

## CHAPTER 19

# Mapping Environmental Memory Through Literature

## A Conversation with Emily Lethbridge and Steven Hartman

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### Abstract

This conversation with Emily Lethbridge (Árni Magnússon Institute for Icelandic Studies, Reykjavík) and Steven Hartman (University of Iceland) highlights transdisciplinary research in literature and sustainability through the environmental and

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digital humanities. The insights that have come out of their separate projects inform work in the fields of archeology, geology, and natural-cultural heritage in Iceland and the greater North Atlantic. In these exchanges, they each speak to the role of literature and culture in their shaping of their respective programmes of research and collaboration.

## Introduction

Parker Krieg (PK): When thinking about Iceland and literature, I'm always reminded of the poem by Jorge Luis Borges, 'Nostalgia for the Present':

At that precise moment to himself the man said:  
 What would I not give  
 to be with you in Iceland  
 under the grand immobile daytime  
 and share this now  
 like sharing music  
 or the taste of fruit.  
 At that precise moment  
 the man was together with her in Iceland  
 (1999: 447).

For many in the twenty-first century, Iceland similarly occupies an almost mythological location in the cultural imagination as a place of timelessness, where ancient and modern coincide. The sagas likewise stand at the intersection of ancient and modern literature, 'on the boundary between history and fiction', transmitting cultural experience, information, and myth to present readers (Lethbridge 2020: 26). Borges' poem, by the same token, reflects literature's ability to collapse time and distance into a single moment of shared experience: sound and taste under the midnight sun. This 'nostalgia for the present' has implications for sustainability. After all, for the foreseeable future, the literary travel imagined in the poem is more sustainable than the air travel that makes it possible to have the direct experience so prized by environmental

culture. Yet Iceland's recent tourism boom, whose ecological footprint and societal impacts are overshadowed by spectacular geological formations and landscapes, is not entirely new.

In your own ways, each of you highlights the ways that Iceland and its culture has been globally connected for centuries, as are the environments that populate these stories. Emily Lethbridge, your Icelandic Saga Map (ISM) project makes present the environmental past in the Icelandic sagas, and de-mythologizes the sagas so as to make their knowledge accessible to contemporary readers. You've even gone on to develop the notion of a 'narrative stratigraphy' of Iceland, working with geologists on the environmental history of place-names, and attempting to match written records of environmental catastrophe with the geological record itself. On a separate trajectory, Steven Hartman has crossed paths with the sagas in your joint publication (Lethbridge and Hartman 2016). At the same time, Steven Hartman, your work extends to developing international research platforms that integrate the environmental humanities into sustainability studies through projects such as Inscribing Environmental Memory (IEM), ICECHANGE, and the UNESCO project, BRIDGES: Building Resilience in Defense of Global Environments and Societies. Emily and Steven, thank you for taking the time for this interview.

### **Part One: Emily Lethbridge**

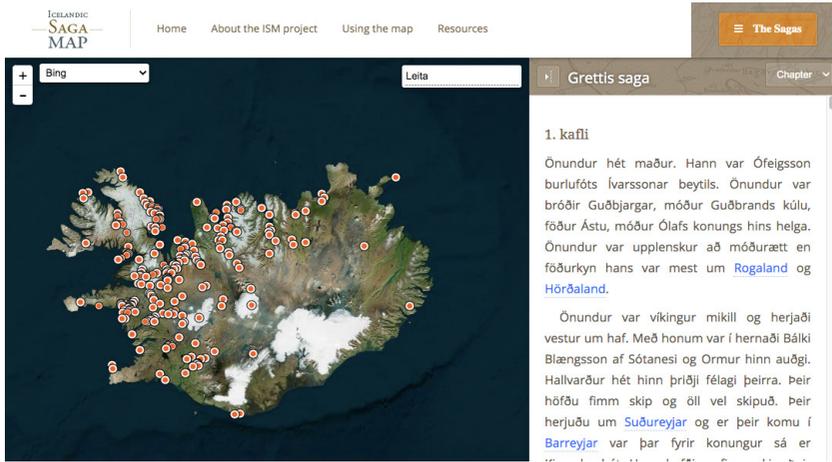
*PK: What kind of information have you uncovered from the sagas? How have they inspired you to rethink literature and sustainability?*

Emily Lethbridge (EL): One of the main things I have uncovered in developing the project is just how complex and processual the nature of the relationship between saga-place and its equivalent in the contemporary landscape is. It is, in fact, much more difficult than one might assume at first, from a theoretical perspective and in reality, to make a one-to-one connection between a place named in a saga and what is assumed to be the 'same' place in the contemporary landscape. In some cases, it is not possible at all. This might be because of landscape change, or place-names

being lost or transferred to other locations when farms were abandoned or moved, for example, or younger places being given older names on the basis of what people read in the sagas. Marking places named in the sagas as dots on a map that correspond to locations in the contemporary Icelandic landscape is arguably misleading in the way that it suggests a straightforward continuity between past and present. The reality is much more opaque and all the more interesting for that.

