

main permafrost areas. Symbols locate several distinctive permafrost features. These include ice wedges, which grow at endlessly reopened winter shrinkage cracks filled by thaw water, and pingos, which grow where permafrost gaps under lakes refreeze when the lakes are drained and a final kernel of sediment erupts to the surface. A line on the map marks the northern limit of trees.

The map presents four cross sections based largely on boreholes, two in Canada and two in Russia. They show the regional variation in permafrost thickness and type as related to latitude, altitude, and water cover (for relict permafrost).

This is the first map that presents data on permafrost and ground ice in arctic and mountainous regions in a reasonably consistent manner. Viewing the completed map permits speculation on the causes of its patterns. A first-order factor seems to be the warm, moist Gulf Stream. Permafrost is sparse in the quarter of the Earth broadly affected by it, whereas ice caps are abundant there (and they were even more so during the Pleistocene). On the other hand, the quarter of the Earth surrounding the North Pacific Ocean, which lacks a Gulf Stream analog, has thick and continuous permafrost, but few glaciers.

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**SINEWS OF SURVIVAL: THE LIVING LEGACY OF INUIT CLOTHING.** By BETTY KOBAYASHI ISSENMAN. Vancouver: UBC Press. 276 p., maps, illustrations, appendix, notes, glossary of place names, bib., illustration credits, list of sponsors, index. Hardbound. Cdn\$45.00.

The Inuit have been described as a people who live at the edge of the habitable world. In fact, through a series of remarkable social, economic, and technical achievements, they have pushed back that edge. One of their most important technological achievements is the production of tailored skin clothing. As Betty Issenman shows in her book, *Sinews of Survival: The Living Legacy of Inuit Clothing*, this aspect of Inuit technology cannot be fully appreciated outside its cultural context; thus, she sets out to explore Inuit clothing as protection, as marker of identity, and as bearer of culture.

The book begins with an overview of the Inuit, their culture, and their history. The introductory chapter also surveys archaeological evidence relating to skin working and early European images of Inuit clothing. The second chapter discusses the types of animal skins available to the Inuit, their properties, and the challenges of the arctic environment which clothing made from these materials had to meet, including heat conservation, humidity and temperature control, and durability. Issenman also emphasizes in this section how form follows function in Inuit clothing. For example,

Inuit seamstresses avoid placing major seams in areas of stress. Thus, they do not use the narrow armhole typical of European clothing, which physically active people know to be a weak spot. Their larger and differently situated arm opening also makes it easier to draw the arms inside to conserve heat. The author provides many examples of how attributes of arctic skins were employed to maximum advantage. It is well known, for instance, that the hollow hairs on caribou hides provide excellent insulation; Issenman points out that garments made from caribou skins with the hairs left on also provide buoyancy in case of an accidental fall into water. Chapter 3 discusses the tools used to prepare and sew skins and the techniques used to transform the skins into garments. She observes that sinew thread tends to swell when damp, thereby improving the waterproof quality of seams when the garment is exposed to moisture. Such observations underscore the importance of knowing intimately the materials used to make clothing that one depends upon not only for comfort, but also for survival. Stylistic attributes of Inuit clothing and their meaning are explored in Chapter 4. In a pan-Inuit survey of garment styles, Issenman shows how style indicates not only where people come from, but also their age, sex, and (for women) marital status. Some of the more esoteric aspects of clothing, including spiritual, artistic and social traditions, are explored in Chapter 6. For instance, the Inuit believed that by donning skin clothing, one assumes a bond with the animal domain; certain stylistic elements commonly incorporated into clothing reinforce the belief that a transformation has occurred. Even stylistic elements which seem merely decorative may help to signal the identity of the owner. The author discusses the role of skin clothing in marking the life stages as they are recognized by the Inuit, and provides examples of special clothing associated with ceremonies and worn by shamans. The final chapter, which looks at some of the issues facing Inuit in the contemporary world, left me thinking about how traditional skin clothing can continue to play an important role in perpetuating Inuit culture by reinforcing the value of their heritage.

It is obvious that the author has exhaustively researched her subject matter: the book contains an extensive bibliography of published materials. More importantly, Issenman has drawn on the knowledge of Inuit seamstresses and added their voices to the book.

*Sinews of Survival* is a delight to read. It is well written and incredibly informative, and conveys the author's passion for the subject matter. The production values are excellent. The layout of text and illustrative materials minimizes the need to flip back and forth; nor do the illustrative materials block the flow of the text. The high-quality photographs and illustrations in themselves provide for many hours of visual browsing. Even readers with a good knowledge of Inuit ethnology will find this book a learning experience, as it contextualizes information in ways that many will not have encountered.

