

the scientific competence of indigenous scholars besides) and criticizing him for not knowing the tangled institutional history of the St. Petersburg-based linguists that lay behind this one unfortunate text. Bogoraz himself certainly suffered for daring to criticize authorities. One wonders if the editors of this volume should have been so enthusiastic about clearing and remarking all of his paths.

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ARCTIC SCIENTIST, GULAG SURVIVOR: THE BIOGRAPHY OF MIKHAIL MIKHAILOVICH ERMOLAEV, 1905–1991. By A.M. ERMOLAEV and V.D. DIBNER. Translated and edited by WILLIAM BARR. Calgary: University of Calgary Press, 2009. xiv + 591 p., maps, b&w illus., appendices, bib., glossary, index. Soft-bound. Cdn\$ and US\$44.95.

The celebrated Soviet scientist Mikhail Mikhailovich Ermolaev, whose life as an Arctic scientist spanned the period from just after the foundation of the Soviet Union in 1924 until his death during the year of its collapse, is the subject of this biography, conscientiously translated by William Barr. During Ermolaev's long life, his work involved a range of related academic disciplines from geology to geophysics and geochemistry and was conducted both out in the field in the far North, in a university setting, and in the GULAG prison camp system following his re-arrest in 1940.

After a first chapter on Ermolaev's early life prior to his 1925 voyage to Novaia Zemlia, the bulk of the book is concerned with his career in the field during the 1920s and 1930s and the period from 1938 to 1954, during which he was first imprisoned and then, after a brief period of freedom during 1940, became an inmate of the GULAG camp system and exile. Events in Ermolaev's life are described alongside elements of his scientific work, with further details on the latter in particular provided in Barr's notes and in appendices.

From this reviewer's perspective, the material on Ermolaev's arrest in 1938, release and re-arrest in 1940, and subsequent work within the GULAG system is particularly interesting, both in terms of the role of the system in the Soviet "conquest" of the Arctic and considering Ermolaev's experiences as a case study of its functioning. Here family materials provide a context that reinforces the emotional suffering endured by many families during the era of the "Great Purges" in the USSR.

The authors of this biography, Ermolaev's son Aleksei and V.D. Dibner, a colleague of Ermolaev's late in his life, had access to privileged personal materials, including what

appears to be a considerable amount of correspondence—much held by the family and some obtained from archives of the security services. Unfortunately, neither of the authors is a professional historian, and hence the attribution of material to sources in the endnotes is weak. On occasion, the authors have resorted to the Soviet-style device of presenting what is no doubt paraphrasing as direct speech. Although the authors do not eulogize their subject (as one might expect given the relationship of the authors to the subject and the very traditional Russian academic biographical style), this biography lacks a critical edge that might have made for livelier reading and indeed provided a more multi-dimensional portrayal of Ermolaev. The author's conscious avoidance of critical comments by the subject about other figures certainly contributes to making some of the material a little "dry." Some of the material on Ermolaev's early and later life, which is likely to interest a far more limited audience than the core of the book, could perhaps have been omitted to abridge these hefty 591 pages.

William Barr has done an excellent job of translating this work, which is also well illustrated. It is not entirely clear, however, what the purpose of the book is, other than serving as a memorial to Ermolaev. This goal may appeal to family, friends and colleagues, but many readers of this English translation are more likely to be interested in Ermolaev's perspective on Soviet Arctic exploration and development and his experiences of the tumultuous period of the "Great Purges" and late Stalinism. Though I accept that there was an honourable attempt to be sensitive to the desires of the family in production of the English translation, more ruthless editing and additional endnotes by the translator could have given those topics more prominence—perhaps leading to greater exposure for this prominent figure in Arctic science.

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ARCTIC DOOM, ARCTIC BOOM: THE GEOPOLITICS OF CLIMATE CHANGE IN THE ARCTIC. By BARRY SCOTT ZELLEN. Santa Barbara, California: ABC CLIO Publishing, 2009. ISBN 978-0-313-38012-9. xi + 232 p., notes, bib., index. Hardbound. US\$49.95.

