STUDYING ARCTIC FIELDS: CULTURES, PRACTICES, AND ENVIRONMENTAL SCIENCES. By RICHARD C. POWELL. Montreal and Kingston: McGill-Queen's University Press, 2017. ISBN 978-0-7735-5113-8. 244 p., maps, b&w illus., endnotes, bib. Softbound. Cdn\$34.95. Also available as an eBook.

In 1958 the Canadian government created the Polar Continental Shelf Project (PCSP) as an outcome of the International Geophysical Year 1957–58, with the goal of mapping and charting the continental shelf to the north and west of the Canadian High Arctic Islands (p. 5). Political interest in the Canadian Arctic at the time was at an all-time high; Canada's 13th Prime Minister, John Diefenbaker, was elected in 1957 on a campaign promise to bring to life his "Northern Vision."

The idea of the Northern Vision was to create jobs by opening the Canadian Arctic through the building of roads and railways and improve communication with the hope that investors would be enticed to develop resource extraction operations. In addition, Diefenbaker announced plans to increase Arctic research and promote self-government in Yukon and the Northwest Territories (Diefenbaker, 1958). With the excitement about opening up the Canadian Arctic, the Department of Northern Affairs and National Development put forth its "Road to Resources" program in an effort to promote mining development across the Canadian Arctic. However, Diefenbaker's grand Northern Vision fell short of expectations and very little was achieved: project costs had been grossly underestimated and investors were shy to move in, mostly because of the engineering requirements necessary to deal with the harsh Arctic climate. He ultimately decided to abandon his plans in 1962, as he felt his political popularity was diminishing with Canadians because of the lack of progress on the campaign promise to open up the Canadian Arctic. During the four-year life span of the Northern Vision, his government was able to complete the construction of the Pine Point Railroad, which carried lead-zinc ore concentrate out of the North for refinement in southern Canada, finish the Dempster Highway in Yukon, and support the operations of the PCSP. Even though the Dempster Highway project ran well over budget (costing \$103 million, as opposed to the \$5-8 million that had been projected) and took over 20 years to complete, it has remained an important roadway in Yukon and serves as a relic of Diefenbaker's Northern Vision (Isard, 2010).

Canadian history reveals that there have been many efforts to open up the Canadian Arctic for resource development. It is not surprising that after many failed political promises it still remains largely undeveloped. Perhaps the political desire to open the Canadian Arctic for development is simply an attempt by the nation state to exert sovereignty over the North, an idea that started gathering steam between the 1920s and the 1960s and has continued into the early 2000s (Cavell and Noakes, 2010; Southcott, 2015). Most northern development plans have

fallen short or fail to make it beyond a campaign speech. Speaking of falling short, former Prime Minister Stephen Harper (2006–15) made annual trips across the Canadian Arctic to announce new initiatives and investments as a way to show the world that Canada was not only investing in the North but also watching it closely. There were promises of icebreakers, a deep-water port, and a military training centre that during his tenure never made it beyond the podium (Byers, 2013). However, two achievements were the construction of the Canadian High Arctic Research Station (CHARS), located in Cambridge Bay, Nunavut, and investment in the training and development of the Canadian Rangers, who are Canada's first responders to any Arcticrelated emergencies. Investments in research tend to make it off the ground and last the test of time—such as PCSP. which offers support in the form of logistics throughout the Canadian Arctic for field research (Natural Resources Canada, 2018).

Richard Powell has dug deep into the history books to provide an important overview of the political motivations of the Canadian government to create the PCSP in 1958 and how its mandate and name ("Project" to "Program") have changed over the years. Furthermore, this book is not simply a Canadian history lesson; it is an ethnography of field science (p. 4). Powell offers a unique approach to understanding the social dynamics of scientists in the Canadian Arctic with an in-depth ethnography of the PCSP research station in Resolute Bay, Nunavut, and several other field camps. The research approach and methods used in Powell's study are clearly well thought-out and well executed. Powell carried out observations, conducted face-to-face interviews, made site visits, and read archival information about PCSP to provide a thought-provoking ethnography.

This detailed study is illustrated with maps and both historical and contemporary photographs, and is divided into seven chapters. The first chapter provides a historical overview of Canada's interest in the North and how the idea behind the PCSP was to exert both scientific and military sovereignty across the Canadian Arctic—the Russians and Americans had more detailed maps of the Canadian Arctic than Canada did. The second chapter offers a historical summary of the scientific disciplines and practices of geography and biology that the PCSP utilized to fulfill its initial mandate. In the third chapter, Powell propels us into his fieldwork at the PCSP Resolute Bay research station and illustrates the personal and social dynamics at play—this is a fascinating chapter that anyone about to begin ethnographic fieldwork for the first time should read. Chapter 4 provides the unique perspective of social hierarchies and undercurrents of the PCSP research station, and most likely any research station. Even though this book is not an ethnography focused on Inuit, chapter 5 provides an overview of the creation of Nunavut, how the community of Resolute Bay was established when the Canadian government forcibly relocated Inuit people, and how the social dynamics between PCSP researchers and

the community play out during the annual Canada Day celebrations. For any sociologists, anthropologists, or social theorists reading this book, chapter 6 will be a thoughtprovoking gold mine sprinkled with epistemological and ontological nuggets of contemplation. This chapter explores the emotions underlying the social structures at the PCSP research station and allows the reader to consider how our backgrounds shape our perspectives. Chapter 7 strikes an emotional note as Powell explores the "hidden voices" within the PCSP research station in Resolute Bay. This chapter describes some of the frustrations felt by the station researchers, which focus on funding constraints, competing interests, and concerns about the future of PCSP. The fieldwork stories that Powell depicts through his book bring powerfully to life the dynamics that exist within field research in the Canadian Arctic.

Powell's observations and dialogue with PCSP staff, graduate students, community members, and researchers add an important dimension to this book, as the social dynamics and structures of northern research stations can be an enormous challenge that can prohibit fieldwork, especially for people new to the field. Powell presents a perspective on Canadian Arctic science that has not previously been fully explored. His ethnography of field science shows the reader that Arctic scientists, who hold the keys to the mystery of climate change, are faced with many personal, social, and political demands. Regrettably this book does not situate the PCSP within the larger international context of research programs run by other countries such as the United States, Russia, or Great Britain. The reader is left wondering if the social and political hierarchies and structures that can inhibit research in Canada are also felt in other countries that have robust Arctic research programs.

Richard Powell offers readers a greater understanding of the historical and contemporary trajectory of the PCSP and of the many challenges that Arctic scientists face besides bad weather and damaged instruments. This book should be required reading for any student interested in Arctic research, for polar historians, and for politicians with aspirations for northern development.

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