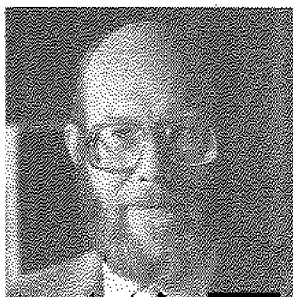


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The ARCTIC In World Affairs by Oran R. Young

Donald L. McKernan Lectures in Marine Affairs

May 10, 1989

The Arctic in World Affairs

Oran R. Young



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THE ARCTIC EMERGENT

Suddenly and somewhat unexpectedly the Arctic has become a focus of intense interest among those desiring to initiate and institutionalize cooperation in international society. Bilateral Arctic arrangements involving Canada and the United States, the Soviet Union and Norway, and Canada and the Soviet Union, among others, are proliferating at a rapid pace. Agreement is expected in the near future on the establishment of a multilateral International Arctic Science Committee. President Gorbachev has staked out a position of leadership for the Soviet Union in this realm by calling for the creation of an Arctic zone of peace that would encompass an array of cooperative arrangements involving both military and civil matters. The Finnish government is working hard to formulate the terms of a multilateral environmental protection regime for the Arctic that will prove acceptable to all parties concerned.

For a region regarded until recently as an area where international cooperation was either unnecessary due to the low level of human activities or infeasible due to the direct involvement of the superpowers, these developments signal a striking change. They are not only worthy of our attention in their own right, they have also transformed the Arctic into a source of insights for those seeking to deepen our general understanding of the conditions governing cooperation in international society. In the analysis to follow, therefore, I endeavor to make use of the Arctic to shed light on generic questions pertaining to international cooperation as well as to evaluate the prospects for international cooperation in the Arctic itself.¹

THE ARCTIC REGION

In some international regions, like the Middle East, Southeast Asia, or Central America, conflicts originating within the region threaten to escalate in ways that embroil outside parties and, in the process, trigger wider international conflicts. The essential problem, in such regions, is to devise codes of conduct to minimize the frequency and extent of outside interventions (especially those of a competitive nature), while seeking durable and preferably equitable solutions to the regional conflicts themselves. In other international regions, like the oceans, the atmosphere, or Antarctica, outside powers are drawn to regional settings as attractive arenas in which to pursue their larger interests. In such regions, characterized by many analysts as global commons, the central

¹ On the emergence of the Arctic as an important international region see Oran R. Young, "The Age of the Arctic," *Foreign Policy* 61 (Winter 1985-1986), 160-179; and, more generally, Gail Osherenko and Oran R. Young, *The Age of the Arctic: Hot Conflicts and Cold Realities*, Cambridge: Cambridge University Press, 1989.

problem is to establish institutional arrangements or international regimes to regulate the interplay of outside interests in such a way as to protect the integrity of the regions, without seriously interfering with efforts on the part of the outside parties to pursue their own goals.²

The Arctic belongs, fundamentally, to the second of these categories.³ It is a resource-rich, ecologically sensitive, sparsely populated region whose location makes it increasingly important to the great powers in geopolitical terms. The human population of the region numbers less than ten million, of whom more than three quarters are Soviet citizens. Yet because the Arctic offers an exceptionally favorable environment for the deployment and operation of strategic weapons systems, the superpowers have steadily increased their military presence in the region during recent years. More than 20 percent of the crude oil produced in the United States today comes from the Arctic. Comparable figures for the Soviet Union are much higher: over 60 percent of both Soviet oil and natural gas comes from giant fields in northwestern Siberia (for example, Samotlar, Urengoi, and Yamburg). The fact that the greenhouse effect is expected to produce temperature increases in the high latitudes that are two to three times those occurring in the mid-latitudes ensures that all those concerned with global change will pay closer attention to the Arctic in the future.

Yet the Arctic differs from other global commons in at least two respects that have significant implications for the pursuit of international cooperation in the region. Even in an era of creeping jurisdictional claims affecting marine areas and other traditional commons, the sovereign authority of states reaches farther into the Arctic than it does into the oceans, the atmosphere, or Antarctica. No one questions the sovereignty of the Arctic-rim states (that is, Canada, Denmark/Greenland, Norway, the Soviet Union, and the United States) over the land, including the various clusters of islands, lying in their respective sectors of the Arctic. The fact that the presence of ice makes the boundary between land and sea particularly indistinct in this region has motivated some Arctic states to take an expansive view of the geographical scope of their jurisdiction in the region. And recent developments in international law, like the ice-covered areas provisions of Article 234 of the 1982 Law of the Sea Convention, have provided a basis for new claims to national jurisdiction over some of the marine areas of the Arctic region. Under the circumstances, it is no cause for surprise that the recent history of the Arctic is, in considerable part, a history of interactions between advanced industrial metropolises located to the south and resource-rich hinterlands located to the north.

In contrast to other global commons, moreover, the Arctic is an ancestral homeland for a sizable collection of indigenous or Native

peoples who still constitute the core of the region's permanent residents. What is happening in and to the region presents a growing threat to these peoples, especially those anxious to protect distinctive cultures or ways of life. As the international significance of the Arctic grows, decisions affecting the region's future are taken increasingly by outsiders who are seldom well informed about the concerns of Arctic peoples and who, in any case, have little reason to make choices that are sensitive to these concerns. Despite (or perhaps because of) this development, however, the Native peoples of the Arctic are currently experiencing a pronounced resurgence of cultural awareness which has stimulated a rising tide of interest in protecting their unique ways of life. The growing gulf between these two trends is a source of deepening concern among those desiring to maintain the integrity of the Arctic as a distinctive international region.

DRIVING SOCIAL FORCES IN THE ARCTIC

What, then, are the prospects for international cooperation in the Arctic over the next 20-30 years? To provide a basis for responding to this question it is important to grasp, at the outset, the nature of the driving forces that have raised the profile of this region in world affairs over the last generation. Long dismissed as a frozen wasteland of interest only to a handful of explorers, traders, missionaries, scientists, and indigenous peoples, the Arctic has emerged in recent years as an international region whose importance in military, economic, and environmental terms rivals that of the world's other major regions. This is partly attributable to a surge of human activities taking place within the Arctic itself. In part, it stems from the growth of linkages between Arctic phenomena and human activities centered in the mid-latitudes.

ARCTIC INTERACTIONS

Whereas military analysts commonly relegated the Arctic to the status of a remote and unimportant periphery over which missiles might fly at high altitudes during the heyday of the intercontinental ballistic missile (ICBM) in the 1960s and 1970s, the Arctic today is widely regarded as a convenient and comparatively safe environment for the operation of nuclear-powered submarines equipped with highly accurate submarine-launched ballistic missiles (SLBMs) and high-endurance manned bombers carrying long-range, air-launched cruise missiles (ALCMs).⁴ Coupled with growing concerns about the vulnerability of land-based ICBMs, these attractions of the Arctic have captured the attention of those responsible for deploying and safeguarding strategic weapons systems. And these developments, in turn, have attracted the interest of officials charged with devising means of countering offensive weapons systems. This accounts for the current resurgence of interest in Arctic air defense arrangements, like the North Warning System that the

² Oran R. Young, *International Cooperation: Building Regimes for Natural Resources and the Environment*, Ithaca: Cornell University Press, 1989.

³ For another account of the Arctic as an international region see Franklyn Griffiths, "Introduction: The Arctic as an International Political Region," in Kari Mottola, ed., *The Arctic Challenge*, Boulder: Westview Press, 1988, 1-14.

⁴ W. Harriet Critchley, "Polar Deployment of Soviet Submarines," *International Journal* 39 (1984), 828-865.

United States and Canada are constructing to replace the outdated DEW Line, as well as for the striking increase in emphasis on Arctic sea defense systems, like the SSN-21 or Seawolf attack submarine that the U.S. Navy plans to build in conjunction with its maritime strategy. Barring dramatic breakthroughs in the realm of strategic defense, the Arctic will continue to loom large in strategic calculations for some time to come. The resultant militarization of the Arctic does not bode well for simple or comprehensive Arctic arms control proposals, such as plans to demilitarize the region in the manner that the Antarctic Treaty of 1959 demilitarized Antarctica.⁵ Still, the militarization of the Arctic is not all bad. Because strategic delivery vehicles deployed in the Arctic are unusually secure from detection and destruction, the Arctic is coming to play an increasingly central role in the maintenance of a relationship of stable, mutual deterrence between the superpowers.

