsóknar (kjarnahópur)," Stofnun Árna Magnússon.

different techniques. By analyzing the similarities between AM 346 fol. and other core Helgafell manuscripts, I hope to uncover common “unique” traits that they share, based on the idea that the more traits manuscripts share, the more likely they were produced at the same location. The basic data, such as scribes connecting the manuscript to Helgafell and the average size, for the core Helgafell group is found in the following table, table 3. Additionally, the more unique the traits are, juxtaposing them to Icelandic manuscript production as a whole, the more likely the manuscripts were produced in similar fashions at the same location.

Table 3: Overview of Core Helgafell manuscripts

Manuscript	Original Production Age	Average page size	Scribes	Leaves	Content ¹¹⁸
AM 61 fol.	1350-1375	359 x 268mm	H2	157	<i>Jónsbók, Réttarbætur, Hirðskrá, Kristinréttur Árna biskups</i>
AM 73 b fol.	1370-1390	284 x 210mm	H1	4	<i>Ólafs saga helga hin sérstaka</i>
AM 219 fol. and JS fragm. 5 and Lbs fragm. 6 and SÁM 2 and Þjms 176 (AM 219 fol.+)	1370-1380	286 x 207mm	H1	21	<i>Biskupasögur</i>
AM 233 a fol.	1350-1360	Varies largely, tallest: 394 x 214mm	H1	29	<i>Sögur heilagra manna</i>

¹¹⁸ This whole table has been sourced by Pokorny's tables and information on the Helgafell Project website.

"Handrit til rannsóknar (kjarnahópur)," Stofnun Árna Magnússon.; Pokorny

		widest: 388 x 320mm			
AM 238 VII fol.	1350-1375	265 x 177mm	H2	1	<i>Silvesters saga</i>
AM 239 fol.	1360-1370	287 x 203mm	H1	109	<i>Tveggja postula saga Jóns og Jakobs, Jóns saga baptista, Péturs saga postula, Andrés saga postula, Viðræður Gregoríusar</i>
AM 350 fol.	1363	359 x 268mm	H1	157	<i>Jónsbók, Réttarbætur, Hirðskrá, Kristinréttur Árna biskups</i>
AM 156 4to	1350-1375	177 x 132mm	H2	79 (and additions)	<i>Jónsbók</i>
AM 325 VIII 3 a 4to and AM 325 X 4to (AM 325 VIII 3 a 4to+)	1370	294 x 33mm	H1	14 (and addition)	<i>Konungasögur</i>
AM 383 IV 4to	1370-1390	175 x 132mm	H1	4	<i>Þorláks saga helga, Jarðeinabók Þorláks biskups hin elsta</i>
AM 653 a 4to and JS fragm. 7 (AM 653 a 4to+)	1350-1375	247 x 190mm	H2	11	<i>Tveggja postula saga Jóns og Jakobs</i>
ÞÁM 1	1350-1375	Varies largely, tallest: 412 x 255mm	H2	95	<i>Postulasögur, máldagar</i>

		widest: 339 x 282mm			
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Mise-en-page

Table 4: Mise-en-page comparing columns in core Helgafell group and AM 346 fol.

One Column	Two Columns
AM 346 fol.	AM 61 fol.
AM 73 b fol.	AM 233 a fol.
AM 219 fol.+	AM 238 VII fol.
AM 156 4to	AM 350 fol.
AM 653 a 4to+	AM 325 VIII 3 a 4to+
AM 383 IV 4to	SÁM 1*
	AM 226 fol.

*SÁM 1 has one production unit from the fourteenth century, and another later added production unit. H2, one of the two main scribes that worked at Helgafell, has written most of the first production unit, which has two columns. This is not to say that the later production units, written by other scribes and in some places in one column, were not made at Helgafell but are less directly connected to Helgafell as the quires written by the known Helgafell scribe in the correct time period.