Questions of literary genre come in here (to what degree are the sagas and the world they present fiction/fictional, or historical, or something in between?), as well as the political, ideological, and even economic dimensions of cultural heritage landscapes. In some instances, one can see how individuals or communities might have a vested interest in a specific place in today's landscape being identified as one and the same place in the sagas, for instance. But landscape is never passive or static, as archeologists and anthropologists such as Christopher Tilley (1994) and Barbara Bender (1993) remind us—as well as cultural geographers such as Denis Cosgrove (2008). It is a social and cultural construct that is always in flux, mutable, subjective, and at the heart of questions concerning identity and perspective. In this light, trying to better understand the stratigraphy of story and reality that have accumulated and coalesced over many centuries is a fascinating endeavour.

It can be a challenge trying to separate out the multiple layers in order to work out how people, story, and landscape have acted on each other in an Icelandic context over a period of one thousand years or so. But charting how information regarding the natural world, early Icelanders' perceptions of it, and their place in it (as well as their response to environmental change), as encoded in the sagas, was subsequently passed on from one generation to another for as long as these stories were recopied and retold—right up until the late nineteenth century—is also illuminating from the perspective of sustainability. Themes and information in these stories continued to be relevant to later generations of Icelanders: the stories were a means of communicating different kinds of knowledge at the same time as being entertaining.



**Figure 19.1:** Icelandic Saga Map, *Grettis Saga*. Source: Icelandic Saga Map project (<http://sagamap.hi.is>).

*PK:* How would you describe the Icelandic Saga Map project?

*EL:* The Icelandic Saga Map project is a digital project that enables the spatial reading of the medieval Icelandic sagas (*Íslendingasögur*, *Sturlunga saga*, *Landnámabók* and other medieval Icelandic works) as well as other related works (such as nineteenth-century accounts of travel to Iceland and visits to saga-sites). The website interface (<http://sagamap.hi.is/>) displays text on one side of the screen and a map on the other. Once the user has selected a saga, the saga text and the accompanying map appear. Toponyms in the text are hyperlinked to the map where all places mentioned in the saga are displayed. When a toponym in the text is clicked on, its location is highlighted on the map; when a toponym on the map is selected, hyperlinks appear that direct the user to all mentions of that place in the text corpus (saga/other work and chapter number).

On a basic level, geography (who lives where, how journeys made by saga characters lie in the landscape, where this or that fight happens, where saga characters are buried, etc.) is essential to the narrative mechanics of the sagas. Printed editions and translations often contain maps as appendices to help readers who are not familiar with Icelandic geography first-hand. But one great

advantage of the ISM digital map interface is the opportunity it provides for layering spatial data, and thus enabling a more holistic interrogation of the role of places in these narratives as a corpus than is possible otherwise. When several sagas are selected simultaneously, for example, the geographical overlap between them is clearly displayed, and we get a sense of how some places more than others might be seen as ‘nodes’ in saga spatial networks.

*PK: How does this relation of narrative and place change our understanding of the sagas and their place in literary and environmental history? What might it tell us about Iceland’s past and present relationships in the global circulation of culture?*

EL: I hope that the ISM project has helped those outside of Iceland who study the sagas or who enjoy reading them to navigate these rich narratives intellectually by showing how the arcs of their plots are so closely tied to the landscape. Also, that the project has helped to underline just how crucial the landscape itself was in the transmission of these stories over many centuries: I do think this is something that has been generally underplayed and not really researched in depth. I see the tradition of nineteenth-century saga pilgrims writing about saga-sites on the basis of their own experiences of places they were shown to be another highly significant and influential part of the history of the sagas’ transmission.

Demonstrating in a visual way via the map interface how the sagas are rooted in the landscape I think helps to emphasize the concrete nature of human–environment relations that are represented in these stories: people are tied to place in a very explicit way, and the overall sense is of reciprocal influence between the settlers and their descendants, and the land they claimed and worked. Another dimension here is the way that place-names were a crucial source for saga-writers in many instances: place-names contained kernels of narrative which were worked up in longer form by those who put the sagas down in writing. Whether or not the longer written interpretations of these place-names have their origin in any historical reality does not really matter—the interesting thing here is how the landscape preserved and prompted storytelling in an active way.

