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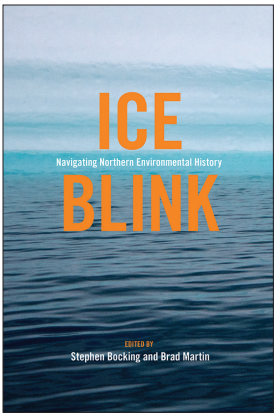

ICE BLINK: NAVIGATING NORTHERN ENVIRONMENTAL HISTORY Edited by Stephen Bocking and Brad Martin

ISBN 978-1-55238-855-6

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Climate Anti-Politics: Scale, Locality, and Arctic Climate Change

Emilie Cameron

Introduction

Although the study of arctic climate change over the last several decades has been predominantly associated with the natural sciences, the relations between climate, people, and arctic environments have also long preoccupied scholars in the social sciences and humanities, including environmental historians and geographers. And while it is largely the dramatic physical evidence of global warming at the poles that has made the Arctic synonymous with climate change, it is difficult to identify a historical moment when the Arctic has *not* been associated (among non-residents) with its supposedly extreme climatic features and their impacts on human life and livelihoods. As Liza Piper observes, summarizing a large body of historical, anthropological, and archaeological scholarship, "the most significant arrival of people in the Circumpolar North and their movements across the region historically correspond to climatic changes."[1] Piper's account is far from deterministic; she traces the movements of Norse,

Thule, and Inuit, but also Basque, Siberian, French, English, and Russian peoples (among others) across arctic lands and seas over many centuries as they were articulated not just with climatic changes, but also with social, political, and economic shifts. While generations of anthropological and archaeological scholarship has focused on the capacity for northern Indigenous peoples to adapt to and thrive within changing arctic environmental conditions, Piper also identifies links between climate and the geographies of arctic whaling, fur trading, infectious disease, agriculture, and non-renewable resource extraction. Making a living in the Arctic, she suggests, whether in subsistence terms or in industrial, capitalist, or otherwise extractive terms, is deeply tied to climate.

This longer and more complex history of political, economic, social, cultural, and environmental change in the Arctic offers important insights into contemporary struggles with climatic change, but has had limited impact on arctic climate change research and policy development.[2] Although there is a great deal of climate-related research being undertaken in arctic communities, keen interest in understanding and mitigating the human impacts of climate change in the region, and significant research investigating Indigenous and traditional knowledges of climate history and contemporary climatic changes, the orientation of most (although not all) climate research is toward an anticipated future.[3] That is, although past experience with environmental change informs assessments of the "human dimensions of climate change" in the region, it tends to do so only insofar as past experiences aid in identifying current and future impacts of climatic change on the region's largely Indigenous population, and in developing policy that might facilitate adaptation to a rapidly shifting set of environmental conditions.[4]

This focus on present and future impacts responds, in part, to the ways in which human impacts are framed in the Arctic Climate Impact Assessment (ACIA) and the Intergovernmental Panel on Climate Change (IPCC) reports on climatic change, but also to decades of Inuit political mobilization, particularly the work of the Inuit Circumpolar Council, demanding that the international community take seriously the ways in which climate change impacts Inuit lives and livelihoods. Efforts to safeguard the "right to be cold," as Sheila Watt-Cloutier frames it, are at the heart of such political mobilizations. As scholars and policymakers have taken up the call to attend to the risks climate change poses to Inuit, however, there has been

considerably less focus on pan-Inuit rights than on localized capacities to adapt to localized changes, changes that are already palpable. While many Inuit leaders and organizations have supported this pragmatic turn toward adaptation, they have done so alongside continuous calls both to address the historical and ongoing causes of climatic change and to attend to the interconnections between climate change and geopolitical struggles to control access to arctic resources and transportation routes.[5] But in spite of these calls, the translocal, historical, deeply political dimensions of climate change have been less prominent in the literature than assessments of local understandings of, and vulnerabilities to it. It is not only particular temporal scales that dominate arctic climate research, then, but also particular geographic scales, notably a particular understanding of the "local."

Interest in the local characterizes the climate change literature more broadly, where Brace and Geoghegan identify a turn toward a more "grounded and localized understanding of climate change" and a kind of consensus "that environmental knowledges, including those surrounding climate change, need to be understood on a local scale."[6] Indeed, scholars working in diverse traditions and with a range of objectives have increasingly turned to the local as a site for understanding climatic change. Duerden highlights the importance of understanding locally specific articulations of Arctic climatic change, noting that "human activity is highly localized, and impacts and responses will be conditioned by local geography and a range of endogenous factors, including demographic trends, economic complexity, and experience with 'change' in a broad sense."[7] Ford and colleagues similarly note the importance of in-depth, place-based, case study research for characterizing climate exposure and vulnerability in specific northern communities.[8] Riedlinger and Berkes point to the importance of locally specific, traditional knowledge and local expertise for understanding climate history, and for developing research questions, adaptive strategies, and monitoring plans.[9] And Hulme emphasizes the importance of understanding "the multiple meanings of climate change in diverse cultures" so as to "create new entry points for policy innovation," and highlights the role of the interpretative social sciences, arts, and humanities in complementing positivist scientific engagements with climatic change.[10]