Including AM 346 fol. there is an almost even split between one and two columned manuscripts in the core Helgafell group (see table 4). Neither division of text on the page is unusual for Icelandic manuscripts, and they are clearly not directly tied to Helgafell via one fashion over the other. One important restriction in columns to note is the size of the overall manuscript. A smaller manuscript, for example a pocket-sized book, would not likely have two columns because it would be much more cramped and harder to read than one column. It would be futile to judge whether or not AM 346 fol. came from Helgafell based on the number of columns found therein. In addition, AM 346 fol. is smaller than most of the other manuscripts, meaning it would be more cramped to have written it in two columns.

Most of the manuscripts listed above have a larger text area per page than AM 346 fol. More specifically, AM 61 fol., AM 73 b fol., AM 219 fol.+, AM 233 a fol., AM 239 fol., AM 350 fol., and SÁM 1 all have larger text areas than AM 346 fol., some large

enough to fit the whole of this manuscript within them.¹¹⁹ The only two core manuscripts that have smaller text areas are AM 156 4to, and AM 383 IV 4to. Finally, AM 219 fol. +, AM 238 VII fol., AM 325 VIII 3 a 4to+, AM 653 a 4to+ are the closest in text area size to AM 346 fol., with the first three of those having slightly larger text area size, and the last having slightly smaller. Text area information for AM 226 fol. was not readily available for my comparison. In similar fashion to the number of columns per page, text area size largely relies on the size of the manuscript. Text area size, while an interesting comparative factor, would be more useful if there were multiple manuscripts of the same dimensions to compare, but because the core Helgafell group is so diverse in terms of size, it makes sense that the text areas also vary.

Illumination Colors

Table 5: Illumination colors found in core Helgafell group and AM 346 fol.

Manuscript	Bright Red	Dark Red	Light Green	Dark Green	Blue	Turquoise	Yellow	Black	Purple
AM 346 fol.	X	X	X	X	X				
AM 61 fol.	X	X			X		X		
AM 73 b fol.	X	X			X				
AM 219 fol. +	X	X		X				X	
AM 233 a fol.	X	X	X	X	X		X	X	
AM 238 VII fol.									
AM 239 fol.		X	X						
AM 350 fol.	X	X	X	X	X	X	X	X	
AM 156 4to	X	X			X				

¹¹⁹ The average text area sizes for the core Helgafell group range from 28.1 x 20.17mm (SÁM 1) to 13.3 x 9.45mm (AM 383 IV 4to)

AM 325 VIII 3 a 4to +	X	X			X				
AM 383 IV 4to	X	X			X		X		
AM 653 a 4to +	X	X	X				X	X	X
SAM 1	X	X			X	X	X	X	X

Table 5 shows the distribution of the colors used in the illuminations in the core Helgafell group and AM 346 fol. The first five colors from the left are the ones used in AM 346 fol., as shown. These are also the most common colors in all of the manuscripts listed. With the exception of AM 238 VII fol., which has no colorful illuminations in its preserved fragment, all of the manuscripts have dark red in them, in addition to being used in the illuminations is common for rubrics (along with bright red). In addition, all but two manuscripts have bright red colorings in them, showing another common feature. It is noteworthy that none of the colors not found within AM 346 fol. were common among the other manuscripts. This shows that they could be unique to that manuscript, or that they were simply rare at Helgafell.

While there are several core group manuscripts that do not have yellow in them, there are still more that have yellow than either green individually. Based on the fact that AM 346 fol. does not stand alone in any of the colors in its pallet, and that all but one manuscript has matching colors therein, it seems reasonable-- or rather does not speak against-- that AM 346 fol. could be made in the same location as the other manuscripts, because they appear to have had access to the same pigments and colors while illuminating.

Pricking and Ruling

Table 6: Ruling Marks in core Helgafell group and AM 346 fol.

