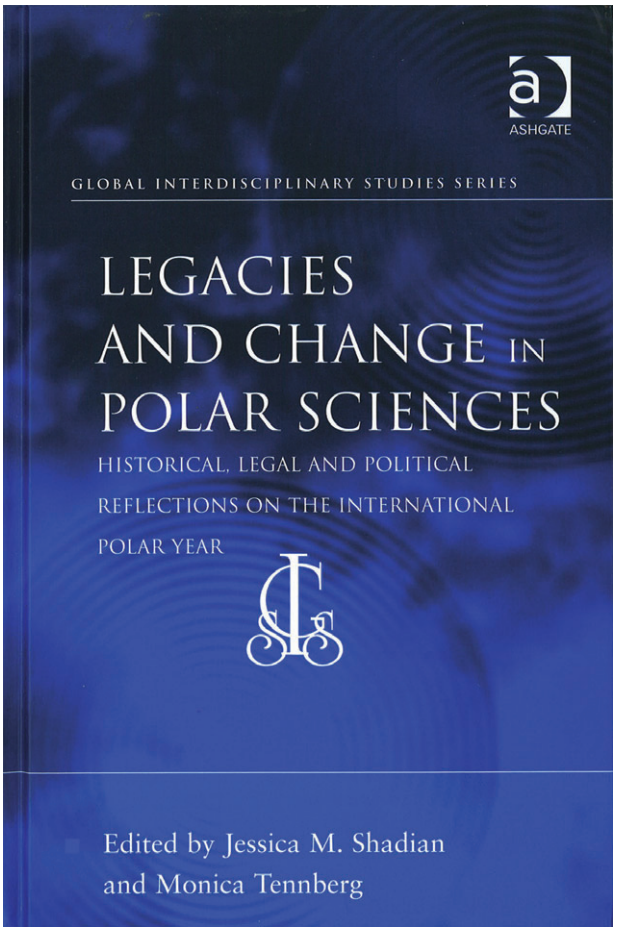
Polar Research

BOOK REVIEW

Review of *Legacies and change in polar sciences: historical, legal and political reflections on the International Polar Year*, edited by Jessica M. Shadian & Monica Tennberg (2009). Farnham: Ashgate. 213 pp. ISBN 978-0-7546-7399-6.



The International Polar Year (IPY) of 2007–09 was an international scientific enterprise that encompassed all polar regions, and built on the legacies bequeathed by earlier endeavours stretching back to the late 19th century. The first such venture was initiated in 1882–83, the second was in 1932–33 and the last, the International Geophysical Year (IGY), occurred in 1957–58, and involved thousands of scientists working inter alia in the polar continent. Activity in the Arctic, for geopolitical reasons, was rather more limited, and was certainly not epitomized by free and unfettered scientific investigation. Sponsored by the International Council for Science, the most recent IPY was noteworthy for its explicit bi-polar focus, and its integration of the humanities and social sciences with the physical and environmental sciences. The role of indigenous communities was also notable in Arctic-based projects, a development that would have been inconceivable during the IGY. As with the IGY, however, a spectacular event in one of the theatres of scientific interest grabbed world headlines: in 1957 it was Sputnik orbiting the Earth, and in 2007 it was a Russian submersible planting a flag on the bottom of the central Arctic Ocean basin.

Jessica Shadian and Monica Tennberg's edited book on the polar sciences and their relationship with the IPY and its predecessors is impressively well timed. Indeed, the book's release date of July 2009 shows a commendable turn of speed. The Cambridge-based historian of science, Michael Bravo, explains the rationale for this collection in an elegantly composed preface. It is he, rather than the two editors, who sets out the intellectual and political landscape. Indeed, one of the disappointments of this book is the rather flimsy editorial introduction. After two pages of a quick overview, the editors merely note that there is a multiplicity of contributions, and that the intersection between science, law, politics and history matters. We are reminded that the Arctic and the Antarctic are different geographical environments, and finally the contents of the book are summarized somewhat brusquely. Six pages in total are devoted to the introductory component.

Correspondence
Klaus Dodds, Department of Geography, Royal Holloway, University of London, Egham, Surrey, TW20 OEX, UK. E-mail: k.dodds@rhul.ac.uk

Organizationally, the book is divided into two sections: a set of four Arctic-based chapters and a collection of four Antarctic interventions, rounded off by a concluding chapter of sorts by one of the editors. The rationale for the first set of essays is based largely on an interest in climate change politics and environmental knowledge production in the Arctic. So, we have a good chapter on international climate science with regard to the High North by the Swedish-based writer Annika Nilsson. It reminds readers that despite the intense militarization of the Arctic during the Cold War, scientific and political networks prevailed, with varying levels of cooperation and interaction. The second chapter by Jessica Shadian is a rather different kind of project and uses international relations theory (and political studies) to make the powerful point that the IPY was a very different kind of affair to the IGY—a move away from state-sanctioned big science towards a host of actors

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and agencies, including private industry and indigenous communities. Whether it is indicative of a post-Westphalian system is a moot point. Thereafter, we have the Canadian political scientist, Rob Huebert, commenting on scientific cooperation, sovereignty and the Arctic region. Recent interest in the delimitation of the outer continental shelf in the Arctic Ocean is a good indication of the intriguing relationship between science, nationalism and resources. Heubert touches upon the potential role of the social sciences in understanding this relationship, but I would have thought it was rather a truism to suggest that science and international cooperation do not necessarily follow one another. This was well understood in the 1950s. The final contributor, Urban Wrakberg, contributes a fascinating chapter on IPY field stations and, without citing other potentially relevant scholars, I could see this work complementing the work completed by the geographer Christy Collis and the architect Quentin Stevens on Antarctic field stations and scientific bases. Generously illustrated, even if they are of a rather indistinct black and white quality, this analysis links the discursive and material in productive ways, even if I was not quite sure what the author meant when discussing the "geopolitical meanings of polar stations" (p. 92). To someone who works in the field of critical geopolitics this was intriguing, but not well explained.