Whether emphasizing its methodological, ontological, or epistemological merits, it would seem that the local has become a privileged site for understanding and responding to climate change in the region. But as geographers have long argued, scale is itself a social and deeply political frame through which to understand any issue.[11] That is, any attribution of scale makes apparent certain processes and relations and renders others illegible. To speak of climate change as a "global" issue with "local" dimensions (as has become the norm among arctic scholars and policymakers) is thus to make climate change knowable, analyzable, and amenable to intervention in certain ways and not others. Similarly, as a number of climate historians have argued, to speak of climate change as a distinctly contemporary phenomenon is to overlook the varied and complex histories of human relations with climate around the world, and the lessons they offer us in the present.[12]

How, then, might critical geographers and historians intervene in the study of arctic climate change? I argue here that a significant contribution can be made not just through study of past relations with climate (which has tended to preoccupy historical geographers and environmental historians interested in climatic change), but also by bringing key theoretical and conceptual resources to bear on climate scholarship and questioning some of the temporalities and spatialities underpinning contemporary research. My focus is on querying the intellectual and political implications of scaling arctic climate change. Drawing on critical interrogations of scale in geography and beyond, I consider the limitations of engaging "local knowledge" at the local scale in efforts to understand the effects of—and appropriate responses to—a "global" phenomenon like climate change. Rather than make a case against the local per se, however, I attempt to tease out some of the multiple locals at play in various approaches to climate change, and trace some of the unintended effects that can flow from engaging the local as a self-evident site, level, or method of analysis. Against tendencies to take the local for granted, I argue that environmental historians and geographers are well placed to clarify and expand the kinds of locals that are at stake in climate research and the histories informing their production and legibility. Next, I explore some alternative engagements with locality and their implications for understanding arctic climate change. I consider three potential ways in which climate scholars might engage the local differently: a) tracing the genealogies of academic,

government, and corporate engagement with "local knowledge"; b) developing a more critical understanding of the ways in which Indigeneity, locality, and tradition become politically consequential; and c) localizing the geographies of the "global" dimensions of climatic change. Alert to the capacity for academic research to buttress—rather than dismantle—relations of exploitation and domination, these lines of intervention are offered not as a straightforward research agenda, but rather as possible sites for rethinking and rematerializing the interweaving of knowledge and power in the contemporary north.

Scale and Climate Change

Scale has long preoccupied human geographers. One of the most important insights to emerge through the 1980s and 1990s, however, was that scale is social, relational, and political; there is nothing natural or inevitable about the scale at which different issues are analyzed, managed, or known.[13] Rather than assume that invocations of the "local," "national," and "global" correspond with material reality, geographers began to turn their attention toward the ways in which scale produces and naturalizes social, economic, and political difference.

There has been a range of work undertaken within this broad literature. Although some understand scale to be wholly socially constructed, others conceive of scale as social and political in the sense that struggles to advance various social and political causes are inevitably shaped by the scale at which they are lived, and the scale at which they become politically legible.[14] For the former, scale is approached "not as an ontological structure which 'exists,' but as an epistemological one—a way of knowing and apprehending,"[15] and understandings of scale as a "nested hierarchy of differentially sized and bounded spaces"[16] are rejected on both intellectual and political grounds. As J. K. Gibson-Graham argues, "the global and the local are not things in themselves, nor are 'globalness' and 'localness' inherent qualities of an object. They are interpretive frames … inherently empty of content."[17] For the latter group, scale is understood to be an abstraction but a necessary one, and rather than wholly reject understandings of scale as nested hierarchies or levels, or the attribution of particular bodies and events to particular scales, the emancipatory potential of scale

is emphasized. Thus, for Neil Smith, "geographic scale is political precisely because it is the technology according to which events and people are, quite literally, 'contained in space.' Alternatively, scale demarcates the space or spaces people 'take up' or make for themselves. In scale, therefore, are distilled the oppressive and emancipatory possibilities of space, its deadness but also its life."[18]

Although they are informed by and imply slightly different political and intellectual commitments, both perspectives share a concern with the ways in which the local is mobilized to make sense of various people, practices, and places. For both, the local is neither self-evident nor neutral, and the framing of particular issues or struggles as predominantly "local" demands critical interrogation. Both also conceive of the local as having political potential, but in different ways and on different terms. Smith, for example, emphasizes the importance of connecting diverse local struggles into broader political movements, and thereby "jumping scales."[19] Implicit in such a formulation is an understanding of the local as more small, isolated, and politically limited than "higher" scales of activity. By contrast, those who reject hierarchical conceptualizations of scale do so, in part, as part of a political commitment to the local and a refusal of the notion that struggles must be scaled up to be effective. Marston et al. argue, for example, that, "the local-to-global conceptual architecture intrinsic to hierarchical scale carries with it presuppositions that can delimit entry points into politics—and the openness of the political—by pre-assigning to it a cordoned register for resistance."[20] They argue, in effect, that hierarchical understandings of scale and political struggle shore up an understanding of power as sweeping, pervasive, and hegemonic—a form of power that can only be effectively countered by equally expansive, "globalized" forms of resistance—and in so doing the very real political possibilities of the local and the specific are overlooked.

I will return to the implications of these slightly different conceptualizations of the politics of scale for understanding climatic change, but it is important to note that most (although not all) arctic climate research engages the local as a self-evident, contained site of analysis, not as a product of social and political struggle. A large body of scholarship considers the ways in which local landscapes, infrastructure, health, and other dimensions of wellbeing in the Arctic are affected by climatic change, and how local knowledges might be brought to bear on these localized changes.