The Arctic has also gained prominence as a secure (albeit high cost) source of raw materials of great importance to advanced industrial societies. The North Slope of Alaska is the single largest oil producing area in North America; the most attractive prospect for additional onshore oil and gas development in the United States at this time is certainly the coastal plain of the Arctic National Wildlife Refuge. And the prized raw materials of the Arctic are not limited to hydrocarbons located in the United States. A lead/zinc mine that may become the world's largest will soon be operational in northwest Alaska. The northeastern part of the United States is coming to depend heavily on electricity generated at the massive hydroelectric facilities of northern Quebec. And the hydrocarbons located off the north coast of Norway seem destined to play a role in limiting the dependence of western Europe on shipments of natural gas from the Soviet Union. If anything, the Far North looms even larger in Soviet efforts to develop secure sources of raw materials. The supergiant gas fields at Urengoi and Yamburg in northwestern Siberia dominate current Soviet efforts to increase domestic production of fossil fuels, and the Soviets have become leaders in the use of hydropower for industrial purposes by harnessing Siberian rivers to generate electricity needed to drive the industrialization of the Soviet North.⁶ Naturally, the exploitation of all these raw materials has also given rise throughout the Arctic to a surge of interest in large-scale transportation systems, including pipelines, ice-strengthened tankers, and high-voltage power lines.

We have known for some time that the Arctic is an ecologically distinctive region characterized by complex, though often poorly understood, linkages among its physical and biological systems. Until recently, this was a topic for research on the part of scientists and for

speculation on the part of naturalists rather than a factor affecting the expansion of human activities in the region. Today, this situation is changing rapidly. For one thing, environmentalists and animal protectionists have discovered the Arctic. The region contains many of the most extensive wilderness areas and collections of wildlife remaining on the planet.⁷ As a result, we are now witnessing a striking expansion of organized campaigns aimed at setting aside large portions of the Arctic for long-term preservation or at terminating activities involving the consumptive use of wild animals in the North.⁸ There are, as well, pragmatic reasons to justify taking an increased interest in Arctic environmental protection. Arctic ice conditions can pose obstacles to the operation of submarines in the Arctic basin or hinder the operation of drilling rigs on the continental shelves of the region. Atmospheric phenomena peculiar to the Arctic can interfere with radars and other communications systems, posing problems for military planners and commercial managers alike. Both military and industrial activities in the Arctic often produce severe impacts on sensitive northern ecosystems and on the socioeconomic systems of traditional northern communities. Interactions among the sea, ice, and atmosphere in the Arctic, moreover, are major determinants of weather patterns throughout the northern hemisphere.⁹

The indigenous inhabitants of the Arctic (Inuit, Indians, Saami, Komi, Yakuti, and so forth) are currently experiencing a remarkable resurgence of cultural vitality. Equally important, they have taken the lead in promoting the concept of the Arctic as a distinctive international region and in exploring prospects for international cooperation within this region. The principal transnational organizations now operative in the Arctic, like the Inuit Circumpolar Conference, Indigenous Survival International, and the Nordic Saami Council, are products of initiatives taken by indigenous peoples. The most imaginative efforts to devise coherent management strategies for the Arctic region, such as the ongoing campaign to articulate an Inuit Regional Conservation Strategy, are currently emanating from the activities of these organizations.

What is more, the permanent residents of the Arctic have legitimate interests in the whole range of military, economic, and environmental issues now arising in the region. While their numbers are small and their material resources are limited, the permanent residents expect to live in the Arctic for the indefinite future, a fact that gives them a profound and undeniable stake in maintaining the socioeconomic integrity as well as the ecological balance of the region. It is entirely

⁵ For a review of Arctic arms control proposals see Ronald G. Purver, "Arctic Arms Control: Constraints and Opportunities," Occasional Paper No. 3, Ottawa: Canadian Institute for International Peace and Security, 1988.

⁶ John Hannigan, "Oil and Gas Development in the Soviet North: Exploration, Production, Transportation," Ottawa: Circumpolar Affairs Division, Department of Indian Affairs and Northern Development, 1986.

⁷ This has led some champions of Arctic wilderness to describe parts of the Arctic as Serengeti North. See John Madson, "Serengeti North," *Audubon* 90 (May 1988), 54-65.

⁸ Shelagh Jane Woods, "The Wolf at the Door," *Northern Perspectives* 14 (March-April 1986), 1-8; and Robert F. Keith and Alan Saunders eds., *A Question of Rights: Northern Wildlife Management and the Anti-Harvest Movement*, Ottawa: Canadian Arctic Resources Committee, 1989.

⁹ D. James Baker, "The Arctic's Role in Climate," *Oceanus* 29 (1986), 41-46.

understandable, therefore, that this constituency has sought an effective voice in decisions affecting the Arctic not only by intervening in state (or provincial) and federal arenas but also by taking steps to organize themselves trans-nationally as an influential interest group.¹⁰

The Arctic has not experienced the development of a close-knit scientific community comparable to the one that has played such an important role in Antarctica over the last generation. Nothing like the momentum that the International Geophysical Year of 1957-1958 gave to Antarctic science has occurred in modern times in the case of the Arctic.¹¹ The restrictions on Arctic science are undoubtedly attributable in part to the absence of an international regime for the Arctic region like the one set forth in the Antarctic Treaty of 1959. Partly, they stem from the fact that the Arctic is an arena for the pursuit of major military, economic, and cultural interests, a fact that has made scientific research a subordinate activity in the region.

None of this means that Arctic science is unimportant or fails to transcend political boundaries. We are currently witnessing a surge of support for scientific research in a number of the Arctic states. In the United States, for instance, the passage of the Arctic Research and Policy Act of 1984 has given a powerful shot in the arm to Arctic research.¹² Moreover, there are clear indications that an international community of scientists working on Arctic issues is coming into existence. It is widely expected, for example, that the next year will witness the formal establishment of an International Arctic Science Committee designed to provide this community with a common forum and an effective voice in international circles.¹³

ARCTIC LINKAGES

To complete this sketch of the driving forces behind the emergence of the Arctic as an important international region, turn now to the dramatic evidence that has surfaced in recent years regarding linkages between Arctic phenomena and human activities centered elsewhere on the planet. Heavy metals and other toxic substances originating far to the south and carried northward by ocean currents now show up regularly in

Arctic fish and marine mammals and subsequently in the breast milk of Native women. Even more striking are the effects of the long-range transport of air pollutants attributable to industrial activities taking place well beyond the confines of the Arctic.¹⁴ Prevailing winds blow carbon dioxide, sulphate compounds, soot, sulphur dioxide, chlorofluorocarbons (CFCs), and even radioactive materials from the mid-latitudes into the Far North. Because air masses in the Arctic are relatively stationary during large parts of the year and because cold temperatures result in low rates of precipitation in the high latitudes, these particulates accumulate in the Arctic atmosphere. As a result, the region is now plagued during the winter and spring months with Arctic haze, a dense blanket of suspended particulates that reduces visibility in some areas more than the photochemical smog of Los Angeles or the air pollution associated with the petrochemical industry of northern New Jersey.

Similarly, there is mounting evidence that the danger of ozone depletion is greater in the Arctic than it is in the mid-latitudes where most CFCs are produced and consumed. While the situation in the Far North may not turn out to be as severe as the well-known ozone hole occurring seasonally over Antarctica, it nonetheless constitutes a compelling example of the linkages between the Arctic and other parts of the planet's ecosystem.¹⁵ Arctic air masses are also particularly effective in trapping greenhouse gases, including carbon dioxide as well as CFCs. Scientists now project that the global warming trend will produce temperature increases in the Arctic over the next fifty to a hundred years that are two to three times the increases anticipated in the mid-latitudes.

Southerners may find it easy, at first blush, to dismiss these Arctic consequences of human activities centered in the mid-latitudes. Not only is the region remote in geographical terms, the sparse population of the Far North also minimizes the weight of the Arctic in public decision processes. There is therefore an understandable temptation to treat the Arctic as a sacrifice zone in thinking about environmental problems.

The fact that the linkages between the Arctic and other areas work both ways, however, makes this response futile, quite apart from its deficiencies in ethical terms. The processes just outlined are expected to have far-reaching consequences for the Arctic's climate system.¹⁶ And because the Arctic is a critical weather generator for the entire northern hemisphere, major changes in the climate of the Arctic are likely to have profoundly disruptive consequences for the climate of areas where much of the world's human population resides. In the short run, moreover, rising temperatures in the Arctic are expected to produce increases in snowfall and glacial activity, developments that could lead to a significant rise in

¹⁰ On the efforts of the Inuit Circumpolar Conference, in particular, see Marianne Stenbaek, ed., *Arctic Policy*, Montreal: McGill University Centre for Northern Studies and Research, 1986.

¹¹ On the evolution and impact of the Antarctic science community see Polar Research Board, *Antarctic Treaty System: An Assessment*, Washington: National Academy Press, 1986, especially chs. 8-12.

¹² For information on activities taking place under the terms of this legislation consult *Arctic Research of the United States*, a periodical published (since the fall of 1987) by the National Science Foundation on behalf of the Interagency Arctic Research Policy Committee.

