

tute, and the British Antarctic Survey. By his own account, he has his mother to thank for his adventurous life — a remarkable woman indeed, adept with an elephant rifle in Burma, and insistent that her son should spend the maximum time away from an office chair.

By 1959, Swithinbank had been engaged in both Antarctic and Arctic research for 10 years, spent partly in the field but mainly in the office compiling reports. He was determined — against the odds at that time — to make his living as a glaciologist, and accepted an invitation to join Dr Jim Zumberge's group at the University of Michigan, Ann Arbor, with funds made available by the National Science Foundation under the United States Antarctic Research Program. In the 1959/60 Antarctic season, he was a member of Zumberge's party studying the movement and mass balance of the Ross Ice Shelf on a Sno-Cat traverse from Little America to McMurdo Station. Swithinbank returned to the region in the following two seasons in charge of a small field party travelling by motor toboggan, airlifted to the field areas from McMurdo Station; the machines were novel to the Antarctic at that time. The objective was to measure the movement of a number of glaciers feeding the Ross Ice Shelf on its western and southern sides. Such measurements form important components in the calculation of the mass balance of the ice shelf, and were successfully accomplished. They travelled safely who travelled with Swithinbank, and his precautions against every eventuality became well-known. Against the danger of crevasses, he devised a method for a skier to drive motor toboggans by remote control from the rear of the machine. One may suspect that he never boarded an aircraft in the Antarctic without first checking that it carried full survival gear and provisions! Although the United States Navy and Air Force have a remarkable Antarctic flying safety record, yet Swithinbank records the crash of a US Neptune aircraft, in which he had flown only two weeks earlier, and writes movingly of the loss of the brilliant American geophysicist Dr Ed Thiel in that aircraft.

From 1963, Swithinbank based himself at the Scott Polar Research Institute for another interlude in his career — a year and a half with the Ninth Soviet Antarctic Expedition — for he 'wanted to learn Russian the easy way.' He returned to the Institute at an exciting time because of the development there of an ice-penetrating radar. He rightly credits Amory Waite of the United States Army Signal Corps as the first to recognize the potential of radar for such a purpose, but it was left to the Institute to optimize the frequency used and to build the equipment. After successful airborne tests in the Canadian Arctic in the spring of 1966, the system was ready for deployment further afield, and American support was sought. Thanks to the vision and stature of the National Science Foundation's chief scientist, Dr Albert Crary, generous support was promptly provided in the Antarctic. In the 1967/68 season, an Institute team, which included Swithinbank, undertook many hours of radio echo-sounding flights from McMurdo Station. The resulting under-ice map of a vast

area was a prelude to similar mapping in succeeding years of most of Antarctica.

Eleven years elapsed before Swithinbank was again with the Americans in the Antarctic, by which time he held his senior position in the British Antarctic Survey. Again the main objective was to measure the movement of glaciers flowing into the Ross Ice Shelf, supported in the field by 'helicopters unlimited.' There was also the chance to pay an impromptu visit to Amundsen–Scott Station at the South Pole.

Immediately after his retirement from the British Antarctic Survey, Swithinbank spent the 1986/87 season with the Canadian company Adventure Network International, intent on testing the feasibility of landing heavy aircraft on natural ice runways in the Antarctic. The so-called 'blue icefields,' which Swithinbank and others had previously observed, might provide the answer. The result of the season's work was the test proving of a runway on blue ice in the Patriot Hills, Ellsworth Mountains, in the face of scepticism if not of hostility, from United States authorities. The Americans soon cast aside their reservations, and, in the 1988/89 season, deployed a team to search for suitable 'blue icefields' on or near glaciers flowing into the Ross Ice Shelf. Swithinbank was leader of this team, which found two suitable icefields and, as an unexpected bonus, recovered an iron-rich meteorite weighing 2.5 kg.

These natural runways would later be used to deploy scientists to their field areas, and also greatly to extend the range of tourists and those latter-day adventurers, usually self-styled or press-styled as explorers, whose derring-do is associated by an ill-informed public with exploring in the classic sense. Swithinbank sees the overall human impact on Antarctica as minimal, and is happy with the extended use of the word 'explorer,' for, as he writes: 'we are all explorers.'

This book is extremely well illustrated with very adequate maps and with numerous colour and black-and-white photographs. Swithinbank's detailed knowledge of Antarctic history is appropriately deployed for the areas made famous in the 'Heroic Age,' and he has contributed footnotes to that history by finding caches or cairns left by such as Roald Amundsen and Dr Laurence Gould. He is to be warmly congratulated in describing so readably one man's experience on very wide-ranging American operations spanning three decades. A second volume of his memoirs, covering omissions in the present book, has recently been published. (Geoffrey Hattersley-Smith, *The Crossways*, Cranbrook, Kent TN17 2AG.)