Dry-Point Ruling	Lead Ruling	No Visible Ruling
AM 346 fol.	AM 233 a fol.	AM 73 b fol.
AM 219 fol. +	AM 350 fol.	AM 238 VII fol.
AM 61 fol.		AM 239 fol.
		AM 156 4to

		AM 325 VIII 3 a 4to +
		AM 383 IV 4to
		AM 653 a 4to +
		SÁM 1

Half of the manuscripts that have visible ruling from the core Helgafell group have dry-point ruling, like AM 346 fol. (table 6). The other manuscripts with visible ruling, AM 233 a fol. and AM 350 fol., have lead ruling. The lack of ruling marks visible in the rest of the core Helgafell manuscripts leaves a gap in the information scholars can use to compare AM 346 fol. to the rest of the core Helgafell group. The fact that in many of these manuscripts there are no ruling marks visible does not mean that they were not used, it simply means that they are harder to find or have faded over time. Ruling was essential in keeping the scribes' work straight, and so it is likely that this is just information lost over time, rather than a production feature to be measured against. Additionally, the ruling may have faded due to damage as well as age. If, for example, the manuscript became wet, the vellum would partially return to its original softness and lose the ruling marks. If the manuscript was pressed tight, as well, this could cause the ruling to fade due to the stress on the writing support.

Table 7: Pricking Marks found in Helgafell group and AM 346 fol.

Slit-Like Pricking	Round Pricking	Both Slit-Like and Round
AM 73 b fol.	AM 653 a 4to +	AM 346 fol.
AM 219 fol. +		AM 61 fol.
AM 233 a fol.		
AM 238 VII fol.		
AM 239 fol.		
AM 350 fol.		
AM 156 4to		
AM 325 VIII 3 a 4to +		
AM 383 IV 4to		
SÁM 1		

The pricking (table 7), on the other hand, is mostly slit-like. There is only one manuscript with only round pricking in its initial production unit, and only one other

manuscript besides AM 346 fol. that has round pricking marks in addition to the slit-like pricking marks. Due to the fact that AM 346 fol. only has one production unit, all of the pricking was done at the same time, and the round holes become the outlier in the manuscript. The similarities between AM 345 fol. and Helgafell in terms of pricking method are strong because there are more manuscripts with slit-like pricking marks rather than round ones in the core group. Also, both round and slit-like pricking marks are found in the Helgafell manuscripts, meaning it is possible that AM 346 fol. was created at Helgafell. Finally, AM 61 fol. also evidencing both types of pricking marks shows that this may have been done at Helgafell, and perhaps it shows a stronger link between these two manuscripts that needs to be further explored.

In both pricking and ruling, AM 346 fol. is accompanied in style by AM 61 fol. This closeness could be due to the production in this aspect being done by the same person, or by people trained at the same location. Both of these hypotheses allow for AM 346 fol. to have been reasonably made at Helgafell, despite falling into the minority with regards to these two production features.

The variation in pricking could have a few explanations. The first explanation would be that different people, with different tools, pricked the vellum for these manuscripts. Since one manuscript requires many sheets of vellum, it is not out of the question that different people would prepare vellum to be made into the same manuscript. Similarly, it could be the same person simply using different tools for different pieces of vellum. The variation in pricking could also mean that the vellum itself was sourced from different places, pre-produced, and therefore pre-pricked. There is no evidence to support that vellum was made off-site, but it seems futile to base the localization of AM 346 fol. on varied pricking holes alone. Since there are other manuscripts with a variety of pricking marks, AM 61 fol., specifically, that have been reasonably deduced to have been made at Helgafell, it lends a case for AM 346 fol. to have also been made there, even with multiple types of pricking.

Running Titles

Table 8: Inclusion of Running Titles in core Helgafell group and AM 346 fol.

Includes Potentially Contemporary Running Titles	Does not Include Running Titles
AM 346 fol.	AM 61 fol.
AM 350 fol.	AM 73 b fol.
	AM 219 fol. +

	AM 233 a fol.
	AM 238 VII fol.
	AM 239 fol.
	AM 156 4to
	AM 325 VIII 3 a 4to +
	AM 383 IV 4to
	AM 653 a 4to +
	SÁM 1

The inclusion of contemporary running titles puts AM 346 fol. in the minority of manuscripts (table 8). The only other manuscript in the core group that has running titles is AM 350 fol. Seeing as neither the running titles in AM 346 fol. or AM 350 fol. can be proven to have been written contemporaneously, it is possible that in the original production, there were no running titles. Additionally, it is possible that there were running titles in some of the other manuscripts, but they have been trimmed off over time. Trimming manuscripts was very common, and many running titles from AM 346 fol. were lost in this same fashion. Alternatively, they could be original with touch ups by an additional scribe. Running titles are not overly common, though, with most of the manuscripts not sporting them, be that from lack of original inclusion or from later adjustments.