With regard to global perspectives, it's worth remembering that there are many places in Europe and beyond that crop up in the sagas: although the default map view is set so that Iceland fills the screen, if you zoom out you will see places around the world that appear in sagas. There are places in North America that feature in the Vinland sagas (*Eiríks saga rauða* and *Grænlandínga saga*); the outlaw saga, *Grettis saga Ásmundarsonar*, ends in Constantinople; and many other saga heroes travel to other Scandinavian countries or to the British Isles. So, these narratives have a significant international component: Iceland and the stories of Icelanders in the sagas are part of a bigger, connected whole.

*PK: The mapping project had you practically living in a van, travelling around Iceland for some time...*

*EL: Yes, I actually lived on my own in a Land Rover ambulance for a whole year in 2011 while I travelled all around Iceland exploring saga-sites, contextualizing them in the wider landscape I was becoming familiar with, and collecting local knowledge about places associated with sagas and saga characters. It was in fact the year of travelling and reading sagas in their local settings that gave me the idea of building the Icelandic Saga Map: as I travelled, I was ever-more attuned to how sagas overlapped geographically with the same places appearing in many sagas. I wanted to find a way of displaying this overlap visually, thinking that this was a perspective that is hard to appreciate when one reads the sagas one at a time at home or in the library, as discrete narratives rather than chapters of a bigger whole.*

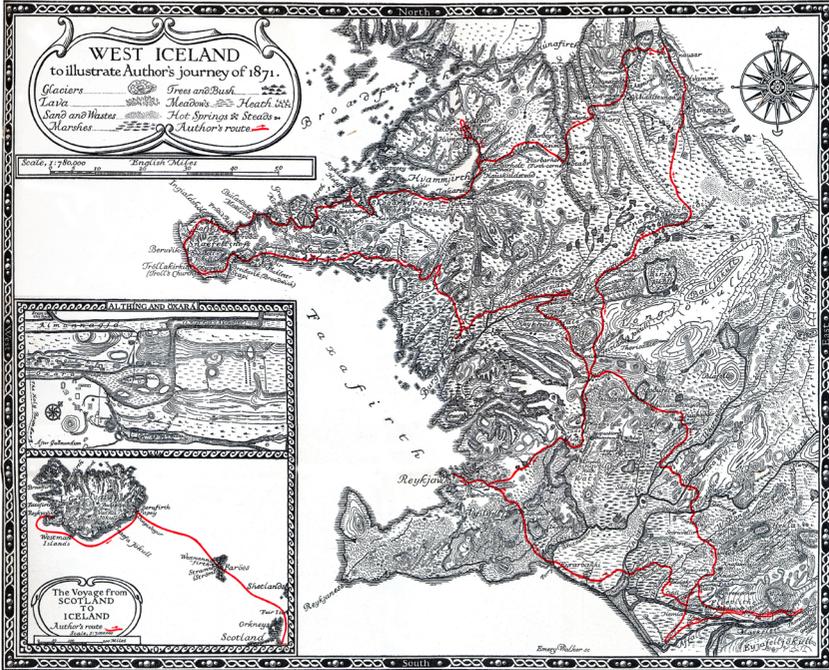
As I travelled, I also began to appreciate the crucial role that the landscape and place-names played in transmitting saga narratives alongside their written transmission in manuscripts, from medieval times to the late nineteenth century. Access to the narratives, what we might call 'saga literacy', was acquired by Icelanders in indoor contexts and outdoor contexts in a complementary and reciprocal way. From the time of the sagas' written composition, Icelanders would have become familiar with the saga narratives in the form we know them through reading manuscript copies of the sagas indoors or listening to someone read aloud from a manuscript

during the winter ‘*kvöldvaka*’ (evening wake). They would thus become knowledgeable about saga geography and places on the basis of these stories (i.e. what happened where, presumably especially in cases where stories were local). This knowledge was reinforced (even put to use in a practical sense to aid navigation) when working or travelling outdoors: in this context, landmarks and place-names encountered linked physical place to the narratives read and told. I have written about this in my 2016 article [PK: See Lethbridge 2016]. So, as well as helping readers to find places named in sagas and thus to follow the spatial twists and turns of their plots more easily, the ISM interface as a whole enables website users to gain a sense of how the landscape preserved and communicated saga narratives—itsself a type of palimpsest, a surface that has been written on over and over again.

*PK: How did the project come about? How did your research carry you from medieval literature to environmental issues?*

EL: I had already learnt Old Norse-Icelandic as a student and got my modern Icelandic up to speed by working on a dairy farm in north Iceland for several periods of a few months at a time in 2008, 2009, and 2010. I conceived the ‘Sagasteads of Iceland: A 21st-century Pilgrimage’ project while I was on the farm after rereading sagas set in that area and realizing as I got to know the area that most of the places in them were still ‘there’ in the landscape today, farms named in the sagas were still working farms today.