**GOVERNING THE ANTARCTIC: THE EFFECTIVENESS AND LEGITIMACY OF THE ANTARCTIC TREATY SYSTEM.** Olav Schram Stokke and Davor Vidas (Editors). 1996. Cambridge: Cambridge University Press. xxii + 464 p, hard cover. ISBN 0-521-57237-1. £55.00; \$US85.00.

*Governing the Antarctic* is a significant contribution to the investigation of the international politics of the Antarctic and the Southern Ocean. This edited collection represents

the final outcome of a four-year research programme, 'The International Antarctic Research Project' (IARP). The IARP was managed by the Fridtjof Nansen Institute in Norway, and, through sponsorship from a variety of governmental and non-governmental sources, managed to assemble a distinguished multi-national and interdisciplinary team of polar researchers. Most of them would be identified as either international lawyers or political scientists. The participating scholars and institutions were drawn from four countries with long diplomatic, political, and economic interests in the southern polar region: Australia, Chile, Norway, and the United States. The overall purpose of the IARP was to examine in some detail the institutional effectiveness and legitimacy of the Antarctic Treaty System. Special emphasis was also placed on offering policy advice to Antarctic policy-makers.

The theoretical starting point for this edited collection is to be found within the realms of international regime analysis. International relations has long been interested in the rules that do (or do not) regulate the behaviour of states. The work of the seventeenth-century writer Hugo Grotius is testimony to that interest in international law and state behaviour. However, interest in conceptualising international regimes surfaced within the English-speaking academic community in the 1970s, when concern was expressed over the ability of the United States to hold together the post-war Bretton Woods international financial system. Since that earliest phase of research on regime analysis, much academic energy has been invested in identifying definitions, typologies, and examples of international regimes. There can be no doubt that international regime analysis is an important facet of international relations, because, through the present century, states have become increasingly involved in regimes characterised by a series of complex rules and institutions. The Antarctic Treaty System (ATS) can be usefully considered as a complex international regime that attempts to regulate the behaviour of states through a series of agreed rules and procedures.

*Governing the Antarctic* takes a liberal institutional perspective on the ATS as an international regime. Broadly speaking, most of the writers assume that the ATS is a regime that has enabled states to collaborate with one another for the promotion of a common good (a zone of peace and the promotion of scientific research), and that this regime has promoted international cooperation within the wider international system. Part I of the book explores how core notions such as 'international regime,' 'effectiveness,' and 'legitimacy' have been conceptualised within international relations and international law. Drawing on the work of Stephen Krasner and other scholars, the ATS is identified as an international regime shaped by 'sets of implicit and explicit principles, norms, rules and decision-making procedures around which actors' expectations converge in a given area of international relations' (Krasner 1983: 2). Principles refer to theoretical statements about how the world works, such as on the basis of liberal

principles that global welfare will be enhanced by peaceful scientific research. Norms refer to general standards of behaviour expected of states. It also includes issues such as obligation and rights of actor states. Norms and principles in general define the key features of international regimes. The rules governing a regime tend to indicate conventions that help to reconcile conflicts that may exist between the principles and the norms. Finally, the decision-making procedures refer to the specific ways in which behaviour is regulated through practices such as voting in Consultative Party Meetings.

Part II of *Governing the Antarctic* seeks to apply this regime-based approach to the ATS with a detailed examination of the norms and principles that govern the management of the region. Davor Vidas provides a useful analysis of the relationship between the law of the sea and the ATS. His examination is timely because of a number of unresolved tensions concerning issues such as the principle of common heritage, continental-shelf rights, and the ambiguous status of the Antarctic maritime area. The Madrid Protocol has clarified some of these concerns, such as mining rights on the continental shelf, but others remain to be negotiated. Richard Herr's analysis of non-state actors is also significant in terms of regime legitimation. The growing involvement of NGOs in the formal apparatus of ATS decision-making has contributed to a more open style of management. Consultative Parties such as Australia and New Zealand have frequently included members of Greenpeace and the Antarctic and Southern Ocean Coalition (ASOC) within their official delegations at Consultative Party Meetings. Moreover, wider recognition of the legitimacy of the ATS to manage Antarctica was greatly improved in the aftermath of the Madrid Protocol and the negotiation of a mining ban. One surprising aspect of this analysis of NGOs is the relative neglect of how, and with what consequences, televisual images and advertising campaigns were employed by NGOs (especially in Australia, New Zealand, France, the United States, and the United Kingdom) to pressurise the members of the ATS to reconsider their proposals for a Convention on the Regulation of Antarctic Minerals Resource Activities. The mobilisation of public opinion through direct action such as protest marches and campaigns is, for instance, Greenpeace's favoured pathway for alternative agenda-setters. During the last 15 years, the decision-making powers of the ATS have been subjected to a far greater scrutiny by NGOs, media organisations, and global forums such as the United Nations. Formal acceptance of NGOs has already occurred in the sense that ASOC is a regular presence at the annual Consultative Party Meetings. The implications for regime analysis are substantial, because the expanding influence of scientific, environmental, and tourism-based NGOs questions the capacity of the ATS to adapt to a vastly different political environment (as compared to 1959–1961).