This line of scholarship has identified important dimensions of climatic change in the region. But as I have argued elsewhere,[21] it has also tended to obscure some other, very pressing dimensions of climatic change. Insofar as the local is equated with the Indigenous, and the Indigenous, in turn, is equated with an externally defined understanding of the "traditional," localized studies of the human dimensions of climate change have tended to emphasize hunting, land travel, and traditional knowledge over other "local" dimensions of climate change, particularly climate-related transformations in resource extraction, shipping, and sovereignty. These latter transformations are of pressing concern to Indigenous northerners, but tend not to register as local dimensions of climate change in the literature, or as issues to which local or traditional knowledges might be brought to bear. Within the large body of literature considering the human dimensions of climate change in the Arctic, there has to date been no study focused on how, for example, climate-related transformations in the resource and shipping sectors will impact northern Indigenous peoples, in spite of the rapid and extensive changes afoot.

Approaching the local as a contained and self-evident scale of analysis has also tended to obscure the historical and political constitution of "local communities" and "local knowledge" in the Arctic. Indeed, most contemporary climate research overlooks the importance of imperial and colonial histories in shaping contemporary research objects, subjects, and research relations. Julie Cruikshank notes, for example, the cruel irony in contemporary efforts to gather traditional knowledge from Indigenous peoples about lands from which they have been forcibly removed.[22] The establishment of arctic settlements is itself deeply contested and an outcome of prior colonial interventions in the north; the very constitution of a local community to which contemporary researchers might travel is a legacy of prior efforts to manage and know northern Indigenous peoples. Similarly, contemporary efforts to "help" arctic Indigenous peoples adapt to a rapidly changing world (including academic and government interest in maintaining Inuit "in place") are themselves informed by long histories of helpful intervention in the north. There are lines of affiliation to be drawn between contemporary efforts to help Indigenous northerners in the face of climatic change, and what Tania Murray Li describes as a colonial "will to improve," a will that ultimately entrenches colonial authority and interests.[23] In other words, academic engagement with local communities and

local knowledge in the Arctic is historically and politically informed, and is invariably shaped by inherited structures of knowledge and practice.

While there are clearly reasons to be cautious about the mobilization of the local in contemporary research, to pursue these arguments is not to suggest that scholars should abandon analysis of the localized geographies of climatic change. Rather, it is to insist on a critical, careful assessment of the ways in which the local is deployed in climate research, policy, and politics; to attend to the ways in which attributions of locality are affiliated with colonial systems of knowledge and practice; to challenge the presumption that the "local" knowledges and concerns made legible through academic and bureaucratic knowledge production fully reflect what arctic Indigenous peoples know about and care about with respect to climatic change; and to redirect attention to a series of other locals that are central to the constitution of climatic change. In so doing, some of the intellectual and political effects of scaling climate change might be both traced and challenged.

Toward Different Locals

What other lines of engagement with the local might we pursue, then, as part of a critical and careful engagement with arctic climatic change? I consider three lines of inquiry below that might be thought of as points of critique, lines of existing inquiry, and lines of potential inquiry through which studies of climatic change in the Arctic might be both interrogated and refocused. All three take scale to be socially and politically constructed—there is no self-evident "local" at stake here—and all three redirect attention from non-Indigenous study of distant, Indigenous "locals" toward a critical interrogation of the range of locations, peoples, and practices that produce, sustain, and profit from climatic change.

1. Genealogies of "Local Knowledge"

The locality of knowledge is firmly established in environmental history, geography, and anthropology; few would dispute Cruikshank's claim that "all knowledge is incontrovertibly local."[24] Such an insight emerges from geographic attention to the spatiality of knowledge and power, but also from the work of a broader network of scholars drawing on feminist,

poststructuralist, postcolonial, actor-network, and science and technology studies (STS) writings. There is now a large body of literature attending to the very specific geographies of scientific, imperial, and other knowledges, a literature that insists on the importance of acknowledging the geographical and historical specificity of the universal or global, and the processes by which hegemonic knowledges are made "true."[25]

If all knowledges are "local," however, it does not follow that all knowledges enjoy equivalent mobility, legibility, and legitimacy. Indeed, there is an important distinction to be made between the philosophical premise that all knowledge is local (in the sense of being produced by particular people in particular places) and the broader discursive contexts within which particular knowledges become associated with the "local," "global," "universal," or "true." There is no doubt that "all knowledge is located and geographically and historically bounded, and … the local conditions of its manufacture affect substantively the nature of the knowledge produced,"[26] but certain knowledges continue to be more firmly associated with the local scale. Such associations are politically consequential. As Nygren observes, "local knowledge" continues to be framed as "an out-of-the-way other, contrasted with progressive representatives of the expert world," and part of the "romantic past," or, alternatively, framed as "a panacea for dealing with the most pressing environmental problems" and a "critical component of a cultural alternative to modernization." In either case, "local knowledge has been represented as something in opposition to modern knowledge."[27] Indeed, the turn toward local knowledge in climate change research inherits, and in many ways remains informed by, a long tradition of associating the local with the small, powerless, antimodern, isolated, racialized, and feminized.[28]