The Sagasteads project was akin to anthropological fieldwork in some senses, a kind of phenomenological ‘literary fieldwork’. Another inspiration that bridged medieval and modern periods for me, and that was an important organizing force behind the project, was the tradition of foreign travel-writing on Iceland—in particular, English-language accounts of travel and descriptions of saga-sites by nineteenth and twentieth-century ‘saga pilgrims’ such as William Morris (1911). Saga literature and all things Icelandic/Northern became increasingly popular in Britain and North America throughout the nineteenth century, and Morris was one of many visitors who travelled to Iceland in order to see and experience places named in the sagas for themselves.



**Figure 19.2:** William Morris' Map of Iceland. Source: William Morris Archive, available at [http://morrisedition.lib.uiowa.edu/Icelandic\\_CollectedWorksv8\\_map.jpg](http://morrisedition.lib.uiowa.edu/Icelandic_CollectedWorksv8_map.jpg).

The name of the project was chosen in homage to a wonderful book called 'The Sagasteads of Iceland' published in 1899 by William Gershom Collingwood and Jón Stefánsson. I remember stumbling across a copy of this book in the open stacks of the Cambridge University Library when I was a BA student and being captivated by the beautiful watercolour and pen-and-ink sketches of saga-sites and retellings of saga narratives. Throughout the year of my saga-site explorations, I used this book as another filter or lens through which to view the landscape and assess change and continuity over time. Morris's 1871 and 1873 accounts (Morris 1911), and Collingwood's and Jón Stefánsson's 1899 book, are among the travel books that have been geo-referenced and added to the ISM website. It's interesting to see where they (and others) went, and to compare how they described the same saga-sites. For me, being in the landscapes, trying to trace connections between

texts and places, experiencing places at the height of summer in 24-hour-daylight, and in mid-winter—in the dark and in fierce weather—that gave me insights into the portrayal of life in Iceland in a way that I could never otherwise have accessed. Working on the farm, too, helped me to better understand the reciprocal and cyclical relationship between farmers, the land they work, and the livestock and other animals that their lives are founded on.

*PK: Your work engages physical locations, textual interpretation/translation, and digital technologies. What are the challenges (practical, conceptual, institutional, societal) of working across these contexts?*

EL: Practical challenges include—inevitably—funding and time. Time is perhaps my biggest practical (and societal) challenge right now as I have a young family, and leaving my 2 year old and 4 year old at home with their dad for any extended period of time while I disappear off into the remoter parts of Iceland to do fieldwork isn't really an option. The Sagasteads project was funded by small grants I got here and there: from the British Academy, and from businesses, and I learnt a fair bit about how to market an academic project for a more general audience then.

The technical development of ISM and the hugely time-consuming work geo-referencing texts has been funded by various project grants from the University of Iceland, Rannís, and most recently, as part of a bigger National Science Foundation-funded project on digital infrastructure called dataARC [[www.data-arc.org](http://www.data-arc.org)]. I've been lucky to have been awarded project grants that have enabled me to continue developing the digital resource and my research, and I've learnt a lot from others I've worked with, particularly on the technical side. It helped a lot too that the computer programmers I've collaborated with had humanities backgrounds as well as being excellent programmers, so they had no difficulties in understanding where I wanted to go with the saga corpus data, and of course, had many excellent ideas themselves that wouldn't have occurred to me. Not having the programming background myself has been frustrating at times, and while I try to learn bits and pieces, I would love to have more time to devote to this. One institutional challenge

I've come up against (and I know that others working on digital humanities projects have too) is the fact that it is hard to get concrete credit for digital projects in the academic evaluation framework. You get points for publishing but not for curating datasets and digital resources. This is rather unfair in many respects, not least because of the huge amount of time and editorial work that goes into generating and maintaining digital data to a high standard. It's not unlikely that the ISM website has had a much greater impact worldwide than my published research, which only a small number of academics will probably ever come across.

*PK: What did you find rewarding in working in the landscape?*

EL: As well as a better understanding of the subject I was researching and gaining inspiration from being in the landscape, I loved meeting people and learning from them. I talked to everyone I came across—at petrol stations, in local grocery shops—and I knocked on a lot of farmhouse doors. People were genuinely interested in the project, in my story and what I was learning, in the Land Rover, and they often went out of their way to help me even when I turned up unannounced. They showed me places themselves and introduced me to others who might have relevant information... they also often invited me in for coffee and cakes, and even fed me hearty meals sometimes (which was always welcome!). My Icelandic improved a lot, and I began to feel that I was building relationships with people all around the country and, in that way, finding my place in Icelandic society. Once I moved to Reykjavík and started working there, I trained with the Mountain Rescue Service (Björgunarsveit), and that gave me regular opportunities for long weekends in the mountains in all conditions: this also helped me to build up and extend my mental mapping of Icelandic landscape, environment, and narrative intersections.

