Article

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Études/Inuit/Studies, vol. 35, n° 1-2, 2011, p. 187-200.

Note de recherche / Research note

A praxis for ethical research and scientific conduct in Greenland

Lene Kielsen Holm[*], Lenore A. Grenoble[**] and Ross A. Virginia[***]

Résumé: Recommendations pour une recherche éthique au Groenland

Les trente dernières années ont vu des changements remarquables dans la structure politique et sociale du Groenland. En 1979, avec l'instauration du Home Rule, le Groenland a obtenu une certaine autonomie vis-à-vis du Danemark. Après un référendum, le Groenland a accédé à une autonomie renforcée en juin 2009. Ce gouvernement autonome (Naalakkersuisut) donne au Groenland le contrôle dans tous les domaines de la gouvernance, mais la défense et la politique étrangère restent toutefois sous le contrôle danois. À l'heure actuelle, ni le gouvernement autonome ni aucun organisme de recherche du Groenland n'a formulé de code d'éthique ou de directives pour une recherche éthique et responsable. Dans cet article, nous discutons des dangers de ce manque et proposons des solutions possibles pour aller de l'avant. Nous considérons qu'un code d'éthique de la recherche est essentiel aux politiques du gouvernement autonome du Groenland. Il s'agit d'un outil important pour toute participation scientifique avec la communauté internationale, maintenant que le Groenland doit prendre des décisions importantes au sujet du développement durable de ses ressources.

Abstract: A praxis for ethical research and scientific conduct in Greenland

The last 30 years have seen remarkable changes in the political and social structure of Greenland. In 1979 Home Rule was proclaimed, giving the territory some measure of autonomy from Denmark. Self-Government (*Naalakkersuisut*) was instituted in June 2009 after a referendum, giving Greenland control over all areas of governance except foreign affairs and defence, which remain under Danish control. At present neither the Self-Government authorities

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ÉTUDES/INUIT/STUDIES, 2011, 35(1-2): 187-200

nor any research body in Greenland has formulated a comprehensive code of ethics or guidelines for ethical and responsible conduct of research. In this paper we discuss the hazards of this legal vacuum and propose possible opportunities for moving forward. We consider the development of such codes to be integral to the development of science policy by the Self-Government authorities and an important tool for scientific engagement with the international community at a time when Greenland is making important decisions about resource development and sustainability.

> Ethics are not a problem of knowledge but a call of relationship (Spivak 1993: 32).

Introduction

Climate change has attracted growing international interest, thus bringing Arctic life and the Arctic environment into sharper focus and increasing the foreign presence in Greenland over the last few decades. Such interest falls into two basic categories: research and resource development. Research in turn breaks down into the "hard" sciences (e.g., climate change, glaciology, snow studies), conducted in areas remote from human populations, and the "soft" sciences (social sciences and the humanities). As researchers ourselves (an anthropologist, a linguist, and an ecosystem ecologist), we maintain that *all* areas of research are of central concern to Greenland and its government, and that *all* projects should be conducted ethically. We agree with Aqqaluk Lynge, Inuit Circumpolar Council Chair, that:

> We need a different approach. The 1800s will be remembered as a century of great Arctic explorers. And one of greater colonization. The 1900s will be remembered as a century of great scientific investigations. Both centuries failed, however, to recognize the value of the indigenous peoples of the Arctic. Let's do little things together which will help make this current century one of connections, one of working collectively in which the scientific community doesn't just come to Greenland or other parts of the Arctic to undertake research that is only of interest to it (Lynge 2007: x).

In this paper, we focus on the need for a research ethic, drawing upon our own experiences of working in Greenland and with Greenlanders, from the perspective of foreign researchers and from inside the community. We argue that Greenland needs an established code of regulations and policies for ethical development, this being essential for its identity and for the well-being of its citizens and its territory. We see the establishment of a research ethic as a central part of this process. In what follows we map out the policies in some other nations. None of these scenarios is an exact match for Greenland, which differs from all other countries for a combination of historical, political, and geographic reasons. Yet, until Greenland establishes its own research ethics, external researchers will rely on the ethics of their own countries or professional organisations, which may often be only self-regulating and perhaps self-

serving. The model we are advocating here has one key aspect: some sort of monitoring of research to guarantee compliance at all times with a Greenlandic code of ethics.

Who oversees ethical research?