Seeing that AM 346 fol. is a law book, it makes sense that there would be running titles. AM 350 fol. is also a law book, providing another reason why these two manuscripts would be the ones to include running titles. It is unlikely that it was made for regular, straightforward reading, and so having running titles better allowed users to find the section they needed. While others of these core manuscripts are also law texts, they also have other purposes, as shown in the next subsection. The fact that some of the running titles were added later, not necessarily much later, but it is clearly a different ink, could mean that they were used enough that they had to be redone, like some of the rubrics.

Content

Table 9: Content Related to Law in core Helgafell group and AM 346 fol.

Law Content	Religious Content	Other Content
AM 346 fol.	SÁM 1	AM 325 VIII 3 a 4to +
AM 156 4to	AM 73 b fol.	

AM 350 fol.	AM 219 fol. +	
AM 61 fol.	AM 233 a fol.	
	AM 238 VII fol.	
	AM 239 fol.	
	AM 383 IV 4to	
	AM 653 a 4to +	

As previously discussed, AM 346 fol. is a law book with all law-related texts. Most of the other core Helgafell manuscripts are not as directly related to law, though there are ties within all of them due to the general nature of the sagas.¹²⁰ There are three other manuscripts with solely law related texts in the core Helgafell group (table 9). The majority of the manuscripts from the core group are religious, with only one manuscript not fitting into the law or religion types: AM 325 VIII 3 a 4to +. This manuscript has *konungasögur*, which do have heavy ties to law but are not specifically lawbooks as AM 346 fol. and AM 156 4to are.

As other scholars have previously argued, the content of the manuscripts is not the most reliable way to localize them. I only mention the content here to draw parallels between the core group and AM 346 fol. that might have been otherwise overlooked. Particularly with the already close relationship between AM 346 fol., AM 61 fol. and AM 350 fol., the content being as similar as the production features (colors, running titles, pricking) allows for more analysis to be drawn. It is possible that, for example, the two manuscripts were written by scribes with the same production knowledge, and therefore the two manuscripts came out similar. The two manuscripts were not written by the same scribes, but if they had access to the same training, then it is more likely that they created similar manuscripts.

Overall, there are a wide variety of manuscript production features shown in the above manuscripts. In fact, none of them have the strongest ties to one another solely based on production, and none of them are exactly alike. Therefore, AM 346 fol. not having been produced exactly like any of the other known Helgafell manuscripts does not rule out that it was produced in the same place. A final decision will then have to rely on the differences between Helgafell and other manuscript production centers, and

¹²⁰ The most common themes of the sagas in the core Helgafell group are religious. The main characters often encounter law related predicaments or feuds. See table 2 for a more detailed list of sagas in the core Helgafell group.

if all the production features within AM 346 fol. can be found at Helgafell. That, however, lies outside the scope of the present study.

6. Other Manuscripts Connected to AM 346 fol.

Table 10: Data for Manuscripts Loosely Related to Helgafell

Manuscript	Original Production Age	Average page size	Leaves	Content
AM 399 4to ¹²¹	1330-1350	224 x 166mm	74	<i>Guðmundar saga biskups</i>
AM 122 a fol. ¹²²	1350-1370	350 x 250mm	110	<i>Sturlunga saga</i>

By looking at other manuscripts that have uncertain origins, but are still connected to AM 346 fol., this project provides additional perspectives on ties between production features, scribal hands, and potential locations where this book was produced (table 10).

The first related manuscript is AM 399 4to., which is believed to be the same hand as AM 346 fol.¹²³ This claim is supported by my investigation of the two scripts, which have many similarities. Unfortunately, there are other dissimilarities between the two manuscripts. There are some examples of slit-like pricking marks but few, if any, are round like in AM 346 fol. AM 399 4to was written between 1330 and 1350, making it the same time frame as AM 346 fol., and is written in one column.