¹³ For relevant background see Fred Roots, Odd Rogné, and Jorgen Taagholt, "International Communication and Coordination for Arctic Science—A Proposal for Action," discussion paper dated November 1987.

¹⁴ Bernard Stonehouse, ed., *Arctic Air Pollution*, Cambridge: Cambridge University Press, 1986.

¹⁵ Philip Shabecoff, "Arctic Expedition Finds Threat to Ozone," *New York Times*, 18 February 1989, 1 and 9.

¹⁶ See Barrie Maxwell, "Atmospheric and Climatic Conditions in the Canadian Arctic: Causes, Effects, and Impacts," *Northern Perspectives* 15 (December 1987), 2-6.

sea levels worldwide. Should the warming trend become even more pronounced with the passage of time, it may eventuate in the melting of Arctic sea ice and the Greenland ice cap, a process that could lead, in turn, to greater warming as the albedo of the Arctic surface declines. The Arctic is therefore likely to play a role of great significance in the pattern of global change which scientists now believe could drastically alter the condition of human life on the planet within the next hundred years. It follows that any idea of ignoring developments unfolding in the Arctic on the grounds that the region is remote and sparsely populated can only be characterized at this juncture as short-sighted in the extreme.

BASES FOR ARCTIC COOPERATION

Cooperation in international society, as in any other social setting, emerges as an interesting prospect when independent actors (whether individuals, corporations, or states) engaged in interactive decisionmaking discover that they can reap joint gains by coordinating their actions. Sometimes these gains take the form of mutual benefits. The joint gains expected to flow from scientific collaboration or from joint economic ventures are examples relevant to the Arctic today. In other cases, joint gains take the form of the avoidance of mutual losses. Arms stabilization or limitation measures as well as initiatives designed to protect the natural environment constitute examples of this type of cooperation which seem attractive under the conditions currently prevailing in the Arctic.

Rising levels of human activity in the Arctic, which have increased interdependencies throughout the region, have opened up new possibilities for both mutual benefits and mutual losses. As a result, the stakes of all the Arctic states in devising cooperative arrangements for the region are rising rapidly. This development has not escaped the notice of senior policymakers in the Arctic states. The most recent formal expression of American Arctic policy, for example, declares that the United States has "unique and critical interests in the Arctic region" and speaks explicitly of "promoting mutually beneficial international cooperation in the Arctic."¹⁷ Senior Canadian officials now refer to international cooperation in the Arctic as a "trend of enormous importance"; they state explicitly that Canada "wishes to see peaceful cooperation among Arctic Rim countries developed further."¹⁸

The clearest and strongest expressions of interest in international cooperation in the Arctic in recent times, however, have come from the Soviet Union. In a major speech in Murmansk on 1 October 1987, President Gorbachev laid out a six-point program for Arctic cooperation and pledged the Soviet Union's "profound and certain interest in

preventing the North of the planet, its Polar and sub-Polar regions and all Northern countries from ever again becoming an arena of war, and in forming there a genuine zone of peace and fruitful cooperation."¹⁹ In the ensuing months, the Soviets have acted vigorously to pursue this Arctic zone of peace initiative, entering into Arctic agreements with Norway in the fields of scientific cooperation and environmental protection, initiating ongoing discussions regarding Arctic cooperation with Canada, and expressing enthusiasm for early establishment of the proposed International Arctic Science Committee. Even more significant over the longer run, the Soviet Union has established a State Commission for Arctic Affairs, designed to function as a high-level interagency coordinating committee and chaired by a first deputy prime minister. Under the circumstances, it will come as no surprise that Presidents Gorbachev and Reagan spoke specifically about Arctic cooperation during their December 1987 summit meeting in Washington. The official statement released at the end of the meeting, in fact, states that "Taking into account the unique environmental, demographic and other characteristics of the Arctic, the two leaders reaffirmed their support for expanded bilateral and regional contacts and cooperation in this area."²⁰

To be more specific, several distinct types of incentives underlie these expressions of interest in Arctic cooperation. There is, to begin with, a need for cooperation to avoid mutual losses stemming from the disruption of the shared ecosystems of the Arctic. The natural environment of the region is indivisible, highly sensitive to anthropogenic disturbances, and linked to other parts of the planet's ecosphere in profoundly significant ways. Air and water pollution cannot be confined to politically demarcated segments of the Arctic. Much the same is true of the effects of megaprojects that threaten the ecological balance of the region (for example, the hydroelectric development in Northern Quebec or the currently shelved plans for diverting waters from the northward flowing rivers of Siberia to the south). And because of the links between the Arctic and the mid-latitudes, especially with respect to the global climate system, we must expect that these northern effects will eventually make themselves felt on the earth's biosphere as a whole. It follows that all the countries of the Arctic stand to benefit from "the cooperation of the northern countries in environmental protection."²¹

There are, in addition, opportunities for cooperation in the Far North arising from the fact that the Arctic states regularly encounter similar problems in their efforts to exploit the resources of the North while, at the same time, protecting the region's ecosystems and unique cultures. Some of these problems are essentially technical in nature; they are attributable to similarities in climate-induced conditions (for example, the presence of permafrost) and in geographical conditions (for example,

¹⁷ U.S. National Security Decision Directive (NSDD) No. 90, 14 April 1983.

¹⁸ Joe Clark, Secretary of State for External Affairs, speech delivered at the Norway-Canada Conference on Circumpolar Issues, Tromsø, Norway, December 1987. The text is printed in *The Disarmament Bulletin*, Ottawa: Department of External Affairs (Spring 1988), 22-24.

¹⁹ A number of English language versions of this speech are available. See, for example, Mikhail Gorbachev, "The North: A Zone of Peace," Ottawa: USSR Embassy, 1988.

²⁰ Communiqué issued following the Washington summit, December 1987.

²¹ Gorbachev speech, "The North: A Zone of Peace."

long distances and sparse populations) throughout the Circumpolar North. Others are better understood as economic and social problems. The high costs of extracting raw materials in the North and of transporting them to distant markets constitute an important consideration in all investment decisions (whether under capitalist or socialist auspices) whose returns may take years to accrue. Similarly, the threats to the cultures of northern Natives arising from contact with advanced, industrial societies are much the same throughout the Arctic region.

It would be pointless and wasteful to adopt insular or secretive policies in responding to these problems, forcing scientists, engineers, and administrators located in different parts of the Arctic to solve the same problems again and again. Except in cases where the resultant products compete with one another in world markets (which are likely to be rare as far as the Arctic is concerned), therefore, cooperation in the exchange of problem-solving techniques and Arctic expertise will benefit all.

Yet another incentive for international cooperation in the Arctic turns on opportunities to initiate joint ventures (or joint enterprises) designed to exploit complementarities arising from asymmetries in scientific, technological, or socioeconomic development in the North. The Soviets, for example, lead in such areas as the construction of multistoried buildings on permafrost, Arctic marine transportation, education in the languages of small northern peoples, and (at least in principle) arrangements designed to provide a measure of self-government for northern peoples. The Canadians and the Americans, by contrast, are ahead in the development of small dwelling units adapted to northern conditions, the use of specialized transportation technologies (for example, snowmobiles, all-terrain vehicles), northern road construction, technologies for offshore oil and gas operations, and the design and implementation of environmental safeguards for Arctic ecosystems. Denmark has accumulated experience of great value in the course of establishing Home Rule arrangements for the Faroe Islands and Greenland. The Scandinavian countries have established the most effective systems of reindeer husbandry in the North and could assist in improving Soviet practices in this area and (together with the Soviet Union) in introducing reindeer husbandry into the North American Arctic.

Each Arctic country leads in one or more spheres of northern experience. By pooling knowledge and resources through the initiation of joint ventures, therefore, the Arctic states can generate mutual benefits exceeding the sum of what each country working alone can produce.

FORMS OF ARCTIC COOPERATION

As in all other social settings, cooperation in international society can assume a variety of forms. Cooperative arrangements may be explicit or tacit in nature. Explicit arrangements, the category of cooperative mechanisms we are apt to think of first, are embodied in formal agreements (that is, treaties, conventions, or similar instruments) spelling out the terms of the relationships. Tacit cooperation, by contrast, requires only a *de facto* coordination of behavior in order to realize mutual

benefits or, more commonly, to avoid mutual losses. Additionally, the informal practices that regularly arise to supplement the provisions of explicit arrangements typically evolve as a matter of tacit cooperation.

Cooperative arrangements may be either bilateral or multilateral depending upon the number of parties involved. The category of multilateral arrangements, moreover, covers a broad spectrum ranging from three or four participants, as in the case of the conservation regime for northern fur seals, to more than 150 participants, as in the case of the regime for deep seabed mining set forth in Part XI of the 1982 Convention on the Law of the Sea. Particularly significant for this analysis of international cooperation in the Arctic is the distinction between multilateral arrangements in which the participants are members of a geographically distinct region (for example, the Mediterranean Action Plan) and multilateral arrangements in which the parties are linked together by functional ties (for example, the regime for the use of the electromagnetic spectrum).