At present, there is little regulation of research ethics (or norms of conduct) at the local (Greenlandic) level. Such regulation does occur externally. In many countries, ethical standards are established and regulated by essentially two different groups: federal governments and professional organisations. In the United States, for example, the model is that ethical standards are established by the federal government through its funding agencies, which in turn oversee compliance within each agency and more directly by passing the responsibility on to the university or organisation that administers the funds. If a university is found not in compliance with federal regulations on a particular project, it may lose all federal funding and hence is strongly motivated to comply. Thus American universities have Institutional Review Boards (IRBs), which oversee approval of research projects and monitor conduct. IRB approval is required prior to research.

IRBs are a control mechanism at the institutional levels. American and Canadian universities have a set of protocols to ensure that any research on human populations poses no more than minimal risks or, if the risks are not minimal, that the subjects understand them and the possible benefits. Such projects could range from participation in a drug trial to cure a disease to answering a social science survey about human influence on climate. A key aspect is the principle of informed consent, which requires that subjects receive full, clear information about the potential hazards and benefits of any research, as well as the contact information of a person who can answer any of their questions. In Canada, a number of organisations are responsible for setting ethical research standards.

The National Research Council Canada/Conseil national de recherches Canada focuses on research in biotechnology, information sciences, molecular sciences, and related areas of technology. It has its own Research Ethics Board (REB), which reviews applications for all research involving human subjects and serves as a resource for learning about and applying ethical principles that concern research involving human subjects (NRC-CNRC 2007). Research in other areas is supported by the Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council of Canada (NSERC), and the Social Sciences and Humanities Research Council of Canada (SSHRC) and falls under the Tri-Council Policy Statement (TCPS): *Ethical Conduct for Research Involving Humans* (CIHR et al. 2010). This code of ethics regulates all social sciences research in Canada. The 2nd edition of the TCPS was prepared in consultation with Canadian Aboriginal organisations. University-sponsored research must also be approved by the university's REB. SSHRC has supported programs that more specifically focus on work between indigenous communities and institutions of higher education, such as the Community-University

Research Alliances program (CURA) and the Aboriginal Research Pilot Program (see Rice 2010 for discussion). These programs aim to foster ethical, collaborative research.

The Commission for Scientific Research in Greenland (KVUG n.d.) is an advisory body to the Ministers of Research of both Denmark and Greenland; its role is to support and promote Danish-Greenlandic research, including financial aid. It does not, however, have any binding procedures to ensure ethical research of the kind that we are advocating here, although this is a natural place for such procedures.

In addition to governmental agencies, professional organisations in many countries have their own codes of ethics. The American Anthropological Association (AAA) has long had a code of ethics, the current version having been approved in February 2009. The AAA Code contains research guidelines, beginning with the point that ethical responsibilities can supersede the research, potentially leading to a decision not to undertake the project if the requirements for ethical conduct cannot be met. Basic points include respect, an obligation to avoid harm or wrong, and transparency and consultation. The latter two are of particular interest here, specifically under point A of the Code of Ethics (responsibility to people and animals): "to consult actively with the affected individuals or group(s), with the goal of establishing a working relationship that can be beneficial to all parties involved." This point requires researchers to consult; we understand "actively" in this context to mean sincerely and with real effort to engage in bona fide consultation, not just to pay lip-service. Anthropologists should be both honest and transparent with all stakeholders, and disseminate their findings not only to the scholarly community but also to others, including decision makers, as appropriate, keeping in mind "the social and political implications of the information they disseminate. They must do everything in their power to insure that such information is well understood, properly contextualized, and responsibly utilized" (AAA 2009: 4).

In May 2009 the Linguistic Society of America (LSA) adopted its own code of ethics. The AAA's and the LSA's codes of ethics set guidelines for individual researchers, but compliance is a matter of personal choice. For this reason, in its current review process the AAA is considering whether researcher behaviour should be monitored and whether sanctions should (or could) be imposed for failure to follow the guidelines. We suspect this proposal would be hard to implement, except perhaps in the most egregious cases. The bottom line is that these professional codes are based on self-regulation and rely on educating researchers on the need for and the benefits of participation. Both the AAA's and the LSA's codes of ethics include a statement about the anthropologist's or linguist's responsibility to the public, namely to make the findings of their research available and accessible to the general public, including non-specialists. The AAA's code specifies making results available to policy and decision makers.