The second manuscript, AM 122 a fol., has been tied to AM 399 4to. by scholars arguing that they have the same hand.¹²⁴ It is written in two columns, and four scribes have been identified as working on this manuscript, creating more difficulties in localizing the production. Also, AM 122 a fol. appears to have finer penwork in the illuminated initials and not as many colors as other manuscripts from Helgafell, judging by the images on handrit.is, though there are colored initials and red capitals

¹²¹ "AM 399 4to," Handrit.is, accessed September 6, 2022, <https://handrit.is/manuscript/view/en/AM04-0399/0#mode/2up>.

¹²² "AM 122 a fol.," Handrit.is, accessed July 26, 2022, <https://handrit.is/manuscript/view/is/AM02-0122a/201#page/mode/2up>

¹²³ "AM 346 fol.," Handrit.is.

¹²⁴ "AM 399 4to," Handrit.is.

on pages 91r and 93v. The vellum of this manuscript is poorly preserved, which makes it more difficult to look for ruling and pricking marks, though there are round pricks found on some of the better-preserved pages. AM 122 a fol. is dated to around 1350-1370, once again fitting in the time period of the other Helgafell manuscripts including AM 346 fol.

A particularly noteworthy fact about AM 122 a fol. is that before the seventeenth century, it could have been housed in the Westfjords. According to a marginal note on leaf 70bisv, there is a connection between this manuscript and Bær in Króksfjörður. Króksfjörður is on the southern side of the Westfjord peninsula, relatively close to where the Helgafell monastery would be, especially by boat. Part of the connections regarding Drechsler's Barðastrandarsýsla grouping was that all the connected production sites were around the fjord created between the Westfjords and Snæfellsness peninsula, called the Breiðafjörður region.¹²⁵ Drechsler has outlined the three main production centers in the Breiðafjörður region that the Barðastrandarsýsla group most likely worked with, and those include Helgafell along with a workshop near Skarð á Skarðströnd and the workshop that likely produced Perg fol. 5., which remains comparably understudied.¹²⁶ In addition to this grouping, Drechsler argues that the scribes and illuminators for these production sites were highly mobile and often moved between the three, if not more, sites. Specifically, he argues that some scribes were more mobile than others. For example, he proposed that H1 worked at Helgafell more exclusively while H2 didn't work at Helgafell full time and likely went to other Barðastrandarsýsla group sites.¹²⁷ Drechsler assigns H1 with the title "Helgafell master," and asserts that all the other scribes (of which there were sixteen) were working under their direction or influence, potentially excluding H2.¹²⁸ Taking mobility into account when considering if AM 346 fol. was produced at Helgafell allows for the possibility that the Helgafell monastery was an "open scriptorium, at which scribes and artists worked in various constellations on different campaigns of manuscripts,"¹²⁹ as Drechsler put it. Stefán Karlsson also addresses the problem of moving scribes in his article "Localization and Dating of Icelandic Manuscripts," in which he argues that just

¹²⁵ Drechsler, *Illuminated manuscript production in medieval Iceland*. Pg 226.

¹²⁶ Drechsler, *Illuminated manuscript production in medieval Iceland*. Pg 230.

¹²⁷ Drechsler, *Illuminated manuscript production in medieval Iceland*. Pg 233.

¹²⁸ Drechsler, "Making manuscripts at Helgafell in the fourteenth century." (PhD Dissertation, University of Aberdeen, 2017). Pg 29-10.

¹²⁹ Drechsler, "Making manuscripts at Helgafell in the fourteenth century." Pg 2.

because the scribe is known does not mean that the location is, because of their movement.¹³⁰

An open scriptorium with severely limited boundaries would make localizing manuscripts nearly impossible based on scribes and illuminators. It seems less likely that the producers of the vellum, those who worked on the writing supports before they were inked, would be traveling to alternative production centers than scribes or illuminators. Due to the sheer number of materials and tools used to make manuscripts, it seems futile to assess the idea of parchment producers being one of the traveling artists Drechsler describes above. Gullick also looks at who was making what parts of the manuscript; he claims that professional scribes and monastic scribes had different work. Monastic scribes were more likely to have pricked and ruled their own parchment, while professional scribes could have ruled and pricked parchment written into their contract so that they spent their time writing and not undertaking the laborious effort of preparing parchment to write on.¹³¹ As an art historian, Drechsler's focus was surely on the physical illuminations and decorations of the Helgafell manuscripts, not the whole manuscript as history and as a piece of art. By looking at the production features, this project works in tandem with traveling manuscript production because it is important to keep in mind that the other stages of manuscript making could be done by traveling artists and scribes.