This book will interest specialists as well as a general audience. Thanks to the rich illustrations, it works well as a coffee table book, yet its wealth of information

makes it equally suitable as a reference text, the most comprehensive yet available on the role of skin clothing in Inuit culture.

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QUO VADIS, ARCTICUM? THE INTERNATIONAL LAW REGIME OF THE ARCTIC AND TRENDS IN ITS DEVELOPMENT. By LEONID TIMTCHENKO. Kharkiv, Ukraine: State University Press 'Osнова,' 1996. xiv + 361 p., maps, notes, bib., index. Softbound. US\$45.00.

International law has been slow to develop distinctive responses to Arctic problems. This is not to suggest that the Arctic has been devoid of international law. Given the nature of the polar environment, international law has been of some significance in the Arctic since the eighteenth century, when countries began to compete with each other over their Arctic claims. A number of these claims were not finalized until the twentieth century, while in the case of the Spitsbergen Archipelago, sovereignty was eventually dealt with in 1920 by way of a treaty between Norway and a number of other interested countries. Arctic sovereignty became a hot issue once again in the mid twentieth century following the development of the Law of the Sea, which allowed Arctic countries to assert a range of maritime claims. The Canada-United States dispute over the status of the waters of the Northwest Passage and disputes over Arctic maritime boundaries, which have found their way before the International Court of Justice, illustrate how contentious sovereignty remains in the Arctic.

While international law has played a pivotal role in allowing Arctic countries to assert their various territorial and maritime claims, it has also worked in a variety of ways to resolve these disputes. Notwithstanding this impact of international law, the question remains whether the law treats the Arctic as a separate and distinctive region, or whether it considers the Arctic to be no different from temperate or even tropical lands. This is the question which Timtchenko sets out to answer in *Quo Vadis, Arcticum?* In the process, the author identifies three main topics for the study: 1) the history of the formation of the Arctic legal regime; 2) the modern international law regime of the Arctic, and 3) the trends in the development of the international law regime of the Arctic. The book's three chapters broadly reflect these topics.

Chapter 1 reviews the core elements behind the doctrine of the acquisition of territory in international law that are relevant to the Arctic. Some emphasis is given to the acquisition of "no-man's land," also often referred to as *terra nullius*. This doctrine is particularly relevant in the

polar regions, which are uninhabited or sparsely inhabited. In the past, international law has not required territorial claims over these territories to meet the same standards that apply to occupied territories. It is disappointing that more mention was not made of the 1933 decision of the Permanent Court of International Justice in the Eastern Greenland Case between Denmark and Norway. That judgement is significant not only because it dealt with the Arctic, specifically whether Denmark or Norway had territorial sovereignty over Greenland, but because the Court discussed the international law standards necessary to prove sovereign rights over polar lands.

The following chapter provides an extensive review of the contemporary international law regime of the Arctic. An exhaustive analysis is undertaken of the Spitsbergen Treaty, the Arctic sector concept, and the legal status of Arctic waters under the law of the sea. The Spitsbergen Treaty is especially interesting, as it sought to resolve an Arctic sovereignty dispute by recognizing certain sovereign rights in Norway, but also granting certain sovereign rights to other states interested in the archipelago. This "shared sovereignty" concept is unique; however, with the exception of Russia's interests in Spitsbergen coal, it has never been fully tested. The review of the "sector theory" with which Canada and Russia have from time to time sought to assert their territorial and maritime claims in the Arctic and that of the status of ice in international law are particularly detailed; the author undertakes a comprehensive review of both Western and Soviet scholars.

The third chapter reviews proposals for the further development of the international law regime of the Arctic and their legal consequences. Considerable attention is given to the development of an Arctic nuclear weapon-free zone and the consequences of such a zone for the United States and Russia. Also reviewed are developments in the Arctic since the late 1980s following General Secretary Gorbachev's Murmansk initiative in 1987, the Finnish initiative of 1989, and, more recently, proposals for an Arctic Council. The author is at a disadvantage in these reviews, as the Arctic Council proposal was in the midst of being refined during the mid 1990s and was eventually adopted in 1996, the year of the book's publication. Nevertheless, the chapter follows the debate with accuracy and identifies the issues.

Timtchenko is not a native English writer, however, notwithstanding the occasional grammatical errors, the book is well written and assesses some of the legal issues in considerable detail. A feature is its extensive reference to published literature not only in the notes but also in the text, where the author weighs the views of numerous commentators. Importantly, this research effort allows for a balanced assessment of commentators from throughout the Arctic, and the author is to be commended for that approach. A major weakness, however, is the structure of the chapters, which are rarely broken down by headings or subheadings: major blocks of text can run over many pages without adequate direction for the reader on the content.