The American Association for the Advancement of Science (AAAS) largely relegates ethics to the scientific societies. Its report *The Role and Activities of Scientific Societies in Promoting Research Integrity* has a useful summary of a survey (conducted

in 1999) of codes of ethics among scientific societies (AAAS 2000: 3). At that time, 74% (or 34 societies) reported having a code of ethics. These codes included the following provisions: authorship determination (30%), reporting misconduct procedures (26%), plagiarism (26%), duplicate publication (24%), obligation to report misconduct (24%), data retention (22%), mentoring/supervising roles (20%), responsibility of authors (20%), timely/complete reporting of data (17%), and order of authors (9%). This is not the kind of ethics we have in mind here, although we would agree that these are all important aspects of appropriate scientific conduct, a precursor for the broader definition of ethical research that we suggest for Greenland.

In sum, there are a number of external controls on ethical research, many of which focus on research that concerns human subjects. We argue that 1) all research—not just research on human subjects—should be ethically conducted and regulated; and 2) the Self-Government authorities have an opportunity to understand this point and the need to define "ethical conduct" on Greenland's own terms, with specific regard to the cultural, historical, and long-term potential and real impacts of the research on the country.

Ethical conduct redefined

The present transition to Self-Government opens up new opportunities and challenges. We consider it to be the responsibility of the government to develop ethical standards for research, to establish them as public policy, and to enforce them. In larger nation states, these roles and responsibilities are often spread across multiple bodies, but the final legal authority resides with the government. Thus in many countries, as we have seen, it is common for state funding bodies to exert control, which is in turn managed at a local level by universities or research centres.[1] This is problematic, since most funding for research conducted in Greenland today comes from external sources, such as Denmark, the European Union, the United States, and Canada. In addition, in the very near future we might see multinational corporations conducting research, since they are interested in accessing Greenland's natural resources. Discussion of research ethics in Greenland must allow for the unique circumstances of Greenland's history as a colonial state, its transitional governmental structures, and the identification of Greenlanders with the pan-Inuit community represented by organisations such as the Inuit Circumpolar Council (ICC). But there is a real possibility of mismatch between the interests of foreign researchers, and their funding bodies, and the interests of Greenlanders. And even where the interests are aligned, the potential for external researchers to misunderstand the Greenland context, or to miscalculate the importance of a range of factors—political, social, historical, and others—should not be underestimated.

1 Not all countries have ethical standards or codes of conduct; this is one major problem for researchers working in many countries.

For this reason, guidelines for ethical conduct should not be left to external research bodies or governments alone. Ethical conduct in Greenland needs to be defined on Greenland's own terms, with specific regard to local values and concerns, and long-term goals and considerations. Leaving this responsibility to external bodies not only relinquishes local control but also allows external, foreign entities to define what is ethical and what is not from their own perspective. Greenland's perspective is almost certain to differ in some critical ways, due to its unique history, the unique cultural makeup of its peoples, and its unique geographic position.[2]

To place this discussion in context, a brief review of Greenland's history would be useful. Greenland was inhabited for millennia first by Palaeo-Eskimo cultures (Independence I and II, Saqqaq, Dorset) and then by the Thule, who were the direct ancestors of present-day Greenlanders (Fitzhugh 1984). In the late 10th century, southern Greenland was colonised by the Norse, who disappeared in the early 15th century. Greenland was once again colonised in 1721 by Denmark, when the Norwegian/Danish missionary Hans Egede came in search of the Norse people (Gad 1984), thereby beginning a colonial influence that continues to this day. In 1953, the country was officially "decolonised" under Denmark's new constitution, although in practice little changed. With mounting frustration against the foreign presence, Greenland achieved Home Rule in 1979 and Self-Government in June 2009. Since the advent of Home Rule, the parliament and government of Greenland have been taking on responsibilities for governance and regulation that previously had been under the purview of Danish ministries and agencies. With the introduction of Self-Government even more responsibilities have been taken on, such as issues relating to the use and development of Greenland's underground resources (e.g., minerals, fossil fuels, and precious metals). This is an essential step toward what many see as national independence for Greenland, but it also places new economic and administrative burdens on a small population. And critically, any code of ethics, and any research conducted in Greenland, needs to be framed within the context of a country still in the process of emerging from its colonial past.

How should ethical standards be developed?