At a time when gathering, documenting, and integrating local, traditional, and Indigenous knowledges has become orthodox in assessments of climatic change,[29] tracing the geographies of the rise of local knowledge in climate change research—situating and making explicit the "local conditions of its manufacture" as an object of research—might reveal some of the intellectual and political stakes of the mobilization of the local in contemporary climate discourse. Bocking contributes to such a project in his assessment of the evolution of the status of Indigenous knowledge in northern science. He traces the conditions and terms upon which "the status of Indigenous people and their knowledge has been radically revised" among

northern scientists, from dismissal and denigration to acceptance and integration, and argues that such shifts must be understood in relation to dynamics of race and whiteness.[30] Cruikshank has long troubled the ways in which northern Indigenous knowledges are taken up by scholars and bureaucrats, and has situated recent enthusiasm for "local" climate knowledge in relation to a much longer timeline of encounter between scientists, explorers, and northern Indigenous peoples.[31] Forbes and Stammler also help situate the rise of local knowledge in climate change research by noting the awkwardness of researching both "traditional ecological knowledge" (TEK) and "climate change" in arctic Russia, where neither concept has the same purchase as it does in North America.[32] There is no necessary correspondence, they argue, between what becomes framed as "traditional" knowledge and the knowledges that emerge from intimate relations with locality, particularly when externally defined research agendas and questions are imposed on circumpolar Indigenous peoples.[33] These varied works draw on a larger body of scholarship unpacking the place of the local in environmental research, governance, and politics.

A genealogy of the ways in which "local knowledge" has been engaged (and ignored) in northern research would thus make important links with past efforts to engage or dismiss local knowledge, including the utter dismissal and denigration of local understandings of wildlife through the caribou crises of the 1960s,[34] the failure to account for local concerns and interests in post-war arctic mineral development and militarization,[35] the denigration of local relationships with sled dogs through the sled dog shootings of the 1960s,[36] the assumption that Indigenous knowledges of lands in one part of the Arctic could be seamlessly transferred to other regions as a rationalization for relocations,[37] the impacts of bureaucratized knowledge production, translation, and decision-making on Indigenous wildlife co-management (as discussed by Paul Nadasdy in his chapter in this volume),[38] and the failure of local knowledges about the importance of seal hunting and commercial trapping to effectively counter European and North American movements to ban seal and other fur trades.[39] Each of these interventions had devastating effects on "local communities," and is symptomatic of the ways in which strategic understanding and misunderstanding of local knowledges interweaves with broader power relations. Given that each intervention was also framed as helpful, well-meaning,

and in the best interests of northerners, how, we might ask, do contemporary valuations of local knowledge risk extending such legacies?

Furthermore, a genealogy of local knowledge might assist in de-centering academic knowledge production and the false notion that local, Indigenous, or traditional knowledges must be documented by academics and policymakers in order to be meaningful or effective—or, in more extreme formulations, in order to survive at all. Indigenous peoples have always nurtured their own knowledges, for their own purposes, and continue to do so beyond the confines of academic or institutional documentation. These geographies of engagement with "local knowledge" are necessarily and importantly *not* known or knowable in academic or bureaucratic terms, and it is by no means clear that it is possible or desirable to translate such knowledges and practices into institutional spheres.[40] But it is crucial to acknowledge that, whether or not such processes are documented in academic or bureaucratic terms, Indigenous knowledges are continually engaged by Indigenous peoples, for their own purposes, and scholars must take seriously the necessary and inevitable gap between the institutionalized documentation, mobilization, and application of local knowledge, and the relationships and practices that sustain knowing and being in Indigenous communities. This is not a gap to fill or bridge (much less by non-Indigenous academics), but rather to respect and remain attentive to. Indeed, initiatives like the Digital Indigenous Democracy (DID) project recently launched in Nunavut challenge the notion that "local" Inuit knowledges and concerns can be meaningfully engaged by institutions, and underscore the necessity of sustaining and sharing knowledge outside of, alongside, and in opposition to institutional parameters. Emphasizing oral Inuktitut, DID uses Internet, community radio, local TV, and social media

> to amplify Inuit traditional decision-making skills at a moment of crisis and opportunity as Inuit face Environmental Review of the $6 billion Baffinland Iron Mine (BIM) on north Baffin Island. Through centuries of experience Inuit learned that *deciding together*, called *angiqatigiingniq* … is the smartest, safest way to go forward in a dangerous environment. Through DID, Inuit adapt *deciding together* to modern transnational development—to get needed information in language

> they understand, talk about their concerns publicly and reach collective decisions with the power of consensus.[41]

Not only does Digital Indigenous Democracy initiative challenge the delimitation of local knowledge to a narrow understanding of the traditional, antimodern, or ecological (see the following section), it also displaces academic and institutional structures—and written English—as the most appropriate, effective, and meaningful venues within which such knowledges might be mobilized and through which decisions should be made. A genealogy of engagement with "local knowledge" must account for such practices, not in an attempt to make them knowable in academic or institutional contexts, but rather as instances that de-centre dominant forms of knowledge production, and challenge the presumption of equivalence between academic engagements with local knowledge and knowledge itself. In sum, a genealogy of "local knowledge" as an object of arctic climate research would call into question not only the nature and scope of the knowledges in question, but also the longer histories and politics of academic engagement with Indigenous knowledges. It would situate the turn among scholars and policymakers to "collect" and "integrate" local, Indigenous, and traditional knowledge in relation to much longer histories of engagement, including histories of selective and strategic misunderstanding and disregard.