Parts III and IV are devoted to regime legitimacy and effectiveness. The effectiveness of the ATS is addressed

through a detailed examination of a series of conventions and protocols relating to living-resource management, mining, environmental protection, and polar tourism. These analyses are underwritten by a concern to demonstrate how various ATS regimes deal with long-standing tensions regarding sovereignty rights, external acceptance, scientific research, and the environmental management of the Antarctic. Evidence relating to these four issues is well presented, not least because the authors are cautious to acknowledge that discussing regime performance is inseparable from their evaluations of regime effectiveness. There remains a considerable number of problems confronting key actors and institutions within the ATS, ranging from fishing regulation and sovereignty rights around islands such as South Georgia to the management of tourism and the negotiations regarding a liability annex for the Madrid Protocol. The involvement of tour operators within the ATS regulatory process is further indication that the ATS has been remarkably successful in co-opting non-state actors and NGOs. The implications for regime regulation remain to be seen, but there can be little doubt that managing polar tourism is one of the pressing issues for the ATS in the new century. In terms of legitimacy, the ATS has, therefore, been effective in embracing new political actors such as ASOC whilst simultaneously ensuring that there has been a return to consensus over the Antarctic within the United Nations.

The final part of this collection considers the role of domestic politics in shaping attitudes and policy-making regarding the Antarctic and the Southern Ocean. The four case studies are based on the political and legal systems of Australia, Chile, Norway, and the United States. The purpose of this analysis is to consider how debates on domestic policies influence the role and position of these states within the ATS. Three out of the four states are claimants to the Antarctic, whilst the United States is one of the most influential non-claimant states within the ATS. In terms of assessing the interaction between domestic politics and the ATS, there are some excellent analyses of the Australian and Norwegian political and legal decision-making processes. Herr and Davis' investigation of the Australian context should serve as a bench-mark for future studies on the interactions of the domestic and the international. One area that deserves further consideration, however, is the usage of interview material, especially when it relates to key officials and institutions. Christopher Joyner's analysis of US Antarctic policy-making relies on the oral testimony of such key players as Tucker Scully. Joyner asserts, for instance, that 'issues have not become acutely emotional or made public' (page 418) because individuals tend to resist the temptation to indulge in political infighting. On the one hand, this may be a fair reflection of the US Antarctic policy scene. On the other hand, there is a need for some sense of caution in the usage of interview material, particularly when there is either little evidence of the interview material itself (and therefore this makes it hard for the reader to judge for himself) or when there is a

tendency for officials to rationalise retrospectively a particular state of affairs.

Overall, *Governing the Antarctic* is a well-produced and well-executed collection. The editors have done a great deal to ensure that the essays are linked together in an effective manner. The effectiveness and legitimacy of the ATS have been comprehensively assessed through a detailed consideration of existing regimes and other related organisations such as the International Seabed Authority. Questions regarding the creation of a secretariat remain to be settled. Chile's recent rejection of the Argentine request to host such a secretariat have caused new tensions to emerge over this particular issue. One area that could have been addressed in more detail was the implication of political and cultural globalisation for the management of the Antarctic region. The development of global media networks has transformed our collective capacity to visualise places such as Antarctica. The region is increasingly exposed to public scrutiny, and this reader would have liked to have read more about the possible implications for governing the frozen continent and the capacity of the ATS either to resist or influence alternative proposals for the management of the region at the *fin de mille*. (Klaus Dodds, Department of Geography, Royal Holloway, University of London, Egham, Surrey TW20 0EX.)

#### Reference

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**WHALES, SEALS, FISH AND MAN.** Arnoldus Schytte Blix, Lars Walløe, and Øyvind Ulltang (Editors). 1995. Amsterdam, Lausanne, New York, Oxford, Shannon and Tokyo: Elsevier. xiii + 720 p, illustrated, hard cover. ISBN 0-444-82070-1. Dfl 475.00; US\$297.00.

The question as to whether minke whaling should be resumed in the northeast Atlantic has been a contentious issue for some years, particularly because there has been disagreement between scientists, industry managers, and government officials about the information on which Norwegian minke whaling has been based. Further, in the mid-1980s, large numbers of harp seals migrated to the Norwegian coast, where at least 60,000 of them became entangled in fishing gear, resulting in heavy economic losses for fisherman.

To address these two issues, the Board of the Norwegian Fisheries Research Council decided to establish a programme of scientific research on the whales and seals in Norwegian waters. The programme ran for seven years, ending in 1994. Because so much of the information was considered to be of international interest, the programme steering committee decided to organise a symposium to present the results for discussion and dissemination. *Whales, seals, fish and man* represents the proceedings of this symposium, and outlines the major findings of the Norwegian programme. In addition, internationally renowned researchers were invited to submit papers on specific relevant topics, so that the volume includes results