In a complex, rapidly changing world, ethical standards need to go beyond research on human subjects, although a code of ethics must necessarily include such research. A new research ethic would incorporate guidelines for active local participation and for sharing results more broadly, within the scientific community and with the public. Developing useful, well-rounded ethical standards requires input from multiple perspectives and multiple bodies. There are models for ethical standards from other groups in the Arctic. First, some models are geopolitically based, such as the Alaska Native Science Commission (ANSC), which posts ethics and protocols on its website (ANSC 1998). Specifically, the models are the Alaska Native Knowledge

2 Forbes and Stammler (2009) provide detailed discussion about research agendas in Russia, which serve as an insightful point of comparison.

Network's *Guidelines for Respecting Cultural Knowledge*; and the National Science Foundation (NSF)'s *Principles for the Conduct of Research in the Arctic*.

The purpose of the ANSC's Code of Research Ethics "is to establish a set of principles and procedures to guide the partners to achieve the goals and objectives of the project. The code outlines the obligations of each of the partners through all of the phases of the project, from the design of the research through to the publication and communication of the experiences of the project" (*ibid*.). A central feature of this code, and many others covering interactions between scientists and Indigenous peoples and cultures is a core principle of respect, reciprocity, and information sharing. This principle also applies to sharing of authorship and credit for research contributions. As the ANSC Code states, "It will be the responsibility of the project partners to ensure that the staff and investigators who have made significant contribution to the project can qualify for authorship. These are people who have worked directly on the project" (*ibid*.).

The ANSC's *Guidelines for Respecting Cultural Knowledge* are aimed specifically at documenting, representing, and using cultural knowledge, integrating it into the school system with other kinds of knowledge, and explicitly discussing the role of various participants (such as elders, pedagogues, and researchers) in this process (ANSC 2000). These guidelines differ from the codes of ethics and human subject protocols discussed earlier in this paper in specifying that researchers work with Indigenous scholars and directly involve communities in their work.

The founding principle of NSF's guide for conduct (Office of Polar Programs–*Principles for the Conduct of Research in the Arctic*, 2008) is that:

> *All* scientific investigations in the Arctic should be assessed in terms of potential human impact and interest. Social science research, particularly studies of human subjects, requires special consideration, as do studies of resources of economic and social value to Native people. In all instances it is the responsibility of the principal investigator on each project to implement the following recommendations (NSF 2008: 1).

Thus the NSF endorses our understanding of the scope of ethical research in that all research should be assessed in terms of impact. At the same time, however, it does not go far enough in encouraging American scientists to partner with Greenlanders, to share their research in Greenland with local stakeholders, and to assist Greenland in building literacy in the sciences and other disciplines.

What is the role of NGOs?

The role of Non-Governmental Organisations (NGOs) in this process is twofold. NGOs are central to any free society in that they constitute an independent voice, not constrained by an electorate or by government funding and control. NGOs are critical in providing autonomous points of view. They are not always unbiased and, in fact, typically have specific positions to advocate or services to provide—as in the case of environmental watch groups or animal rights groups—but (at least in theory) their

existence does not rely on the outcomes of political processes. Thus, their input is valuable in determining the full nature of ethical standards and which elements are crucial for workable guidelines. Second, they have special value in a watchdog role. They can monitor the bodies charged with enforcing the codes. For example, the ANSC (1997) described above is a US-based NGO devoted to "bringing together research and science in partnership with the Native community."

The Inuit Circumpolar Council (ICC) is uniquely situated in this process because it is both pan-Arctic and pan-Inuit. ICC, by virtue of not being an agent of any national government, can represent a circumpolar pan-Inuit perspective. Moreover, it is an Inuit-based organisation, run *by* and *for* Inuit, and thus has the responsibility of establishing ethics based on Inuit values and standards that cross national boundaries and speak to the values of communities engaged in subsistence activities. The ICC brings a human rights perspective to issues of information sharing, power sharing, and collaboration. Finally, the *United Nations Declaration on the Rights of Indigenous Peoples* (United Nations 2007) provides a rich framework for defining research ethics and for seeking a more integrated approach to drawing together nations with interests in the circumpolar world and its peoples.