As these observations suggest, those seeking to promote international cooperation in a distinctive region like the Arctic must also strive to strike a proper balance between the adaptation of universal arrangements (for example, the 1973/1978 MARPOL Convention dealing with vessel-source pollution) to conditions prevailing in the region and the creation of specialized arrangements (for example, the polar bear agreement) tailored to the particular circumstances prevailing in the region.²²

Whether the cooperative arrangements that emerge are bilateral or multilateral, adaptations of universal arrangements or regionally specific, the resultant relationships may be issue specific or comprehensive. Here, too, there is a broad spectrum ranging from highly restrictive relationships (for example, the Canadian/American arrangements for halibut in the North Pacific) to arrangements encompassing an extensive set of interlocking issues (for instance, the provisions governing the use of the oceans set forth in the 1982 Convention on the Law of the Sea or the proposed international law of the atmosphere).

Equally important is the distinction between *ad hoc* cooperation which involves interactions that are not recurrent or iterative in nature and ongoing cooperation which encompasses relationships of a continuing nature. Cooperation for the purpose of demarcating agreed-upon jurisdictional boundaries on the understanding that each party will subsequently exercise exclusive authority within its own jurisdictional zone exemplifies the case of *ad hoc* cooperation. Institutional arrangements or regimes for continuing activities like high seas fishing or the use of the electro-magnetic spectrum, by contrast, serve to structure or regulate relationships of an ongoing nature.

Institutional arrangements governing ongoing cooperation also differ in the extent to which they require specialized organizations to

²² Elena N. Nikitina, "International Mechanisms for Study of the Arctic Environment," paper presented at the annual convention of the International Studies Association, London, March 1989.

administer their substantive provisions. While the Antarctic Treaty of 1959, for example, does not establish any administrative apparatus charged with the regulation of human activities in the Antarctic region, the more recent Convention on the Conservation of Antarctic Marine Living Resources does create a specialized apparatus in the form of a commission, scientific committee, and secretariat to administer its provisions.

The fact that the newly emerging issues in the Arctic (for example, the control of military activities in the region, the regulation of resource development to protect Arctic ecosystems, the maintenance of distinctive cultures) are all ongoing concerns ensures that efforts to promote international cooperation in the region will generally revolve around proposals for the establishment of Arctic regimes. As all well-informed students of international affairs now understand, however, the mere existence of ongoing concerns cutting across the jurisdictional boundaries of states or affecting the commons hardly ensures that the relevant parties will succeed in cooperating to create institutional arrangements to deal effectively with these issues. Individual actors endeavoring to maximize the benefits accruing to themselves often behave in such a way as to generate collective outcomes that are socially suboptimal and sometimes highly destructive. This is commonplace in situations exhibiting the analytic structure of the well-known prisoner's dilemma. But it also occurs in connection with other collective-action problems, such as those we associate with the supply of public goods, the use of common property resources (witness the tragedy of the commons), or the avoidance of social traps. It follows that any assessment of the prospects for international cooperation to devise regimes to handle emerging Arctic issues must not stop with a documentation of the need for cooperation. It must explore the politics of Arctic regime formation as well.²³

POLAR POLITICS: THE ANTARCTIC ANALOG

Those who approach the subject of international cooperation in the Arctic with the experience of the oceans or Antarctica in mind tend to assume that we should aim to create institutional arrangements for the Arctic that are explicit, multilateral, comprehensive, and institutionalized in nature. Increasingly, they also envision roles for specialized organizations to administer the provisions of these relatively complex cooperative arrangements. In these terms, the Arctic certainly lags behind as a domain of international cooperation. Yet there is no reason to accept this model as a general norm or, more specifically, as the appropriate paradigm to guide our thinking about international cooperation in the Arctic. In fact, it makes better sense to think in terms of tailoring cooperative arrangements to the conditions prevailing in geographically

distinct regions or functionally defined issue areas rather than imposing a single model of cooperation regardless of the circumstances at hand.

Consider, in this connection, some contrasts between the Arctic and the Antarctic and the implications of these contrasts for the forms of international cooperation likely to prove effective in the two polar regions. Many commentators have taken recently to using the phrase "polar politics,"²⁴ a manner of speaking that suggests the existence of substantial parallels between the two polar regions. But a brief consideration of the Antarctic experience will suffice to demonstrate that the differences between the Arctic and the Antarctic with regard to international cooperation greatly exceed the parallels.²⁵ In many respects, the two polar regions are antipodes in terms of international cooperation as well as in terms of geography.

In 1959, when the Antarctic Treaty was signed, the various parts of Antarctica were not fully integrated into the political or legal systems of contiguous states. It is doubtful whether those advancing territorial claims in Antarctica could have met even the most lenient standard of "effective occupancy" in any serious test of their (sometimes overlapping) claims.²⁶ By contrast, no one doubts the sovereign authority of the Arctic-rim states in much of the Arctic, though there are unresolved questions about the precise boundaries of their Arctic jurisdictions as well as about more extreme claims to Arctic marine areas based on doctrines like the sector principle. Unlike the circumstances prevailing in the Antarctic, extensive North/South interactions between southern metropolises and Arctic hinterlands have long been the norm in the Far North.

The Antarctic region was not an arena for the deployment and operation of major military systems at the time of the negotiation of the Antarctic Treaty of 1959. The demilitarization of the region under the provisions of the treaty, therefore, was essentially a matter of recognizing formally a situation that already prevailed on the ground. Contrast this with the emergence of the Arctic as an area of growing strategic significance to both superpowers and as an arena for the regular deployment of critical weapons systems. Whatever the prospects for international cooperation in the region, comprehensive demilitarization

²⁴ See, for example, the special issue of *International Journal* entitled "Polar Politics" (vol. 39, Autumn 1984) and the special issue of *International Studies Notes* entitled "Polar Politics in the 1980s" (vol. 11, Spring 1985).

²⁵ For straightforward accounts of international cooperation regarding Antarctica see Philip W. Quigg, *A Pole Apart: The Emerging Issue of Antarctica*, New York: McGraw-Hill, 1983; and Deborah Shapley, *The Seventh Continent: Antarctica in a Resource Age*, Washington, D.C.: Resources for the Future, 1985. And for an account that deals explicitly with the politics of regime formation consult M.J. Peterson, *Managing the Frozen South: The Creation and Evolution of the Antarctic Treaty System*, Berkeley: University of California Press, 1988.

²⁶ F.M. Auburn, *Antarctic Law and Politics*, London: C. Hurst, 1982.

²³ See also Oran R. Young, "Arctic Waters: The Politics of Regime Formation," *Ocean Development and International Law* 18 (1987), 101-114.

along the lines of the Antarctic model does not seem likely in the Arctic during the foreseeable future.

No industrial or commercial activities were taking place in Antarctica at the time the Antarctic regime was negotiated (with the exception of some residual whaling operations in the surrounding marine area which were ignored in the 1959 negotiations). What is more, many thoughtful observers doubt whether such activities will take on major proportions anytime during the next several decades, a fact that certainly facilitated the negotiations resulting in the 1988 Convention on the Regulation of Antarctic Mineral Resource Activities.²⁷ The contrast with the Arctic, which is already the scene of world-class industrial operations, could hardly be sharper.

Despite dramatic evidence concerning the occurrence of a seasonal ozone hole over Antarctica, the environmental impacts of the activities of advanced industrial societies located in the mid-latitudes are even more profound in the north polar region than in the south polar region. Due to the operation of prevailing water and air currents, the Arctic Basin operates as a sink for a wide range of industrial pollutants, including heavy metals, toxic substances, sulphur dioxide, CFCs, and carbon dioxide. Not only does this threaten the health and welfare of the Arctic's human population, it also seems likely to unleash forces, such as rising sea levels, that may profoundly affect coastal areas in the northern hemisphere which are of crucial importance to the world's most affluent societies.

Antarctica does not constitute an ancestral homeland for sizable groups of indigenous peoples. Whereas the Native peoples of the Arctic regard the region as a cultural unit and rightfully demand a meaningful voice in the development of Arctic regimes, the south polar region cannot be said to harbor any permanent residents. It was a straightforward matter, therefore, for diplomats and scientists located in distant capitals to devise mutually acceptable cooperative arrangements for Antarctica without thinking about local reactions to such arrangements.

The Antarctic regime clearly grew out of the activities of the international scientific community, and it has served, in turn, to nurture the cohesiveness of this community. It is no accident that the Antarctic Treaty was formalized in the aftermath of the International Geophysical Year of 1957-1958. And the Scientific Committee on Antarctic Research (SCAR), which operates under the auspices of the International Council of Scientific Unions (ICSU), has played a role of considerable importance in propagating the idea that Antarctica should remain a continent dedicated to science.²⁸ Though we are witnessing today potentially important developments in the international scientific community concerned with

the Arctic, there is as yet no comparison between the two polar regions in these terms.