*PK: Do you have any advice (practical or otherwise) for emerging scholars who are hesitant about interdisciplinary fields and unconventional projects?*

EL: It's always good to talk and to use opportunities to hear about the experiences that others have had, to learn from the challenges

that they have encountered. People are generally very willing to share details about how they managed to develop projects, the many stages involved and the work that went into turning an idea into a reality. I see it as the duty of more established scholars to respond constructively to requests for advice or support that emerging scholars may have. So, it's always worth sending an email to make contact, although when you're a student or in the early stages of your career, you might feel shy about doing this. With regard to collaborating with scholars outside your own field, I think one key thing here is to try to identify a specific area of overlap or mutual interest, and to develop concrete research questions and methods. Interdisciplinary collaboration can require patience too: you have to be pragmatic and flexible—for example, when trying to explain something that is of paramount importance to you, intellectually, but that does not necessarily seem significant to others because they have a different intellectual background or foundations.

*PK: What is next for ISM? What other questions do you hope to address?*

EL: Re. ISM development. Right now we are adding new texts to the database, and a PhD student at the University of Iceland/Árni Magnússon Institute for Icelandic Studies has been working hard at inputting information about places associated with saga manuscripts so we can add that as a new 'layer.' This data will enable fantastic new visualizations and analysis of what sagas were being copied or read where in Iceland from the medieval period to the nineteenth century, and how that relates to places that are named in the sagas. It will also show the journeys that individual manuscripts made in space and time. I'm incredibly excited about this, and it's been on my ISM-wish list for years: another dimension of the place/text cross-over, geography as a key to narrative transmission.

*PK: You are now involved in launching a new place-name project... what can place-names tell us about environmental history, heritage, and sustainability?*

EL: Place-names can tell us a great deal about these themes and are an important source for any historical consideration of

landscape and landscape change. I've been Head of the Department of Onomastics at the Árni Magnússon Institute since 2017 and, since starting, one major aim was to make the place-name archive we have in our care open and accessible to everyone in digital format. The archive comprises around 14,000 documents that preserve registers of place-names for nearly every farm around Iceland, along with detailed landscape descriptions, etymological information, notes about local folk traditions associated with landmarks and place-names, and detail about farming practices among other things. Some of the documents run to dozens of pages and include hundreds of toponyms. It's an extraordinary collection of documents for many reasons: its incredible richness, its comprehensiveness, its enormous potential for detailed comparative place-name research and, not least, for the light it can shed on the environmental history of Iceland from the early twentieth century to present times—a century or so that saw more change with regard to farming technology and techniques and landscape utilization than the whole millennium that preceded it. The collection is now digitized and searchable at <https://nafnið.is> (also at <https://nafnid.is> if your computer doesn't have Icelandic characters).

Place-names are protected in Iceland by law as part of Iceland's cultural heritage, and a place-name committee appointed by the government ensures that 'good practice' is followed when new place-names are created. One of our departmental roles is to give people advice with regard to new place-names and conduct research using various historical sources if disagreements arise about place-names (e.g. over location, spelling, or variants). On the subject of disagreements, place-names, and environmental history, I used the Nafnið.is database to find and analyze examples of place-names that begin with the element 'Þræta', which means 'dispute' or 'quarrel' in Icelandic. I found hundreds of examples (e.g. Þrætutunga, Þrætupartur, Þrætuspotti, Þrætustykki, etc.) and it was striking that, more often than not, the location of these place-names' referents was on a boundary between properties. Many toponyms give us insights into the socio-economic history of places, and here we can infer that these patches of borderland between farms were so-called because neighbouring farmers

fought over them and the resources they yielded at points in time: perhaps livestock strayed and grazed where they should not have, or one farmer mowed a patch that another considered to be on his side of the boundary. Especially where these patches of land are not extensive, this says a lot about the value, historically, of every corner of land an Icelandic farmer had access to and utilized to make hay to support livestock over the long winter period (the medieval law-code *Grágás* decreed that farmers could not keep more livestock than could be fed during the winter, and the failure to adhere to this legal requirement sets off feuds in a number of sagas). Although Iceland in recent years has had one of the highest GDP per capita figures in Europe, life for many Icelanders right up until the early twentieth century was very hard and directly dependent on environmental conditions, since it involved eking out a subsistence living on the land.