Case study: Research on the Greenland ice sheet

How is scientific research currently conducted in Greenland? Who does it, how do they get permission, what does the permission involve, what obligations are imposed, and how is any of this enforced? The importance of climate change and rapid environmental change in the Arctic has brought an influx of foreign scientists, research teams, and equipment in unprecedented numbers. Kangerlussuaq and, more specifically, the Kangerlussuaq International Science Support (KISS), functions as the base site for science logistics, and the starting point for expeditions to the Greenland ice sheet or Summit Camp, for example. In the past, in order to receive permission to do this work, foreign scientists filed requests for research permits from the Danish Polar Centre. Only recently (February 2010) has this process been assumed by Greenland Self-Government authorities, largely the Ministry of Domestic Affairs, Nature and Environment. The permit process requires little or limited communication of results to the Self-Government authorities or to the broader public. Rather it is largely concerned with issues of safety, collection of biological and mineral samples, and preservation of sites of archaeological importance. For example, the reporting requirement for the "survey license for collection and/or acquisition of biological resources for research purpose" mandates that researchers "state when publications or access to results of the survey are expected" (Government of Greenland 2010) and does not require copies of data and/or publications resulting from the research.

The Research Office of the Government of Greenland is within the Agency for Culture, Education, Research, and the Church and is not involved directly in the permit process (Government of Greenland n.d.). The Research Office has a variety of responsibilities and "shall help to promote research and strengthen the research

environments in Greenland" (*ibid*.). It also has the task "to communicate knowledge on research to the public" (*ibid*.). As an outlet for informing the public about research conducted in Greenland, by using the press, TV, and public events such as the *Meet your scientist* lecture series, the Research Office could play an expanded role in collecting and compiling results from research conducted in Greenland. In our personal experience they now informally play this role.

This Western research model for science presents certain disadvantages and problems. Large-scale international science is conducted in Greenland away from population centres and is typically invisible to the public. Foreign scientists fly into and out of Kangerlussuaq, a former United States Air Force base now serving as Greenland's main international airport. It is not an urban centre by any means; the population of Kangerlussuaq (just over 550) is there mainly to support the airport, the tourist trade, and the community of foreign scientists. The scientists may remain there or, more frequently, head off to remote field stations such as Summit Camp, Thule, or distant sites in east Greenland, and therefore have little to no contact with the Greenland population. This model produces high-quality international science with findings, which may be relevant to Greenland and could be extremely useful in making policy decisions. Unfortunately, the end results are not packaged in such a way as to be widely accessible to Greenlanders; more often than not, they are published in specialist journals such as *Nature*, *Science*, or *Polar Science*. Although such publications are technically in the public domain, in widely available journals, they are difficult to understand for readers who are not specialists in the field. Difficulties in reading these articles are compounded by the fact that the population of Greenland by and large knows English as a *third* language. Furthermore, there are few Greenlandic polar scientists, and the University of Greenland, located in the capital Nuuk, does not have a science faculty that can share the results of this work with the public and in the schools

As a result, the Greenland Government does not have easy access to these results and supporting data. It must instead work with the data-reporting rules of the nation conducting the research. In the United States, the National Science Foundation requires scientists to share their data within two years of collection. However, NSF-funded scientists working in Greenland are under no specific obligations to present data and findings directly to Greenland or even to inform local agencies of publications. The vast majority of scientists welcome open access to data and see the importance of working with the public to improve science literacy. At the same time, scientists lack information on what Greenland wants from scientists. Furthermore, although there is a rich literature on the ethics of working with Indigenous communities, this literature is targeted at social scientists and may not be framed in ways that engage natural scientists. At a minimum, there is a fragmented and poorly understood ethic among scientists in Greenland.

We would suggest that relying on regulatory bodies to establish (and enforce) a code of ethics is not sufficient to change research paradigms, although it is a necessary first step. For the longer term, we educators need to rethink the way we train scientists to work in the Arctic. As the title of Aqqaluk Lynge's keynote address at the sixth

meeting of the International Congress of Arctic Social Sciences (ICASS VI, August 2008) states, "Scientists need to do more." Lynge (2011: 37) also states, "The partnerships created among Inuit, scientists, and governments at the Arctic Council are a good start. These partnerships must be strengthened. Inuit are so often left out of the research process, and this must never happen with respect to our changing climate." In other words, Lynge is asking for exactly what the above-mentioned codes of ethics require: bona fide consultation, transparency, and dissemination of information. Innovative, interdisciplinary graduate training programs, such as the Polar Environmental Change Program (supported by a grant from NSF's Integrative Graduate Education and Research Traineeships) at Dartmouth College, USA, provide hope for a new generation of researchers who are more aware of the ethical dimensions of their environmental research, who understand the need to form local partnerships, and who have a commitment to sharing their work in Greenland with Greenlanders. A critical component of the program is focused, on-site training in Greenland, not only in science but also in all aspects of conducting research in a collaborative and ethical manner (IGERT n.d.).