It follows that simplistic comparisons between the Arctic and the Antarctic do more to confuse the prospects for international cooperation in the Arctic region than to shed light on this matter. The mere fact that interested parties have had considerable success in establishing cooperative arrangements for one polar region does not entitle us to conclude that the other polar region is ripe for progress in these terms. The issues requiring explicit cooperation or tacit coordination in the Arctic are, in many ways, more serious than those that provided the initial impetus for regime formation in Antarctica. This may pose problems for regime formation in the Arctic. Because the stakes are higher, interested parties are apt to bargain harder over the provisions of cooperative arrangements for the Arctic. But the need for international cooperation in the north polar region is also greater. We must therefore explore the opportunities for regime formation in the Arctic seriously and systematically, while not losing sight of the problems facing this enterprise.²⁹

EXISTING ARCTIC REGIMES

Once we abandon the preoccupation with comprehensive arrangements of the sort that have emerged for Antarctica and the oceans and that some now envision for the atmosphere, it becomes apparent that there exists already a substantial record of international cooperation in the Arctic. What is more, this experience runs the gamut from scientific and technical arrangements through environmental regimes to cooperation on matters relating to military security.

Some of the resultant regimes are relatively modest bilateral arrangements. Notable in this category are the Grey Zone Agreement between Norway and the Soviet Union covering the use of marine resources in the disputed area of the Barents Sea; the Marine Environmental Cooperation Agreement between Canada and Denmark/Greenland dealing with the ecosystems of Baffin Bay and the Davis Strait; the Joint Development Zone arrangement for the marine areas around Jan Mayen; and the new Soviet/American arrangements encompassing both fishing and oil spill contingency plans for the Bering Sea.

Other Arctic regimes involve more far-reaching multilateral arrangements. Three of these arrangements that are geographically restricted or functionally specific are worthy of particular attention in this analysis: the Svalbard regime, the regime for the conservation of northern fur seals, and the regime for the conservation of polar bears.

²⁷ William E. Westermeyer, *The Politics of Mineral Development in Antarctica: Alternative Regimes for the Future*, Boulder: Westview Press, 1984; and Francisco Orrego Vicuna, *Antarctic Mineral Exploitation: The Emerging Legal Framework*, Cambridge: Cambridge University Press, 1988.

²⁸ Polar Research Board, *Antarctic Treaty System*.

²⁹ See also Lincoln P. Bloomfield, "The Arctic: Last Unmanaged Frontier," *Foreign Affairs* 60 (1981), 87-105.

SVALBARD

The Svalbard Archipelago is a collection of islands located 600 miles northwest of the north coast of Norway and covering 62,400 square kilometers (about the size of Belgium and the Netherlands combined). Long a bone of contention among several northern states (including Great Britain, Norway, Russia, and Sweden), the Archipelago became the subject of an international regime under the terms of the Treaty Relating to Spitsbergen, which was signed on 9 February 1920 and entered into force in 1925.³⁰ This treaty, now encompassing 40 signatories including both the United States and the Soviet Union, originated in conjunction with the larger settlement of issues outstanding at the close of World War I.

In essence, the Svalbard regime couples a recognition of Norwegian sovereignty over the Archipelago with a series of significant commitments on the part of Norway to respect all previously established rights in the area, to allow nationals of all signatories access to the natural resources of Svalbard on an equal footing, and to maintain the Archipelago in a demilitarized state. Legally, therefore, the Svalbard Archipelago has become a part of Norway. But Norway as a member of international society has relinquished the authority to exclude others from using the resources of the area (including both minerals and fish) and assumed an international obligation to prevent any use of the Archipelago for warlike purposes.

Despite the disruptions of World War II and the pressures of the Cold War, the Svalbard regime has remained intact and continues to function as a major source of order in an important segment of the Arctic region. Its success, moreover, stands as a monument to the propositions that state sovereignty is not indivisible and that sovereignty need not constitute a barrier to effective international cooperation when individual states (in this case Norway) are willing to live with explicit restrictions on the exercise of sovereign authority.

FUR SEALS

Prized for several centuries by human users for the quality of its skin, the northern fur seal experienced severe stock depletions as a consequence of pelagic harvesting toward the end of the nineteenth century. Unilateral efforts on the part of the United States to regulate the harvest resulted in a sharp conflict with Great Britain over maritime jurisdiction and eventuated in a well-known case of international arbitration which, however, failed to provide an effective mechanism for protecting the fur seal population.

By the early years of the twentieth century, the consequent decline in the fur seal population had reached crisis proportions, a situation that led to the negotiation of an international regime for the

protection of the North Pacific fur seal in 1911 among Great Britain (acting for Canada), Japan, Russia, and the United States.³¹ This regime banned pelagic sealing and placed all harvesting operations under the control of the United States on the Pribilof Islands in the eastern Bering Sea and Russia on the Commander Islands in the western Bering Sea in return for a guaranteed share of the annual harvest of sealskins for Canada and Japan. Widely credited with halting the depletion of fur seal stocks and establishing conditions allowing for recovery of the fur seal population, this pioneering international arrangement for wildlife management continued to function over a number of decades, with a hiatus in the 1940s occasioned by the war in the Pacific between Japan and the United States.

In recent years, however, the fur seal population has begun to decline again. The animal protectionist movement, which is opposed to conservation arrangements (like the fur seal regime) sanctioning the consumptive use of wild animals, has grown in influence. As a result, the United States Senate failed to ratify a 1984 Protocol to the Interim Convention on the Conservation of North Pacific Fur Seals of 1957, which would have extended the life of the regime for another four years. Today, the fur seal population continues to decline, amidst considerable controversy in the scientific community about the causes of this trend.³² And current efforts to manage this highly migratory species are confined to the actions of individual states within their fishery conservation zones or exclusive economic zones. So far, tacit cooperation has failed to materialize to fill the gap left by the dismantlement of the international regime for the northern fur seal.

POLAR BEARS

The polar bear, in many ways the quintessential symbol of the Arctic, has long been a prime target of trophy hunters from affluent societies around the world. By the 1960s, "the rapidly-growing value of polar bear hides in North America and Europe, combined with increasing use of oversnow machines, stimulated unprecedented increases in numbers of polar bears reported killed."³³

While it was apparent that polar bears ranged widely in the Arctic without regard to political boundaries, remarkably little was known

³¹ For more extensive accounts see Oran R. Young, *Natural Resources and the State*, Berkeley: University of California Press, 1981, ch. 3; and Simon Lyster, *International Wildlife Law*, Cambridge: Grotius Publications, 1985, ch. 3.

³² For a glimpse of the range of opinion within the scientific community see "North Pacific Fur Seals—Pribilof Island Population: Designation as Depleted," National Marine Fisheries Service, 52 Federal Register 49450-49456 (31 December 1987).

³³ Ian Stirling, "Research and Management of Polar Bears *Ursus maritimus*," *Polar Record* 23 (1986), 168. And for a more comprehensive account of the state of knowledge regarding polar bears see Ian Stirling, *Polar Bears*, Ann Arbor: University of Michigan Press, 1988.

³⁰ For an extended account see Willy Ostreng, *Politics in High Latitudes: The Svalbard Archipelago*, Montreal: McGill-Queen's University Press, 1978.

at the time about the population dynamics and behavior of this species. The result was a growing concern about the status of polar bear stocks and a remarkable set of initiatives launched by scientists interested in the polar bear and organized by a Polar Bear Specialist Group operating within the framework of the International Union for the Conservation of Nature and Natural Resources (IUCN). This effort eventuated in 1973 in the signing of a five-nation agreement (including Canada, Denmark/Greenland, Norway, the Soviet Union, and the United States) which establishes an international regime for the conservation of polar bears. The agreement focuses explicitly on protection of the species rather than on any effort to eliminate the consumptive use of polar bears.³⁴ The heart of this regime is a set of commitments on the part of each of the signatories to take steps to protect ecosystems of which polar bears are a part within their jurisdictions; to impose clearcut restrictions on the killing or capturing of polar bears; and to engage in a substantial program of coordinated research.

The resultant regime has not only played an important role in conserving polar bears, whose numbers throughout the Circumpolar North are now thought to run to 20,000-40,000, it also stands as testimony to the feasibility of cooperation involving both the superpowers and several lesser powers with regard to Arctic issues of mutual concern. Additionally, this case of international cooperation offers important lessons concerning the politics of regime formation, since the scientific community operating through the IUCN, rather than the governments of the relevant states, provided the necessary leadership both for the creation of the international polar bear regime and for the activities required to implement the regime following the negotiation of the 1973 agreement.