There is a long-standing tradition of local interest in place-names and place-name history in Iceland, and thousands of people around Iceland contributed information about toponyms known personally to them when organized collection of the material was conducted during the twentieth century. Although around two-thirds of Iceland's population now lives in and around Reykjavík, I think it's likely that most Icelanders will find relatives who were informants in the database if they look up farms where members of their family lived or had connections in previous generations. It also makes research easier for those who already use the data for different purposes (e.g. in archeology, local government/administrative planning, local history, etc.). We hope that the database will stimulate interest among those who have not had access to this material. I'd love to see projects developed that involve school children looking over documents in the collection together with grandparents in order to identify which place-names are still in use, which have fallen out of use, and recording new place-names, for example. I think that would be a fantastic way of encouraging the youngest generation to establish a connection with the Icelandic landscape and nurturing their sense of responsibility for the land and respect for its natural resources. It goes without saying that this is vital for the future.

## Part Two: Steven Hartman

*PK: How does an interdisciplinary project like Inscribing Environmental Memory (IEM) come together? How was it conceived?*

Steven Hartman (SH): In 2011, together with Anna Storm and Sverker Sörlin, I had the pleasure of organizing what I'm pretty sure was the first broadly inclusive interdisciplinary environmental humanities symposium in the Nordic countries. It was certainly one of the first major meetings in Europe defined by a concerted effort to envisage and map out new pathways for better integrating diverse streams of environmental studies based in the humanities, long organized (before then) within separate epistemic communities such as environmental history, ecocriticism, environmental ethics, historical ecology, environmental anthropology, and so on. Titled simply 'Environmental Humanities', the symposium also involved a researcher training course that focused on theoretical and methodological intersections among all of these cognate fields. I'm aware that comparable efforts were under way in Francophone contexts around the same time, or shortly thereafter, led by people like Patrick Degeorges, Bruno Latour, Philippe Forét and other researchers and policy specialists seeking to break down knowledge silos and promote transdisciplinary engagement and collaboration among different epistemic communities, on the one hand, and between academic communities and the sectors of environmental policy and management on the other.

It was in the context of this 2011 symposium in Sigtuna that the ideas for the Inscribing Environmental Memory initiative first took shape. The main organizing partner, NIES, was in fact a very interdisciplinary environmental humanities network from the time of its founding at a University of Oslo symposium in fall 2007, bringing together environmental history, ecocriticism, science and technology studies, landscape studies, and environmental architecture. But the Sigtuna symposium represented a significant scaling up of ambitions and active efforts to map out and actualize a more fully integrated environmental humanities community. What was new about the Sigtuna conference was that it brought ecocriticism, environmental history, anthropology, STS,

and environmental geography into very direct and fruitful conversation with fields such as historical ecology and ecological economics, not only through the participation of many early career researchers across this spectrum (especially PhDs in training) but also by involving many of the leading figures in these fields internationally, scholars such as Carole Crumley, David Nye, Richard Norgaard, Kate Soper, Kenneth Olwig, Libby Robin, Axel Goodbody, and many others. All sessions at the symposium were plenary, which made it not just another catch-all conference where different disciplinary communities went their own way for conversations in their own silos and then came back together for a couple of keynotes and coffee. In fact, it was standard at NIES symposia that all sessions always involved everyone. Without that, how can you get real cross-pollination of ideas, methods, theories, or a true basis for new collaborations?

*PK: So, these interdisciplinary cross-pollinations led to IEM and the current project, ICECHANGE. Could you say more about each?*

SH: What grew out of these conversations, enthusiastically but also somewhat chaotically at first, was a more focused series of exchanges among an expanding community of participants in the humanities, social sciences and environmental sciences that became the foundational concept for the initiative we came to call (informally) Inscribing Environmental Memory in the Icelandic Sagas (IEM). The discussions began with the idea of looking at environmental representation in the medieval Icelandic sagas and other available sources in the Icelandic written record, with a particular focus on resource scarcity and its relation to social conflict. This indigenous northern body of writings not only provides a unique voice to local historical accounts but represents a diverse literary tradition with a long native scholarly tradition of place-centred narratives. This focus would remain an important one in the coming years among the growing community of researchers identifiable with the IEM research collaborations, but it would become one of several interlinked areas of investigation.

The initiative has developed (or evolved) in what can be described as overlapping nodes and sub-projects that integrate multi- and

interdisciplinary teams of researchers across many institutions in the Nordic countries, the UK and the USA. Complementing eco-critical literary and historical analyses of Icelandic textual sources, non-textual data sets (material culture, zooarcheology, paleoecological data, etc.) relating to the period commencing with the Settlement Age (870–930) up through the fifteenth century have been the focus over the past several years. The emphasis is now turning increasingly to the modern period (1550–1950), while continuing to study specific questions from earlier (pre-modern) periods, with increasing emphasis being placed on efforts to analyze environmental change, societal development, social-ecological resilience, and environmental memory in Iceland and also, increasingly, in comparable island communities of the North Atlantic, such as Greenland, Orkney, Shetland, the Hebrides, and the Faroe Islands. More and more emphasis is now being placed on synthesis of results and findings in new interdisciplinary dissemination efforts.