2. Indigeneity, Locality, and Tradition

There is a tendency to use the concepts of "local knowledge," "Indigenous knowledge," and "traditional knowledge" interchangeably in studies of arctic climate change, a tendency that takes its cue from much longer histories of associating Indigeneity with the local and traditional. Such associations have been consequential. Appadurai argues that, in Western knowledge systems, the very idea of Indigeneity or nativeness is underpinned by assumptions of "intellectual and spatial confinement" in which Indigenous peoples are assumed to be not only from certain places, "but they are also those who are somehow incarcerated, or confined, in those places. … Natives are in one place, a place to which explorers, administrators, missionaries, and eventually anthropologists, come."[42] This tendency to assume an equivalence between the local and the Indigenous, and to

assume that non-Western and Indigenous peoples are more local than others, emerges from distinctly racialized and colonial epistemologies. Indeed, a number of scholars have specifically problematized the association of Indigenous peoples with the local and of non-Indigenous peoples with mobility, translocality, and globality.[43] Within such framings, to be Indigenous is to not only be more explicitly tied to a local place, but also to have one's Indigeneity itself delimited to one's relations with that place. That is, one is understood to be Indigenous only insofar as one is located in a particular place and engaging in recognizably "Indigenous" practices. According to Appadurai, the emphasis placed by anthropologists on the traditional relations forged between Indigenous peoples and their environment must be understood as rendered "in a language of incarceration" that perpetuates a fictional and deeply political confinement of particular peoples to particular cultural, intellectual, and spatial locations.[44] Notably, he identified this confinement as not just physical, but also cultural and intellectual: in other words, it is not just Indigenous peoples, but also their knowledge, that is understood to be more local, more directly contingent on relationships with the local environment, its relevance restricted to local processes and concerns.

Much of the past several decades has been spent dismantling this assumption among anthropologists, environmental historians, and geographers, and considering its intellectual and political implications.[45] Critical work has challenged the assumption that local cultures are isomorphic with particular territories (that is, that they are more likely and appropriately found in particular, delimited places), and also that their very being is more tied to the land, more reliant upon nature, and more shaped by things like climate, natural resource use, and so on. The association of Indigeneity with locality has come to be understood as not only a political, intellectual, and cultural-historical construction, but also as a profoundly relational reading of Indigeneity that produces non-Indigenous, colonizing identities, cultures, and knowledges as much as Indigeneity itself. As Howitt argues, "relationships between Indigenous peoples, colonial powers, settler populations, and postcolonial government have always been spatialized by a complex politics of geographical scale,"[46] and problematizing the scalar dimensions of (neo)colonial formations has been a key site of critical inquiry into Indigenous/non-Indigenous relations.[47]

The point is not that Indigenous peoples' knowledges are somehow *not* local, but rather that attributions of locality can be used to undermine that knowledge, even (and perhaps especially) when aiming to document, integrate, and represent "local" understandings of an issue. Indeed, northern Indigenous peoples themselves insist that their distinctive ontologies and epistemologies emerge from intimate relations with place and land.[48] Contemporary efforts on the part of non-Indigenous scholars and governments to take seriously these distinctive, specific, and rich knowledges flow from the political mobilization of northerners themselves; the systematic dismissal and exclusion of Indigenous knowledges and claims from northern research, governance, and politics motivated calls for the establishment of new institutional structures that might account for these knowledges and claims.[49] Indigenous ways of knowing and being are not *limited* to the local, however. Not only can distinctively Indigenous and traditional forms of knowledge be brought to bear on translocal, complex, contemporary dilemmas (and they are), but also a number of Indigenous leaders and scholars explicitly reject the delimitation of Indigeneity to an externally defined understanding of the local, traditional, or Indigenous.[50] They reject, in other words, the move from *recognizing* the importance of the traditional and intimately local, to *limiting* Indigeneity itself to these spheres. It is that delimitation that has been used, time and again, to restrict the legibility and efficacy of Indigenous peoples' knowledges, practices, and claims.

Such a delimitation has been specifically problematized in recent years in relation to the growing interest in integrating Indigenous knowledges into academic and policy settings. While this move can be understood as a progressive response to calls by Indigenous peoples to take seriously their distinctive knowledges, it remains an undertaking that is fraught with political and intellectual challenges.[51] Nadasdy notes, for example, that the emphasis placed on the traditional dimensions of Indigenous knowledges "makes it easy for scientists and resource managers to disregard the possibility that aboriginal people might possess distinct cultural perspectives on modern industrial activities such as logging or mining,"[52] activities that are just as "local" as hunting or other practices associated with Indigeneity. Others raise concerns about whether Indigenous knowledges can be effectively, accurately, and appropriately integrated into academic studies, including issues around translation, representation, decontexualization,

and power.[53] Bravo notes that while there is a great deal of enthusiasm for integrating Indigenous knowledges into science, there is almost no attention directed toward understanding how scientific research is received and debated in northern Indigenous communities.[54] It would seem that "local" knowledge can inform scientific research, but not the reverse. These slippages and critiques are instructive. Local, traditional, and Indigenous knowledge has never been as highly valued in academic, government, or political spheres as it is today, and yet it is by no means clear that what registers as "local" or "traditional" knowledge corresponds with what Indigenous peoples know about and care about, that Indigenous ways of knowing and being can be integrated into institutional parameters, and that documenting, translating, analyzing, and otherwise engaging local and Indigenous knowledges serves the interests of Indigenous peoples themselves.