However, an open scriptorium could also fit the way that AM 346 fol. was created, seeing as the manuscript has multiple different types of pricking. Similarly, other manuscripts that are accepted to have been produced at Helgafell have widely varying production features that could be accounted for by many local artists and scribes coming together to make manuscripts together. In the fourteenth century, when AM 346 fol. was written, the number of scribes connected to Helgafell did rise, which Guðvarður Már Gunnlaugsson claims could mean that the *scriptoria* there simply had good connections, meaning that they could have visiting or traveling scribes.¹³² In his chapter "How Fast did Scribes Write?" Michael Gullick claims that "[t]he single most important factor in monastic book production was the availability of exemplars," which meant that "[a] scribe could be sent to copy a manuscript where one was available; this would have the advantage to the owner of the exemplar of running no risk of losing the manuscript."¹³³ Gullick's proposition that scribes would be sent to other places so that

¹³⁰ Stefán Karlsson, "Medieval Icelandic Manuscripts," Pg 140.

¹³¹ Gullick, "How Fast Did Scribes Write?" Pg 40.

¹³² Guðvarður Már Gunnlaugsson, "Voru scriptoria í íslenskum klaustum?," Pg 192-3.

¹³³ Gullick, "How Fast Did Scribes Write?" Pg 42.

they could copy the manuscripts pairs well with the other arguments of traveling scribes.

7. Conclusion

Overall, it is irresponsible to try and definitively localize a manuscript without having concrete, written evidence that is contemporary to the manuscript's writing. By looking at production features and scribal hands, scholars can make educated guesses on where and by whom each manuscript was made. In the case of AM 346 fol., the production features do align with other manuscripts that are believed to have been produced at Helgafell in the 14th century. Every production aspect of AM 346 fol. can be accounted for in other manuscripts that have been attributed to the monastery at Helgafell. While none of the manuscripts are an exact match to AM 346 fol., there are hardly any examples of exact matching between the other manuscripts in the core Helgafell group either. There can be common threads that all the manuscripts share, but seeing as there are thus far no such threads found, the use of all the same basic principles can be used as a sign that AM 346 fol. could have been produced at Helgafell.

Due to the fact that the scribal hands alone were enough to prove to many scholars a tight correlation between Helgafell and AM 346 fol., it seems fitting that the inclusion of production features in the discussion allows for the bond to become closer between the two entities. AM 346 fol. may not have a clearly defined past, but due to its many similarities in content, form, and production, it cannot be ruled out that it was produced at Helgafell.

For future research on AM 346 fol., and the field of Icelandic manuscripts as a whole, it would be highly beneficial to study the codicology of more manuscripts around Iceland. As outlined in earlier sections, more research on tacketing, line counts, and running titles is needed to be able to draw more secure conclusions on localization and other areas of inquiry. If research based on production features spreads, then scholars will not only be able to compare the production features to those of the same location, but also to those of other locations in Iceland allowing the creation of a broader picture of Icelandic codicological functions. Just because the production features at Helgafell do not yet have strong, visible similarities does not mean that this will be the case for all of Icelandic production sites. If, for example, further research into the production features at Hólar reveals that all of the manuscripts have the same features as AM 346 fol., it will be easier to tie this manuscript to Hólar than to Helgafell. I hope that scholars continue down this path of research and that the

production of manuscripts continues to be studied and more fully understood. My research has been limited because of the lack of information on production features outside of Helgafell. Further research on other production sites is needed to give a more definite answer on whether or not AM 346 fol. was produced at Helgafell, but based on the evidence, it is well within the realm of possibility that this manuscript was created there.

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