All of these very fruitful exchanges and new collaborations in IEM's scholarly community of interest have led to funded projects, including 'Reflections of Change: The Natural World in Literary and Historical Sources from Iceland ca. AD 800 to 1800 (ICECHANGE)', co-led by historical climatologist Astrid Ogilvie and myself, and also involving environmental historian Árne Daniel Juliusson, historical anthropologist Jon Haukur Ingimundarson, and literary historian Vidar Hreinsson. ICECHANGE is financed by Riksbankens Jubileumsfond. However, the IEM collaborations have also contributed to newly funded projects such as the US National Science Foundation project 'Co-production of Knowledge and the building of local archeological capacity in Greenland', led by archeologist Thomas McGovern (Hunter College, CUNY), as well as other projects funded in Iceland, Scandinavia, the UK, and the USA. As funded projects have taken shape, they have gradually displaced or overtaken the informal designation IEM, which is used less often these days, although the community of intersecting institutions, disciplines, and research groups that were previously grouped under this handle remain very much intact and are more active than ever, having in fact grown into a larger community of purpose as new projects come online.

PK: *The ICECHANGE article, 'Medieval Iceland, Greenland, and the New Human Condition: A Case Study in Environmental Humanities' received the 2019 St Andrews Prize from the European Society for Environmental History (ESEH). Can you tell us about it?*

SH: My co-authors and I felt very honoured to receive the St Andrews Prize from the European Society of Environmental History. This article is an example of the kind of interdisciplinary dissemination effort that I just mentioned [PK: See Hartman et al. 2017]. In this case, our team of collaborating researchers was composed of a physical geographer, a cultural anthropologist, two environmental archeologists, an environmental historian, and a scholar of literature and ideas taking an ecocritical approach to narratology and historiography. Normatively speaking, the scientific traditions and methods brought to bear by this particular constellation of researchers was (and remains) far from typical, certainly within a humanities context. This circumstance extends as well to the quite varied data sets drawn upon in the study. For example, the study included sampling, analysis, and interpretation of soil data based in the field of physical geography, using the highly resolved stratigraphic techniques of tephrochronological analysis, among other methods, to answer questions about geomorphology as well as historical landscape formation, use, and change in medieval Iceland and Greenland. The study also involved zooarcheological analysis of previous human settlements, ethnographic research applied to interpretation of medieval documentary data available in so-called normative documents (registers, farm inventories, and the like), and ecocritical as well as environmental historical analysis of stories, annals, and so on.

Satisfactory synthesis of all these study elements in the overarching analysis remains one of the chief challenges of this kind of team-based interdisciplinary research, but that very process of translation and co-learning, sometimes involving unexpected or even serendipitous connections, can sometimes yield breakthroughs in understanding that enable interdisciplinary work to be so much more than the sum of its parts. Nevertheless, whatever

breakthroughs we may achieve in interdisciplinary teams amounts to only half the real challenge, particularly if we don't want whatever advances we achieve to be one-off boutique developments that remain largely invisible to the wider research communities this work is meant to engage. Finding new ways of disseminating such work to multiple specialist communities implicated in the research can also help us overcome the kinds of disciplinary tunnel vision apt to occur when we get too entrenched in our own discourses or disciplinary communities. It can also help us move beyond the pitfalls of nominal (shallow) interdisciplinarity, which happens when research efforts advertise themselves as interdisciplinary endeavours without really earning that label.

I suppose that recognition we got in the form of the St. Andrews Prize is evidence that we achieved at least part of our ambition by reaching one key scholarly community implicated in our research. In the kinds of interdisciplinary research we have been carrying out in the integrated IEM collaborations, this is an encouraging first step, but I'd also have to admit that it's just a beginning. The fact is, presently, there are very few journals, if any, that have the kind of wider readership spanning environmental sciences (social and natural sciences), humanities, and the arts to which we feel our research is relevant. And it's hard to say whether those broadly inclusive dissemination channels are likely to emerge anytime soon (it seems unlikely somehow in the present academic publishing landscape). This means that the onus is on us to find other ways of directing our dissemination efforts to reach this wider constituency.

*PK: How has your understanding of literature changed through collaboration across disciplines?*

SH: I can't really say that my understanding of literature has changed fundamentally since I began to collaborate across disciplines. What has changed somewhat is my understanding of what critical approaches to the study of literature—and what results those studies yield—lend themselves more readily to integrated research crossing lines of enquiry in the academic landscape we

operate in today. Not all forms of enquiry lend themselves to this kind of integrated work in ways that I would say are prerequisites for true interdisciplinary engagement of researchers coming from often very different epistemic and methodological traditions. Such teams are already self-selecting, or they don't last very long.