CURRENT ARCTIC INITIATIVES

It is increasingly apparent to those concerned with international cooperation in the Arctic that we have entered a period of unusual ferment regarding the development of new forms of cooperation to deal with Arctic issues. This is easy enough to explain as a result of the dramatic expansion of human activities that has led to the emergence of the Arctic as one of the world's major regions in military, economic, and environmental terms. But the consequent flowering of ideas relating to international cooperation in the Arctic makes the region today an exciting focus of attention for those interested in the study of international cooperation more generally. To comprehend the full range of current developments in this realm, it is important to consider multilateral as well as bilateral initiatives and public as well as private actions.

BILATERAL INITIATIVES³⁵

In 1988, Canada and the United States signed an Agreement on Arctic Cooperation under which the United States has pledged to obtain Canadian consent for navigation of American icebreakers "within waters claimed by Canada to be internal," even while the two countries agree to disagree regarding the legal status of the waters of the Arctic Archipelago.³⁶ Already, the *Polar Star* has transited the Northwest Passage from west to east under the terms of this agreement without incident and without provoking even a ripple of the angry Canadian response that followed the east to west transit of its sister ship, the *Polar Sea*, in the summer of 1985.

The Soviet Union has entered into a series of bilateral agreements with Norway, Sweden, and Finland pertaining to Arctic matters. One of the agreements with Norway provides a framework for cooperation regarding environmental concerns and places particular emphasis on oil spills in the Barents Sea and conflicts relating to air and water pollution emanating from the Kola Peninsula. Another initiates a program of scientific and technological cooperation regarding Arctic issues. A third establishes procedures for mutual assistance in search and rescue operations in the Barents Sea. Yet a fourth calls for notification of nuclear accidents that could produce radioactive contaminants crossing from one country to the other. This agreement (and a similar one between the Soviet Union and Sweden) is motivated, in part, by Norwegian and Swedish concerns stemming from the proximity of a Soviet nuclear power plant on the Kola Peninsula. Soviet/Finnish bilateral agreements provide for an exchange of information regarding safety measures in nuclear power stations, establishment of rules to improve safety in such facilities, and cooperation to reduce transboundary air pollution. Activity has expanded as well under the terms of bilateral agreements between the Soviet Union and Canada and the United States.³⁷ The Moscow summit in the spring of 1988 witnessed the signing of a Soviet/American agreement on cooperation regarding fisheries of mutual concern. Though the agreement is not Arctic-specific, it devotes particular attention to conservation and management of the renewable resources of the Bering Sea. Another agreement setting forth a Soviet/American oil spill contingency plan for the Bering and Chukchi seas was signed in May 1989. The proposed bilateral Agreement on Arctic Cooperation between Canada and the Soviet Union, which has been widely discussed

³⁵ See also Osherenko and Young, *Age of the Arctic*, Epilogue.

³⁶ Signed on 11 January 1988, this executive agreement is formally titled "Agreement Between the Government of Canada and the Government of the United States of America on Arctic Cooperation."

³⁷ See Gail Osherenko, "Environmental Cooperation in the Arctic: Will the Soviets Participate?" *International Environmental Affairs* 1 (Summer 1989), 203-221.

³⁴ For a descriptive account see Lyster, *International Wildlife Law*, ch. 3.

since 1987, remains to be signed.³⁸ But there are indications that the agreement will be formalized at the Soviet/Canadian summit scheduled for November 1989.

Denmark and Norway appear to be moving toward a settlement of their dispute regarding maritime boundaries between Jan Mayen and Greenland. In August 1988, Denmark submitted the dispute to the International Court of Justice for adjudication, and there is every reason to believe that Norway (though somewhat surprised by the timing of this action) will accept the Court's jurisdiction in this case. Coupled with the 1981 arbitration that resolved a similar conflict between Iceland and Norway, this development may provide new impetus for proposals to initiate joint development zones (of the sort recommended in the 1981 arbitral decision) to manage the human use of the natural resources of the Arctic sector of the North Atlantic. Such a development could also breathe new life into earlier proposals for the establishment of similar zones to manage the use of the shared resources of the Bering and Beaufort Seas.³⁹

MULTILATERAL INITIATIVES

Even more striking are the growing recognition that many Arctic problems require multilateral responses and the consequent emergence of serious interest in multilateral regimes for the Arctic. The Soviet Union's Arctic zone of peace initiative has done much to reawaken interest in the idea of a comprehensive international regime for the Arctic in contrast to a collection of issue-specific arrangements. In his October 1987 speech, President Gorbachev called for a network of cooperative arrangements encompassing one or more nuclear-weapons-free zones; restrictions on naval activities in the Far North; peaceful cooperation in developing Arctic resources; the coordination of scientific research in the Arctic; cooperation regarding environmental protection in the Far North; and the opening of the Northern Sea Route to foreign ships.⁴⁰ Soviet diplomacy in the intervening months has made it clear that this initiative reflects a genuine interest on the part of the Soviet Union in new forms of international cooperation for the Arctic.

It is easy, of course, to criticize specific elements of the Soviet proposal for an Arctic zone of peace. The nuclear-free zone formula is largely familiar and basically self-serving. Much of the emphasis is on northern Europe rather than on the Arctic as a distinctive region. And the whole initiative highlights the preponderant position of the Soviet Union in the Arctic region. But none of this diminishes the fundamental importance of this call for international cooperation in the Arctic. The

leaders of the Soviet Union clearly perceive the Arctic as a region in which important changes are unfolding and believe that enhanced international cooperation constitutes the appropriate response to these changes. Coupled with the rising interest in reconceptualizing security as a multidimensional and relational condition, an interest that the Soviets clearly share, the idea of the Arctic as a zone of peace may well make it inappropriate in the future simply to dismiss out of hand suggestions calling for comprehensive forms of international cooperation in the Arctic.

Despite the impressive achievements of the International Polar Years of 1882-1883 and 1932-1933, the Arctic has long lacked an international scientific community of the sort that has played such a prominent role in operating the Antarctic Treaty System.⁴¹ Today, however, a vigorous planning process is in motion that is likely to lead soon to the creation of a multilateral arrangement to foster cooperation in Arctic science. Starting with a meeting in the United States in 1986, this effort has gone through several stages and is nearing the point of agreement among the eight Arctic states on a document setting forth Founding Articles for an International Arctic Science Committee (IASC). This Committee will "serve the scientific interests of arctic countries and provide a forum for discussion and co-ordination of the research interests of any country involved in arctic science."⁴² The initiative is motivated, in part, by a desire to link Arctic science with the global change movement emerging under the auspices of the International Geosphere-Biosphere Programme, and the Committee may, in time, become affiliated with the International Council of Scientific Unions (ICSU), emerging as a counterpart to the Scientific Committee on Antarctic Research (SCAR) in terms of structure as well as function.

As negotiations relating to the IASC have progressed, all parties have offered significant concessions. The Soviets, in particular, have made important moves from a position favoring participation restricted to the five states actually bordering on the Arctic Ocean to a position of accepting participation by Finland, Iceland, and Sweden as well and finally to a willingness to allow meaningful participation by scientists from other countries mounting active and continuing Arctic science programs.

There are, in addition, indications that these new developments in multilateral cooperation regarding Arctic science will spill over into areas like environmental protection in the Arctic. The Canadian Department of Fisheries and Oceans, for example, has launched a plan for an Arctic Marine Conservation Strategy. Conceived initially as a vehicle for coordinated management of the marine areas of the Canadian Arctic, this plan looks toward a rapid expansion of its scope to foster international cooperation. Thus, "[t]he strategy encourages the

³⁸ For the text of the proposed bilateral treaty between Canada and the Soviet Union see John Merriitt, "Has Glasnost Come Knocking?" *Northern Perspectives*, special edition (October 1987).

³⁹ Elliot L. Richardson, "Jan Mayen in Perspective," *American Journal of International Law* 82 (July 1988), 443-458.

⁴⁰ Gorbachev speech, "The North: A Zone of Peace."

⁴¹ E. F. Roots, "International and Regional Cooperation in Arctic Science: A Changing Situation," *The Musk-Ox* 34 (Spring 1986), 9-27.

⁴² Roots, Rogne, and Taagholt, "International Communication," Executive Summary.

development of a circumpolar conservation effort in all arctic marine waters."⁴³ Such a development would, in effect, build on the international cooperation achieved under the species-specific polar bear regime and expand it by approaching environmental issues in the Arctic region from an ecosystems perspective.

Beyond this, interest has surfaced in broader multilateral arrangements dealing with environmental protection in the Arctic. While some of the emerging proposals focus on the marine environment and envision an action plan for the Arctic along the lines of the Mediterranean Action Plan, other initiatives are even more inclusive and encompass the Arctic's atmosphere as well as the region's marine environment.⁴⁴ The Finns are actively at work on the development of a draft agreement in this realm, and the initial responses of other Arctic states indicate significant enthusiasm for this project. A meeting to explore these ideas in a preliminary manner is now scheduled to take place in Finland during September 1989. What is envisioned at this stage is an umbrella agreement to be negotiated in the near future, with more specific provisions to be added later in the form of protocols.