Zellen, a former journalist and newspaper editor who worked for the Inuvialuit in Inuvik, Northwest Territories, during the 1990s, argues that the Arctic has reached a "tipping point" in terms of both climate change and consequent geopolitical (read: military, economic, and politically strategic) importance on the international stage. With the loss of sea ice, melting permafrost, warming ambient temperatures, and consequent changes in flora and fauna

environments and adaptations, Zellen argues, an Arctic Spring has arrived. It is the beginning of the final chapter of the Earth's last Ice Age, which has held both the geophysical Arctic and its inhabitants prisoner to its climate—held back by the forces of cold from cultural, social, and economic modernization (read: Eurocentric cultural and economic capitalism). This view of modernization pits climate change alarmists (such as Nobel prize winner Al Gore and Inuit Nobel nominee Siila Watt-Cloutier) against climate change “optimists,” such as Zellen himself, along with those who stand to benefit from Arctic resources denuded of the snow and ice that has perpetuated their inaccessibility. It will not be lost on the reader that accessing the reportedly enormous cache of oil, gas, and mineral resources beneath the melting permafrost and sea ice will be critical to proliferation of the oil economy that is responsible for much of the climate warming that the Arctic is now experiencing.

We Northerners are well aware of the potential benefits of climate change. As we watch our children play in the unfamiliar, heavy “sandy snow” piled in backyards and playgrounds around Yellowknife, wrought by temperatures hovering just below freezing well into what is historically the deep-freeze month of December, the joking refrain is: “Global warming—bring it on!” However, Zellen takes a serious tone, providing perhaps an overly capitalistic way for us to understand our situation. According to Zellen, Inuit culture will adapt and evolve to embrace its non-cold climate-induced aspects; economic opportunity will abound; and Indigenous peoples, through the political and economic empowerment they have gained from land claims and self-government, will become the northern equivalent of Saudi princes (p. 163).

One only need take a closer look at the political and legal instruments structuring Indigenous rights recognition agreements, resource royalty, and own-source revenue regimes to know that the kind of power and wealth Arctic warming might unlock is likely to remain firmly in the hands of multinational corporations and national governments. For example, Zellen correctly identifies increased power of Inuit vis-à-vis national resource management interests through co-management provisions of the Nunavut land claim as evidence that Inuit are well positioned to participate in stewarding resource use change and innovation in a warming Arctic. But he neglects to mention the realpolitik of Indigenous rights recognition that our government engages in when it comes to potential resource wealth. For example, he does not mention that in the international arena, Canada's own sovereign claims to vast oil resources beneath the Arctic Islands rest in part on the Inuit Land Use and Occupancy Study (Freeman, 1976). At the same time, Canada in devolution negotiations denies the territory of Nunavut a share in those same resources, arguing that the resources are “offshore” and therefore owned by the Canadian national government, and that the Inuit through the government of Nunavut have no right to them (Okalik in Bell, 2006). But this is nothing new in Canada: the Northwest Territories, for example, is rife with examples of

Indigenous peoples who live closest to oil fields and gold mines that produce hundreds of millions of dollars of federal royalties, but continue themselves to subsist in third-world conditions. And some of those communities are signatories to land-claim agreements.

The book is presented in six chapters, with two forewords: the first by a former Republican governor of Alaska, and the second by a professor of national security studies. The book promises to “apply several theoretical concepts and ideas, including concepts from the fields of geopolitics and international relations theory” (p. 3). This is done, more journalistically than systematically, in order to define first how the Arctic was and is perceived in strategic terms (as a desert, a frozen Cold War buffer, a climatically impenetrable store of resources) and then how the post-cold Arctic should be imagined and understood (as a Mediterranean, Maginot line, Lenaland, Rimland, or resource frontier ripe for plundering). The author is at his best in chapter two, which presents an overview of military and strategic analyses of the Arctic's historical geopolitical importance on the world stage.

Given that the book rests its key arguments on the spectre of profound and far-reaching multidimensional military, strategic, and economic effects of climate change at levels ranging from local to international, a thorough and systematic review of climate change science research and change modeling would have been in order. Such a précis would have provided factual depth to the arguments made. If geopolitics rests, as Zellen says, on the land itself, a chapter with a detailed overview of the land, including its geophysical characteristics, ice phenology, flora and fauna, and the variations in its ambient and ground temperatures would have been useful. This overview, followed by an explanation of influential and credible climate models and descriptions of how changes are being measured (How do they map the seabed? What do they look for in ice core samples?), as well as how these changes are being observed and experienced by animals and humans, would have helped readers to appreciate the connection between geophysical and political change. A quick walk through the poster hall of any Arctic science conference provides ample evidence of both climate change and the opportunities and challenges that scientists see in their findings (e.g., potentially longer berry-picking seasons in some areas of Nunavut, but alas, fewer berry plants!). That lack of distilled scientific findings and factual evidence as a basis for strategic geopolitical advice is the weakness of this book. Zellen is knowledgeable and articulate—that is not in question. But where policy makers would need lines of evidence, they are more likely to find journalistic analysis. This is not a scholarly account, nor is it really a book for those unschooled in strategic studies, Northern development, or climate change. However, I must agree with Zellen that it makes a provocative theoretical case for the potential positive impacts of climate change, which optimists of both the left and the right have begun to embrace, whether it be Obama's optimism for the economic benefits of a green innovation economy

or the *Real-ökonomie* of new-frontier resource exploitation. Zellen has written a book that will make us think, and for that, his contribution should be lauded and welcomed as a source of important discussion among students and scholars of northern studies and northern policy makers alike.