At such a moment, it seems to crucial to ask, then, what counts as a local issue or local knowledge, the conditions under which these issues and knowledges come to matter, and for whom? Mobilizing explicitly local and traditional perspectives on climate change has been an important political strategy for Inuit; it is precisely by making people care about the localized effects of climate change on traditional practices that organizations like the Inuit Circumpolar Council (ICC) have advanced their political objectives.[55] As Duane Smith, president of ICC Canada recently noted, ICC's priorities are to ensure Canadian Inuit have strong ties to Inuit in Russia, Greenland, and Alaska, and to represent Inuit rights internationally: "we make connections abroad so that Canadian Inuit can benefit at home. This is especially important because … challenges in the Arctic very often need to be addressed abroad. And we often call upon our Inuit cousins in other countries to help us."[56] Reflecting on the settlement of the Stockholm Convention on Persistent Organic Pollutants (POPs) in 2001 (also discussed by Stephen Bocking in his chapter in this volume), Sheila Watt-Cloutier similarly positioned her international political work in relation to her personal history, her connections to family and to the land, and her accountability to Inuit in communities.[57] These reflections make clear both the importance of "scaling up" localized concerns to achieve particular political objectives, but also the futility of framing Inuit knowledges and practices as either local or global, traditional or modern.

Indeed, the coordination and internationalization of Inuit concerns about climate change seem to exemplify the emancipatory possibilities of scale; making the local matter at UN conferences or at the US Human Rights Tribunal has been an enormously effective political strategy. But Duane Smith has also observed that there are distinct limitations on the mobility of Inuit knowledges and concerns. Inuit participation is only selectively solicited in governance, research, and consultation settings, he argues, and Inuit are systematically "shut out" when matters of "resource development and other issues of great importance to Inuit" are decided.[58] The ICC's submission to the Arctic Marine Shipping Assessment,[59] a study carried out by the Arctic Council to assess increased shipping through the Arctic, made clear the limitations of engaging Inuit along wholly "traditional" and "local" lines. Inuit have repeatedly called for a comprehensive plan to address oil spills in Arctic waters, calls that have thus far met with only incremental progress by bodies like the Arctic Council, even while oil rigs establish themselves off the coast of Greenland and interest in opening the Northwest Passage to seasonal transcontinental shipping accelerates.[60] Clearly, the legibility and mobility of Indigenous knowledges is highly variable, and that variability is itself tied to larger political-economic relations and interests.

Why do some knowledges travel and not others, and on what terms? While Indigenous knowledges are actively solicited in the identification of local vulnerabilities to climate change, acute concerns and knowledges about pressing, translocal climate-related threats tend not to register in community-based studies. Further attention to the conditions under which local, traditional, and Indigenous knowledges become defined, mobilized, and politically consequential thus represents an important line of inquiry into the geographies of arctic climate change.[61] It is a line of inquiry to which geographers and environmental historians have much to offer; as Carey observes, the task facing climate historians is not simply reconstruction of past climates, or studies of how past societies have adapted to climatic changes, but also directing keen attention to how "social relations and power dynamics" shape the deeply political unfolding of human-climate relations.[62] Challenging the conflation of the local, Indigenous, and traditional in assessments of climatic change draws attention precisely to the social relations and power dynamics underpinning northern research and policy development.

3. Localizing the Global

The knowledges that are codified and represented as "local knowledge" in studies of climatic change are themselves relational productions; they emerge from encounters between researchers and community informants and are profoundly shaped by the contours of these encounters. Framing Indigenous knowledges as more local than other knowledges not only risks delimiting the knowledges and claims of Indigenous peoples, then, but also overlooks the locality and specificity of scientific, imperial, and other translocal knowledges.[63] If, indeed, all knowledge is local, what might be revealed by attending to the locality of the "global" dimensions of climate change, including not just globalized climate-related knowledges (such as climate science) but also climate change itself? That is, what if we turned our attention toward the specific geographies of international scientific networks, CO_2 emissions, commodity finance, and geopolitical struggles for arctic resources? How might localizing these "global" processes sharpen our understanding of climatic change and its articulations in the Arctic?

Efforts to localize climate science have already begun: Bocking has considered not only the ways in which climate science has been shaped by "the particular combination of disciplines, ideas about science, and political imperatives that have attended its development," but also the ways in which political and economic inequality have been defined within climate science as "issues beyond the scope of investigation."[64] His work indicates that there are very specific social, cultural, and political practices underpinning climate science that demand further interrogation and elucidation. Liverman identifies a series of narratives shaping climate research, discourse, and the mobilization of climate science, thus problematizing the ways in which climate science comes to make sense and be made effective.[65] Others have been localizing climate science (and other forms of northern research) in different ways: Carr recently quantified some of the economic dimensions of northern Canadian research, highlighting not so much the ways in which scientific ideas and understandings are generated, but rather the materiality of economic flows in the production of academic industries.[66] Carr argues that research is a significant industry in the territorial north, with output, GDP, and income impacts that are comparable to the commercial hunting, fishing, and trapping industries,

and employment impacts that are similar to the arts and heritage, entertainment, and recreational industries. Abele and Dalseg Kennedy similarly aim to situate northern research over the last several decades in relation to broader political-economic formations, including the often unacknowledged importance of non-academic consulting research in the north, and its role in environmental impact assessment and co-management processes.[67] These lines of inquiry go a long way toward addressing James Secord's important point that scholars must do more than merely demonstrate that scientific knowledge is "local" in the sense of being specific to a cultural-geographical context, and instead consider its "connections with and possibilities for interaction with other settings."[68]