PRIVATE OR NONGOVERNMENTAL INITIATIVES

The resultant sense of ferment regarding international cooperation in the Arctic has given rise to a flurry of private initiatives designed not only to study but also to facilitate regime building in the region. Many of these efforts, like the agreement on cooperation in medical research between the University of Alaska and the Siberian Branch of the Soviet Academy of Sciences, are bilateral arrangements between private or quasi-governmental institutions. But a growing number represent multilateral attempts to address problems that cannot be resolved without the cooperation of organizations located in several or all of the Arctic states.

A striking example is the Inuit Regional Conservation Strategy now being developed under the auspices of the Inuit Circumpolar Conference (ICC), a nongovernmental organization representing the interests of the Inuit peoples of Greenland, Canada, the United States, and the Soviet Union.⁴⁵ Accorded top priority at the 1986 General Assembly of the ICC, this project has won the active support of the United Nations Environment Programme and become an important vehicle for promoting international cooperation on environmental issues in the Arctic.

⁴³ Elizabeth Snider, "The Arctic Marine Conservation Strategy," *Northern Perspectives* 15 (November 1987), 12.

⁴⁴ Alexei Roginko, "Arctic Environmental Cooperation: Prospects and Possibilities," paper presented at the annual convention of the International Studies Association, London, March 1989.

⁴⁵ See Robert and Christine Prescott-Allen, "Towards an Inuit Regional Conservation Strategy: Framework Document for an Inuit Regional Conservation Strategy," prepared for the Environmental Commission of the Inuit Circumpolar Conference, July 1986.

The MacArthur Foundation in the United States has funded the establishment of a Working Group on Arctic International Relations. Administered by the Institute of Arctic Studies at Dartmouth College, this group includes participants from all the Arctic states and meets at regular intervals in northern locations. Dedicated to facilitating international cooperation in the Arctic, the Working Group seeks to provide early warning of emerging Arctic issues, formulate innovative policy options for handling these issues, and serve as an informal channel of communication among policymakers in all the Arctic states.⁴⁶ The Tampere Peace Research Institute in Finland, supported again by the MacArthur Foundation, has launched a somewhat similar initiative. This has already resulted in a workshop on "Alternative Security and Development in the Arctic Regions," and the Institute has arranged another session during July 1989 to explore emerging opportunities for cooperation in the region.

The growth of interest in multilateral cooperation in the Arctic is also breathing new life into existing mechanisms, like the Comité Arctique International and the Northern Science Network (an entity that functions like a private arrangement though it was established in 1982 under the auspices of UNESCO's Man and the Biosphere Program). Recently, the Network's secretariat has resumed publication of its lapsed newsletter and offered the services of the Network as a coordinating arrangement for international scientific cooperation in the Arctic.⁴⁷ Though the relationship between these organizations and the newly emerging International Arctic Science Committee remains to be worked out, the Comité and the Network are attractive because they have a history of concern for the need to improve communication between natural scientists and social scientists.

OBSTACLES TO ARCTIC COOPERATION

Effective international cooperation, in the Arctic as well as in other social settings, is seldom easy to achieve. The prospect of reaping joint gains is a necessary condition for cooperation; it is by no means sufficient. One of the most powerful and robust findings of the social sciences is embodied in the proposition that parties behaving in ways that seem rational from an individualistic point of view repeatedly produce collective outcomes that are suboptimal and sometimes highly destructive.⁴⁸ Before we proceed to celebrate the onset of an era of enhanced cooperation in the Arctic, therefore, it is necessary to turn to an examination of the obstacles to cooperation in this region. This section

⁴⁶ Franklyn Griffiths and Oran R. Young, "Impressions of the Co-Chairs," report on the first session of the Working Group on Arctic International Relations, Hveragerdi, Iceland, 20-22 July 1988.

⁴⁷ *Northern Science Network Newsletter* 4 (November 1988).

⁴⁸ For a general account of these collective-action problems see Russell Hardin, *Collective Action*, Baltimore: Johns Hopkins University Press, 1982.

identifies some substantive problems that must be overcome in efforts to capitalize on the growing interest in international cooperation in the Arctic. The following section turns to several more specific collective-action problems that may impede the process of reaching agreement on cooperative arrangements for the Arctic.

At the most general level, there is, as Soviet prime minister Nikolai Ryzhkov has put it, a "lack of trust that has built up in a region so sensitive from the viewpoint of security interests."⁴⁹ Unlike the oceans, where there is a long history of shared use, or Antarctica, where a complex of cooperative arrangements in the realm of science emerged during the course of the International Geophysical Year of 1957-1958, the Arctic has been plagued by a variety of expansive and often conflicting jurisdictional claims during the twentieth century. The growing geopolitical significance of the region has combined with these jurisdictional conflicts to heighten the sensitivities of officials in all the Arctic countries regarding the strategic implications of recent developments in the region.

What is needed to reverse the resultant atmosphere of distrust is both a program of well-conceived confidence building measures (civil as well as military) for the Arctic and a broad commitment to "mutual respect for each other's interests, and the development of mutually useful cooperation, in the course of which trust is born and strengthens, the 'image of the enemy' collapses, and its place is taken by the image of a partner."⁵⁰ But none of this can happen overnight or without a serious commitment to the expansion of cooperative arrangements.

There is, as well, a striking disjunction between the strategic perspective on Arctic affairs and the point of view of those who approach the region from a cultural, scientific, or environmental perspective.⁵¹ Military planners typically think of the Arctic as a theater of operations for weapons systems and, in some cases, as a potential theater for actual combat. Such an approach is antithetical to the views of those who perceive attractive opportunities for collaboration in scientific research in the Arctic as well as those who sense a growing need for cooperation to protect the region's shared ecosystems. The perspective of the military planners is viewed with horror by the permanent residents of the Arctic, who look upon the region as a homeland rather than as an arena for the interactions of alien powers.⁵²

One response to this situation is to decouple military and civil issues in the Arctic, concentrating on efforts to promote civil cooperation in the hope that cooperation regarding military issues will follow as

experience with civil cooperation in the region grows. It is not universally accepted, however, that this approach constitutes the most fruitful path to Arctic cooperation. An alternative response is to broaden the conception of security to encompass economic, environmental, and cultural threats and to recognize the existence of reciprocal relationships among the various aspects of security. President Gorbachev may well have been on the right track in proposing a multidimensional approach to Arctic cooperation in his Murmansk speech, whether or not the individual elements of his six-point program prove attractive to other Arctic states.

Efforts to achieve international cooperation in the Arctic may suffer as well from a lack of understanding among the Arctic states regarding each other's decisionmaking processes and administrative practices. Because Arctic affairs typically cut across the jurisdictions of numerous agencies, none of the Arctic states has a distinct and easily identifiable decisionmaking process for Arctic matters, much less a coherent Arctic policy. While valiant efforts to engage in interagency coordination regarding Arctic matters have been made from time to time in most of the Arctic states, none of these efforts has produced unambiguous results. For some years Canada had an Advisory Committee on Northern Development, but this entity is now defunct and its role has not been assumed by any other body. The United States has an Interagency Arctic Policy Group (IAPG), which is lodged within the National Security Council structure and chaired by the Department of State. Yet the IAPG has struggled hard without achieving clearcut success in its efforts to coordinate the actions of 12-15 highly independent agencies. In 1988, the Soviet Union established a State Commission for Arctic Affairs which encompasses representatives from several dozen ministries and state committees. At this point, however, it is too early to tell how effective this mechanism will be in influencing the behavior of entrenched bureaucracies.

Under the circumstances, it is easy to understand why those located in each of the Arctic states find it difficult to sort out the complexities of Arctic decisionmaking and administration within their own countries. And it should come as no surprise that opportunities for international cooperation on Arctic issues can and often do fall victim to failures of communication and misunderstandings, despite the availability of significant joint gains.

Another obstacle to cooperation in the Arctic revolves around the issue of leadership. There is no dominant actor or hegemon in the international politics of the Arctic.⁵³ Any arrangements designed to foster international cooperation in the region must consequently take the form of negotiated regimes.⁵⁴ It is therefore apposite to note that no state or

⁴⁹ N. I. Ryzhkov, speech in Oslo, Norway, delivered 15 January 1988. The text appears in FBIS-SOV-88-011, 19 January 1988, at p. 53.

⁵⁰ *Ibid.*, p. 51.

⁵¹ Pertti Joenniemi, "The Environmental Approach to the Arctic in Policy Perspective," paper presented at the annual convention of the International Studies Association, London, March 1989.