It also begged a question about the illustrative qualities of this book. There are no maps of the Arctic and Antarctic—it would have been nice to have seen, for example, the geographical distribution of research stations participating in the IPY. Apart from Wrakberg's chapter and a simple tabular representation in an Antarctic-focused chapter by Jabour and Hayward, this is not a collection of essays that has much time for the visual and/or visual culture. And yet it would seem to me that multinational enterprises such as the IGY and the IPY were thoroughly immersed and shaped by certain visual economies. So, if we are interested in legacies and changes in the polar sciences, we might think about how scientific endeavour, including published results, have been made "visible" within a range of arenas, such as the professional as well as the popular. In the IGY, for example, considerable effort (not always successful) was made, as Fae Korsmo (2004) has documented, to publicize and promote scientists, and science, especially in apparently remote places like the Antarctic. What might we say about the IPY? Was the 2010 IPY Oslo Science Conference one place to look for clues? Or should we turn to the kind of outreach books and online resources being developed, such as that offered by Kaiser et al. (2010), which take their cue from the past experiences of the IGY?

The second part of the book shifts the focus south. All the authors are better known to me, and I am very familiar with their long-standing contributions to Antarctic-based literature, so inevitably I found less to surprise me. Jabour and Haward give an effective overview of the science–policy interface in the context of the Antarctic Treaty System (ATS). Although the ATS is often said to be a regime based on science as its "currency of influence", the two authors add some nuance and colour to the debate, and remind us that collaboration and consensus has not always dominated proceedings. The Antarctic Treaty Consultative Parties do debate and disagree over evidence-based living resource management, the location of scientific stations, and environmental protection in and beyond the Antarctic continent. Notwithstanding the achievements of the IPY, activities such as biological prospecting might undermine a general ethos of data exchange, and further commercialize relations between interested parties. Don Rothwell, an Australian-based international lawyer, reminds us that the politicization of science is not just restricted to biological prospecting, but is also in evidence in the contested practice of whaling in the Southern Ocean. Although the IPY, in his judgement, reinforced certain key qualities such as freedom of scientific research and international cooperation, there can be no denying that, for example, Australia and Japan have fundamental differences of opinion over whaling and environmental protection. The chapter by Consuelo Leon Woppke is probably the weakest in the collection. It purports to deal with the "Chilean Antarctic mentality", but is really too descriptive and needs greater conceptual ballast. Had it been informed by, say, a critical engagement with relevant nationalism literature (Billig 1995), it might have done something quite useful, i.e., really explain how in countries like Argentina and Chile, as Carlos Escudé (1992) has explained, the Antarctic is not only an integral part of national territory, but is intimately linked to post-colonial politics, which became a key feature of the Cold War era. President Pinochet, a former professor of geopolitics, was a strong advocate of Chilean Antarctic Territory, and the need to use science and the military to ensure its integration. Finally, Sanjay Chaturvedi, an established Indian-based geopolitician, gives a sure-footed account of biological prospecting, and neatly explores how this issue, if left unchecked, might provoke a series of ruptures, including a colonial one, which reminds us that the ownership of the Antarctic continent is disputed.

The final chapter by one of the editors, Monica Tennberg, is an odd one in that it attempts to tie the chapters together with some explicit theorizing. But to my mind the end result is only to raise more issues regarding the editorial control of this collection. Embracing Michel Foucault and more recent theorists du jour, including Giorgio

Agamben, she outlines three spirals of knowledge approach linking state sovereignty/territorial control, environmental surveillance and environmental framing. I have considerable sympathy for her intent, and indeed do think that Foucault's corpus has much to offer us in thinking more critically about (polar) territory, sovereignty and surveillance. In the case of territory, for example, Stuart Elden has been at the forefront of recent engagements, and showed how territory has been understood historically and geographically (Elden 2009). What is interesting in recent years is how polar territory is subject to a new round of calculation and measurement, with reference say to the mapping of the polar seabed. I would have thought that this chapter should have formed the basis for an introduction that would really have stamped a conceptual architecture upon this collection, and then asked the contributors to engage with those spirals of knowledge explicitly. A shorter concluding statement might have then summarized and outlined an agenda for the future, especially when we come to reflect and even commemorate the IPY, as we surely will, in 2048–49 (about the same time that the Protocol on Environmental Protection could be subject to review).

This is a welcome addition to the literature on the polar sciences and their legacies, and there are some very interesting and engaging essays here. Although there is much to be said for a diversity of contributions, in terms of academic disciplines, theoretical starting points and geographical locations, it does place additional pressure on editors in general to grab a collection like this by the proverbial scruff of the neck. I think that the editors missed an opportunity to stamp their editorial mark, and to put together an intellectual agenda that will endure.

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