Indeed, what political-economic objectives are advanced in making certain kinds of knowledge mobile and legible in both academic and non-academic institutions? Who benefits from northern knowledge production? Almost twenty years ago, as research funding related to the Royal Commission on Aboriginal Peoples (RCAP) was being disbursed, Martha Flaherty observed that almost none of it went to Inuit, and that RCAP failed to establish research guidelines that would "support full participation of the people being studied in the identification of research needs, design of research methods, collection and analysis of data, and control over the results and use of the results."[69] Similar concerns continue to be expressed by northerners, in spite of important shifts in northern research practices.[70] Even while community knowledges are solicited, most research funding continues to flow to southern researchers and institutions. To localize climate science, then, is not simply to attend to the institutional cultures within which scientists operate, or the settings in which their findings become legible, but also to query arctic knowledge production as an industry underpinned by profound inequalities, tied to processes of accumulation, and affiliated with longer histories of extraction. Here, again, history is instructive; as Carey observes, a range of scholars working in different historical and geographic settings have shown that "the accrual of climate science in the hands of government bureaucracies or among the intellectuals and the ruling elite has resulted in the accumulation of power for those groups—the power to withhold weather data, to manipulate understandings, or to economically benefit certain groups over others."[71] This is not the first time, in other words, that knowledge about climate has been politically and economically consequential.

Tracing the locality of the broader political-economic dimensions of climate change would also challenge the erasures inherent in framing climate change as a "global" issue. While there is no doubt that the effects of anthropogenic climate change are being observed across the planet, not only are these effects highly differentiated socially and geographically, but also the specific geographies of greenhouse gas emissions—the social, political, and economic practices that have caused anthropogenic climate change—fall from view when climatic change is framed as a global issue. There is a geography, Chakrabarty notes, to those who are "retrospectively guilty" of inducing climate change and those who are "prospectively guilty," and these geographies are thoroughly interwoven with "histories of capitalism and modernization."[72] If climate change forces us to confront our collective capacity to act as geological agents of change on a planetary scale, in other words, we must also continually pay attention to the differentiation within that collectivity. Chakrabarty thus cautions against thinking of climatic change "by use of such all inclusive terms as *species* or *mankind* when the blame for the current crisis should be squarely laid at the door of the rich nations in the first place and of the richer classes in the poorer ones."[73] Relatedly, Hulme has recently highlighted the dangers of "climate reductionism"—"a form of analysis and prediction in which climate is first extracted from the matrix of interdependencies that shape human life within the physical world … then elevated to the role of dominant predictor variable."[74] Climate change, in such scenarios, becomes an abstracted and depoliticized explanation for itself; it is climate, rather than specific human activities and relations, that comes to be understood as the primary agent of social, political, ecological, and economic crisis.

If "thinking global" about climate change risks depoliticizing the processes that cause climatic change itself, there is perhaps no better illustration than the move to frame uranium development in Nunavut as a contribution to climate change mitigation. Although they did little to cause climatic change, and suffer disproportionately from its effects,[75] Nunavummiut are being urged by industry and government to think of uranium mining as a means of doing their part to reduce global greenhouse gas emissions.[76] As French uranium company AREVA emphasizes in its proposal to develop a uranium mine near Qamani'tuaq (Baker Lake), Nunavut, "uranium from the Kiggavik Project would help to meet the future needs for nuclear power, which will help reduce, on a global

scale, greenhouse gas emissions."[77] Nunavummiut are, of course, acutely concerned about climate change and keen to contribute to mitigation efforts. But as Nunavut resident Dodie Kayuk noted in a Nunavut Planning Commission meeting tasked with assessing uranium development in the territory, Nunavummiut will bear distinctly localized risks for such "global" benefits: "what will happen when there's a leakage? Who will help us? … We are the ones that will be affected. People from down south and government do not drink our water, eat our animals and the fish, they don't breathe the air we're breathing."[78] Some of the material implications of "thinking globally and acting locally" on climate change are thus laid bare. Framing uranium development as a responsible contribution to a planetary crisis advances the interests of investors and shareholders, and places the lives and livelihoods of others at risk. How might scholars work to make these very different "locals" not only legible, but also identify the ways in which they are interconnected and shape each others' fortunes?

Indeed, what might arctic climate change research look like if we attended not only to its localized effects, but to the very specific geographies of greenhouse gas emissions, commodity finance, and fossil fuel extraction? What might result if we turned our attention to the geographies of what Johnson terms "accumulation by degradation,"[79] the extension of a new round of resource extraction in a region rendered more accessible by the biophysical effects of *previous* rounds of accumulation? Inuit have been tracing and naming these connections for decades.[80] As Ginsburg shows, there is no lack of "local knowledge" about what causes climate change and how it matters in communities: "Most Salluit residents do not characterize climate change as a threat to Inuit culture. Instead, they highlight the damaging impacts of globalization and internal colonialism as a more serious problem. This … suggests that focusing narrowly on climate change can obscure the broader and more immediate challenges facing Inuit communities. Such a realization demonstrates the need for researchers to locate climate change within a matrix of non-climatic challenges in order to mitigate threats to indigenous cultures."[81] According to Ginsburg, the more pressing and primary threats facing Sallumiut emerge from the wage labour system, school system, and other colonial and capitalist interventions, interventions whose spatiality extends far beyond the local, that intimately shape Inuit relations with climatic change.