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NORTHERN EXPOSURE: PEOPLES, POWERS AND PROSPECTS IN CANADA'S NORTH. Edited by FRANCES ABELE, THOMAS J. COURCHENE, F. LESLIE SEIDLE and FRANCES ST-HILAIRE. Montreal & Kingston: McGill-Queen's University Press, 2009. ISBN 978-0-88645-205-6. The Art of the State, Vol. 4. xii + 605 p., 35 contributors, maps, b&w illus. Softbound. Cdn\$49.95.

While climate change and associated questions of national sovereignty have captured public interest in the south, *Northern Exposure: Peoples, Powers, and Prospects in Canada's North* offers a stark reminder that these issues are far more complex than often portrayed in the media by drawing critical attention to the dramatic transformations that are now taking place in the social, economic, political, and environmental landscape of the Canadian North. In this edited volume, Frances Abele and her colleagues have done a masterful job of compiling a collection of chapters from leading scholars, political and industrial leaders, and those who are on the frontlines of Arctic change. This volume will be of particular interest to students and scholars of Canadian history, indigenous studies, and northern affairs, as well as those directly involved in the delivery of northern programs and services. Last, this volume should serve as mandatory reading for all public officials who participate in setting public policies for the North.

*Northern Exposure: Peoples, Powers, and Prospects in Canada's North* is the fourth in a series devoted to The Art of the State. The 32 comprehensive chapters of this edited volume, published by the Institute for Research on Public Policy, are the result of a two-year multidisciplinary research program. They examine public policy needs relating to sovereignty, environmental change, and science;

aboriginal and public governance; economic development; and education and human capital. The impressive list of contributing authors includes Inuit and First Nations leaders, former territorial premiers, and aboriginal youth, as well as Siila Watt-Cloutier (Nobel Peace Prize nominee) and Mary Simon (former Canadian Ambassador for Circumpolar Affairs), who provide insightful commentaries.

In general terms, the volume addresses three fundamental challenges facing Canada's North. The first is allowing northern governing institutions, be they public or aboriginal, the necessary autonomy and means to make and implement policies that reflect the interests of Northerners. To date it is unclear whether the federal system is sufficiently organized to support these new governing processes. The second challenge is to depart from outdated allegiances to short-term economic development initiatives that focus almost exclusively on large-scale mineral and infrastructure development, often at the expense of other, perhaps more sustainable, economic development opportunities. Third, is the related challenge of safeguarding the well-being of Northerners through economic diversification and securing the necessary investment in local institutions and infrastructure. While approaching them in very different ways, and grounded in very different theoretical and conceptual orientations, all of the chapters in this volume explore these three challenges as they pertain to the formation of more informed and enlightened public policy for the North.

This volume also gives voice to the next generation of Northerners, who no doubt will be affected most by the policy choices made today. In a section entitled *Voices of the New Generation*, we are reminded that "the next generation, the generation that has inherited these agreements, treaties and transformative governments ...[will] be expected to do something with what our leaders achieved for their grandchildren and for us" (p. 499). This seems to be a daunting responsibility to place on the next generation, but if these young authors are reflective of future northern leaders, it would seem that the North is in good hands.

From a purely academic perspective, it could be argued that the diversity of authorship in this volume (academic, industry, government leaders, and youth) creates uneven scholarship. However, if this is seen as a weakness I believe it is a weakness far outweighed by having these various and differing perspectives represented side by side. Rarely do you have a single volume that presents the experiences and opinions of mining executives alongside those of indigenous activists and youth.

In the final chapter, *Looking Forward: Northern Policy in Canada*, Frances Abele and her colleagues identify key historical elements of northern public policy and offer a number of observations about potential actions and solutions. This chapter in particular should be read, and then read again, by all those involved in setting northern public policy.

As the effects of broad geopolitical, environmental, and economic forces converge on the Canadian North, it is easy to become discouraged by the enormity of challenges