Finally, we are not alone in seeing the need for a code of ethics developed in Greenland, by Greenlanders, and for Greenlanders. Olsen et al. (2004) make similar arguments, focusing on the necessity of a medical research ethics committee with legal basis in Greenland. They note that the laws governing such research in Denmark are not in effect in Greenland. Such a committee is thus needed to ensure fair and ethical medical research, appropriate handling of sensitive data, and identification of data, and even for such basic issues as obtaining informed consent for proper and ethical use of biological samples. While these authors deplore the lack of an ethics committee in medical research, this deficiency runs the full gamut of research in Greenland. Greenland has an opportunity to become a role model for Arctic governments, especially with the advent of Self-Government. Because so much climate change research is now focused on Greenland, its government is in a position of remarkable influence to shape this field of research—how it is conducted, what research questions are asked, and how the results are disseminated.

Conclusion

In conclusion, we would like to propose several practical steps. First, the Self-Government authorities should immediately begin the consultation process for establishing a code of ethics. We recommend consultation and collaboration with Arctic agencies that already have ethical guidelines. We further advocate broad and comprehensive protocols that go beyond research on human subjects to encompass all forms of research in Greenland.

Second, we propose that the Joint Committee formed in 2004 to increase cooperation between the United States, Greenland, and Denmark be a forum for dialogue on a new research ethic for Greenland. The Joint Committee meets biannually, but its working groups facilitate more frequent interaction between government,

academic, and private institutions in the United States, Greenland, and Denmark to advance common projects and encourage cooperation across a diverse range of policy areas: the environment, science, health, technology, trade, tourism, education, and culture.

Finally, to return to the opening quote from Spivak, we believe that ethical research should be truly *collaborative*. Cameron et al. (1992) distinguish between *ethical research, advocacy research,* and *empowering research*. Ethical research is concerned with "minimizing damage to subjects"; it is fundamentally research *on* social subjects. Advocacy research is *on* and *for* subjects, where the researcher serves as a cultural or political advocate for the concerns of the subjects. Finally, empowering research is research *on, for,* and *with* subjects. Empowering research (or community-based research) is a model to strive for, and we hope that guidelines for ethical research would foster its development such that it would become the norm in Greenland and elsewhere.

Two of the authors of this paper—Grenoble and Virginia—are in fact foreign researchers who work in Greenland. And yet they are advocating that the Greenland Self-Government authorities institute guidelines to regulate their own conduct. To be sure, they are bound by the codes of ethics of their own professional organisations (AAA, AAAS, and LSA). Moreover, they are fortunate enough to have Inuit collaborators and colleagues in Greenland. These include the co-author of this paper, Holm, and others at ICC, in Naalakkersuisut (the Greenland Self-Government authorities) and Oqaasileriffik (the Greenland Language Secretariat) to advise, to answer questions, and to point out shortcomings and mistakes. Foreign researchers and Inuit leaders have found a rich and mutually beneficial relationship in their joint endeavours. Together, they actively train young scientists to work in Greenland and elsewhere in the Arctic. Junior scholars do not always have the access Grenoble and Virginia enjoy, or even the time it takes to build deep, long-lasting working relationships. A balanced and informed set of ethical guidelines for conduct of research in Greenland should in the longer term increase cooperation, collaboration, and respect among the international community of scholars who work in Greenland and with Greenlanders.

Acknowledgments

We would like to thank the following people for enlightening discussions on this topic: Aqqaluk Lynge, Lone Nukaaraq Møller, Pernille Møller, Carl Christian Olsen, Puju, and Inuuteq Holm Olsen. The views expressed here are our own. Funding and support for this research was provided by the Institute of Arctic Studies, a unit of the Dickey Center for International Understanding at Dartmouth College, by a grant from the U.S. National Science Foundation to Dartmouth College (IGERT: Polar Environmental Change, NSF DGE- 0801490) and by the Dean of the Humanities at the University of Chicago.

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