To come to terms with these dimensions of climate change is to come to terms with colonial and capitalist histories and presents. And yet, in the vast majority of arctic climate change research, neither colonialism nor capitalism is within the frame of reference.[82] The local as a category of analysis facilitates these exclusions, insofar as the local is engaged as a resolutely contemporary and contained site, a site whose ties with broader histories and geographies are occluded. Not only is it essential to refuse this delimitation of the local, it is also essential to localize and make legible the specific geographies of climate-related accumulation shaping the Arctic, including both academic and industrial production and extraction.

Conclusion: Climate Anti-Politics

With slyness and flattery
you pretend
it is us you are serving
not yourselves
—Aqqaluk Lynge[83]

At the conclusion of his landmark book, *The Anti-Politics Machine*, James Ferguson responds to an anticipated question. After analyzing the political and economic consequences of development discourses, including the role of academic knowledge production in sustaining the development apparatus, Ferguson addresses the reader who might ask, "what, then, is to be done?" His response remains compelling, particularly at a moment when the "rule of experts"[84] appears to be intensifying in the Arctic. He begins by noting that the question, "'what is to be done?' demands first of all an answer to the question, 'by whom?'"[85] Ferguson challenges the notion that scholars and policymakers have the capacity to create meaningful change, as well as their self-appointed responsibility and jurisdiction to do so. Instead, he argues, "it seems clear that the most important transformations, the changes that really matter, are not simply 'introduced' by benevolent technocrats, but fought for and made through a complex process that

involves not only states and their agents, but all those with something at stake, all the diverse categories of people who craft their everyday tactics of coping with, adapting to, and, in their various ways, resisting the established social order."[86] It is crucial to acknowledge the limitations and dangers of academic engagement in various northern "problems" and to disentangle intentions to "help local communities" from the actual effects of well-meaning, helpful intervention. Although there is clearly a need for pointed, political effort to address the perpetuation and differentiated impacts of climatic change, current academic knowledge production is not necessarily achieving this objective, and it actually risks retrenching the very systems that have dominated northern Indigenous relationships, governance systems, and wellbeing.[87]

This is not to say that scholars should remain silent on arctic climate change; far from it. Rather, it is to call attention to the ways in which academic knowledge production—often unknowingly and unintentionally—can be implicated in the validation and extension of unjust social, political, and economic relations. Indeed, we cannot know in advance where our work will lead, what political strategies will be effective, and how knowledge produced in one context will be transformed by its interactions with others. If this is so, then we cannot assume that academic investigations of climate change do what they aim to do and claim to do, and neither can we assume that filling "gaps" in climate research will have meaningful impacts on the social, political, economic, and environmental processes through which climate change is produced, perpetuated, and ignored. In such a condition, it may be that *not* knowing is as important a response as knowing. That is, it may be that paying attention to the inheritances that shape academic practices in the Arctic, questioning the categories and methods through which we come to make sense of climate change, and de-centering academic capacities to "know" the north will be as important as the advancement of conventional research objectives.

Ferguson goes on to underscore the importance of "political engagement in one's own society" as an alternative to studying and "helping" distant others, as well as the importance of engaging and supporting oppositional groups in other locations, although always with an acute understanding that there may be "no need for what we do [as scholars] among such actors."[88] Both lines of engagement, it seems to me, warrant the attention of contemporary northern scholars, and it is with these cautions and

possibilities in mind that I have outlined some alternative approaches to the "local" dimensions of arctic climate change. For Ferguson, political engagement in one's own society includes actively shaping the discursive terrain within which issues like climate change come to make sense. In this regard, tracing the genealogies of past and present interest in "local knowledge," challenging the political and intellectual incarceration of Indigeneity to the "local" scale, and tracing the very specific geographies of various "global" dimensions of climate change (including greenhouse gas emissions, academic knowledge production, and the acceleration of resource extraction and shipping in the Arctic) might contribute to the ways in which climate change is understood, managed, and lived. This is both an historical and a geographic task. And whether we conceive of local struggles as transformative in and of themselves, or as necessarily articulated with other scales of political engagement, orienting academic skills and resources toward supporting the struggles of those who are experiencing the palpable, profound, material effects of climatic change will remain pressing. If anything, it seems clear that incarcerating arctic climate change to both the local scale and the temporal present and future renders climate change knowable in very specific terms, terms that demand challenge, revision, and re-imagination.

Notes

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15 Katherine Jones, "Scale as Epistemology," *Political Geography* 17, no. 1 (1998): 28.

16 Marston, Jones, and Woodward, "Human Geography without Scale," 416–17.

17 Gibson-Graham, "Beyond Global vs. Local," 30–31.

18 Smith, *Uneven Development*, 230.

19 Smith, *Uneven Development*, 232.

20 Marston et al., "Human Geography Without Scale," 427.

21 Cameron, "Securing Indigenous Politics."

22 Cruikshank, *Do Glaciers Listen? Local Knowledge, Colonial Encounters, and Social Imagination* (Vancouver: UBC Press, 2005), 257.

23 Tania Murray Li, *The Will to Improve: Governmentality, Development, and the Practice of Politics* (Durham: Duke University Press, 2007). I detail some of the interventions I am referring to later in this chapter. I also develop this argument more fully in Cameron, "Securing Indigenous Politics."

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