Those who embark on these kinds of interdisciplinary collaborations demonstrate already from the start a strong interest and a mutual willingness to acknowledge the validity and value of sometimes manifestly different approaches despite (or sometimes even because of) their differences. When I am working with researchers who are in effect seeking to reconstruct the past (both past environmental change and past human influence on and response to environmental change), then my very genuine interest in questions concerning the aesthetic dimensions of literary composition and execution may be of limited interest to my colleagues in archeology or physical geography. Maybe of no interest at all. That doesn't mean I'll cease to be interested in these questions myself. They're just not the kind of study focuses I'm apt to unpack and go after aggressively in my common work with these colleagues. I'll address them in other more discipline-specific ways in a literary studies context.

The mainstay of the research we have been pursuing for a number of years now within what I would call the IEM collaborations (some of my colleagues might call them something else) approaches heritage and environment as inextricably intertwined. There's a lot that can be gleaned and learnt about these intertwined focuses from literary history. And the ambition of the literary studies-oriented work in these collaborations has tended to be dominated by a collective effort to locate and analyze significant examples of environmental knowledge inscribed in local traditions of literary production.

The heritage perspective defining our common work together places a premium on the value of recorded ideas, observed phenomena, local history, auto/biographical narratives, everyday perspectives, attitudes, and lore in cultural texts of many kinds. Our interest in these kinds of works is undiminished whether

or not these texts exhibit features of an exemplary literary culture according to nineteenth and twentieth-century hierarchies of virtuosity that effectively set the tone, critical fashions, and research agendas of professional literary studies throughout the twentieth century and up through the recent past. To a great extent, I would say that we are far less interested in the virtuosity of artistic achievement in literary texts (literary with a small l, never a large L). Many kinds of local literary expression that may have been dismissed 50 years ago, maybe even 20–30 years ago, as doggerel or naive folk expression, we view as potentially very valuable for the social memory these texts may preserve, maybe even more valuable owing to their virtual invisibility to a large segment of the mainstream critical establishment until more recently.

Much of our work, whether it focuses on narrative, poetic, or folkloristic expression of local ecological knowledge, gender relations, values and norms, or simply everyday observations concerning seasons, meteorological conditions, or life on smallholder farms, is richly informed by the field of ecocriticism. But that doesn't define this work in its entirety. Together we are very interested in learning more about environmental representation and memory in the light of wide-ranging studies (historical ecological, archeological, and climatological, to name only a few) which for decades now have been striving to examine and reconstruct evidence of the *longue durée* of human impacts on island landscapes in the North Atlantic, the impacts of climate and other environmental changes on human communities, and the interaction of human societies and their environments at different spatial and temporal scales. The individual contributions to our knowledge and collective understanding of our study objects often help to fill in blind spots that each of us in our respective teams and groups (and from our respective research traditions) may have entered into our collaborations with. That fact helps to illustrate just why literary works—like other documentary, material historical, and even intangible cultural sources that we're studying—can't be fully illuminated independently of the other evidence of cultural heritage and environmental change.

*PK: Through BRIDGES, you are embedding environmental humanities to UNESCO frameworks for sustainability education. Can you tell us about your hopes for the BRIDGES project?*

SH: Yes, over the past year or so, a process has been under way to establish a new international sustainability science coalition, now in the final stages of being formalized in the UNESCO Management of Social Transformations (MOST) intergovernmental programme. The BRIDGES coalition is innovative in a number of ways, not least by being the first human-centred and humanities-driven international sustainability science initiative within UNESCO. The main organizing partners have been the International Council for Philosophy and Human Sciences, the Humanities for the Environment global observatory network [hfe-observatories.org], which I represent, and UNESCO itself. The general assembly of BRIDGES is now composed of a network (still growing) of 50 strong institutional and organizational partners very active in sustainability science, education, and action internationally, such as the International Science Council, Future Earth, the Club of Rome, and the World Academy of Art and Science, as well as smaller but no less important partners with local and regional focuses, such as the indigenous community of the Kogi people in Colombia, the Penn Program in Environmental Humanities, the Cappadocia University Environmental Humanities Center, the Swedish Centre for Biodiversity, and the Third Pole in India, a key regional node in the Earth Journalism Network. BRIDGES is a strategic undertaking in the co-design and co-production of research, education, and public action in support of the Sustainable Development Goals. The coalition promotes new potentially transformative collaborations across the academic domains of the arts, the humanities, the social sciences, and natural sciences, as achievable on the ground in a range of local and territorial contexts together with local partners. We feel this effort meets a very real need to bring the humanities and arts, as well as non-academic partners representing vital threatened natural and cultural heritage around the world, more fully into the mainstream of sustainability science knowledge formation and application of knowledge (in its broadest and most inclusive configurations) to the major social-ecological challenges of the twenty-first century.

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