⁵² Mary Simon, "Militarization and the Aboriginal Peoples," paper presented at the International Conference on Arctic Cooperation, Toronto, October 1988.

⁵³ On the concept of hegemony and the role of hegemony in international regime formation see Robert O. Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy*, Princeton: Princeton University Press, 1984, ch. 3; and Duncan Snidal, "The Limits of Hegemonic Stability Theory," *International Organization* 39 (1985), 579-614.

⁵⁴ For further discussion see Young, *International Cooperation*.

combination of states is ideally situated to provide effective leadership in the negotiation of Arctic regimes. Neither the United States nor the Soviet Union can play this role alone. Any effort to do so on the part of one of the superpowers would inevitably provoke skepticism, if not outright opposition, from the other. No doubt, the United States and the Soviet Union together could exert effective pressure to establish Arctic regimes. But the United States has shown little inclination to accord high priority to Arctic matters, and, in any case, the two states are not in the habit of operating in tandem for such purposes. They are more likely to compete for military advantages in the Arctic as a newly emerging strategic arena than to collaborate in the development of cooperative arrangements covering arms control or other Arctic issues.

This leaves the lesser Arctic states as the most probable locus of leadership for efforts to devise cooperative arrangements in the Arctic. In many ways, this is an appealing role for these states. Canada, in particular, may find such a role in the Arctic attractive.⁵⁵ Not only would this role fit nicely with the image that many Canadians hold regarding the place of Canada in international society, it would also help to assuage Canadian fears of being sandwiched between the superpowers in the Far North or of succumbing to American pressures regarding matters of sovereignty and security in the Arctic.⁵⁶ Whether the lesser Arctic states can pull together to offer effective leadership in the search for Arctic cooperation is surely open to question. But there can be no doubt that analyses of the prospects for international cooperation in the Arctic region must be approached in terms of the study of institutional bargaining and the conditions governing the establishment of negotiated regimes rather than in terms of the study of hegemony or the politics of dominance.⁵⁷

COLLECTIVE-ACTION PROBLEMS

Collective-action problems can also be expected to complicate efforts to realize joint gains in specific Arctic situations, just as they do in other social settings. Four such problems seem particularly relevant to

the prospects for international cooperation in the Arctic today. This section discusses these problems with particular reference to the role they have played in the negotiations regarding the establishment of the International Arctic Science Committee (IASC). Though there is considerable enthusiasm for the creation of a cooperative arrangement along these lines and it is probable that the IASC will come into existence during 1990,⁵⁸ the effort to form the Committee has given rise to complex negotiations in the course of which a number of interesting collective-action problems have surfaced.

NEGOTIATION ARITHMETIC

Even when there is consensus regarding the availability of joint gains, efforts to reach agreement on cooperative arrangements can easily founder on problems concerning the choice of participants and the delimitation of issues to be included in the arrangements.⁵⁹ In the case of the IASC, these problems have converged in the need to reconcile two distinct visions of the nature and role of the Committee. On one account, the IASC should be a strictly scientific, nongovernmental organization that concentrates on identifying promising research opportunities, seeks to avoid linkages to other Arctic issues, and adopts a policy of openness to scientists from all countries provided they are conducting serious programs of Arctic research. Such a committee would resemble the Scientific Committee on Antarctic Research and might join SCAR in due course as a constituent member of ICSU. An alternative approach envisions the IASC as an initial step in the evolution of an array of cooperative arrangements among the Arctic states. On this account, the IASC would be a quasi-governmental organization (in fact if not in form) that would accord a special role to the Arctic states in contrast to other states (for example, Britain, France, Japan, West Germany) possessing a legitimate interest in Arctic research.

Much of the discussion in the sessions of the planning group striving to articulate a mutually agreeable basis for the creation of the IASC has centered on efforts to reconcile these competing visions.⁶⁰ While all sides have been willing to consider significant changes in successive drafts of the Founding Articles, the participants have yet to devise a wholly satisfactory method of accommodating the diverging interests underlying the split between the two visions of the nature and

⁵⁵ For important discussions of Canada's interest in the Far North see Special Joint Committee on Canada's International Relations, *Interdependence and Internationalism*, Ottawa: Queen's Printer, 1986, ch. 10, together with the Government's response set forth in Department of External Affairs, *Canada's International Relations: Response of the Government of Canada to the Report of the Special Joint Committee of the Senate and the House of Commons*, Ottawa: Queen's Printer, 1986. For additional comments see Working Group of the National Capital Branch of the Canadian Institute of International Affairs, *The North and Canada's International Relations*, Ottawa: Canadian Arctic Resources Committee, 1988.

⁵⁶ See Oran R. Young, "Canada and the United States in the Arctic: Testing the 'Special Relationship,'" *Northern Perspectives* 15 (May-June 1987), 2-6; and John Honderich, *Arctic Imperative: Is Canada Losing the North?* Toronto: University of Toronto Press, 1987.

⁵⁷ Young, "Arctic Waters."

⁵⁸ At this writing (June 1989), plans are evolving to establish the IASC formally at a meeting in Canada, perhaps during the first half of 1990.

⁵⁹ James K. Sebenius, "Negotiation Arithmetic: Adding and Subtracting Issues and Parties," *International Organization* 37 (Spring 1983), 281-316.

⁶⁰ See Roots, Rogne, and Taagholt, "International Communication," for an argument that this problem should be resolved by creating two distinct entities, an International Arctic Science Committee and an Intergovernmental Forum on Arctic Science Issues.

role of the Committee.⁶¹ There should be no cause for surprise, therefore, if the participants find themselves devoting a good deal more time and energy to working through the complexities of this problem. This is true despite the fact that the general enthusiasm for the establishment of the IASC may well result in shifting elements of the problem to the implementation phase to allow the parties to take the symbolically significant step of announcing the formal establishment of the Committee sooner rather than later.

POSITIONAL BARGAINING

Cooperation and competition (or conflict) are by no means mutually exclusive. With rare exceptions, they occur together in interactions among the members of international society, a fact that has led many students of international affairs to describe these interactions as competitive/cooperative relations.⁶² Accordingly, parties endeavoring to reach agreement on the terms of cooperative arrangements seldom lose sight of concurrent opportunities to obtain the best possible outcomes for themselves. In the language of those who study negotiations, they engage in positional bargaining, even while seeking to collaborate in the interests of maximizing social or collective welfare.

The negotiations regarding the creation of the IASC offer several illustrations of this class of collective-action problems. The Soviets, for instance, made an effort to orchestrate the negotiations in such a way that the formal establishment of the Committee would occur at a meeting in the Soviet Union, a development that would have reflected positively on the Soviet Union's Arctic zone of peace initiative. The Americans, on the other hand, maneuvered to prevent such an occurrence, precisely because the United States does not want the Soviet Union to gain the lion's share of the credit for establishing cooperative arrangements for the Arctic. Not surprisingly, it now seems probable that the formal establishment of the IASC will occur in Canada, a procedure acceptable to the Soviets because of their interest in fostering cooperative relations with the Canadians regarding Arctic matters and to the Americans because of the long-standing tradition of friendship between Canada and the United States.

In the shadow of this positional bargaining on the part of the superpowers, the negotiations have also given rise to a positional pirouette among the Nordic states over the locus of the IASC's secretariat. The current plan, which involves establishing the secretariat initially in Norway but including a provision to allow for a subsequent rotation of the secretariat, is easy to understand as a device to reconcile the competing interests of the relevant parties regarding this issue. But it is far from clear whether a rotating secretariat constitutes a constructive arrangement

from the point of view of those endeavoring to build a strong international Arctic science community. For that matter, the use of this device to get around an initial collective-action problem hardly ensures that the IASC secretariat will rotate in fact. A similar option built into the arrangements for SCAR has never been exercised; the SCAR secretariat has simply remained in the United Kingdom where it was organized initially.

INTRAPARTY BARGAINING

As all students of international negotiations know, the parties to such processes are not monolithic entities behaving as rational utility maximizers in their interactions with each other.⁶³ Far more common are situations in which competing interest groups are active at the subnational level, seeking to influence the positions their governments adopt in international interactions. The resultant intraparty bargaining regularly affects international negotiations, distorting the character of the cooperative arrangements that emerge and, in extreme cases, preventing the creation of cooperative arrangements altogether.

Once again, the negotiations concerning the IASC provide some interesting illustrations. Clear evidence has emerged, for example, of vigorous jockeying for position within several of the participating states over the composition of negotiating teams and, therefore, the interests favored in the negotiations. In Canada, this has taken the form of a successful effort on the part of External Affairs to take the lead in the negotiations, shifting representatives of other departments, like Environment Canada and Indian and Northern Development, into a secondary role in the process. In the Soviet Union, there are indications that the Academy of Sciences has gained strength vis-a-vis the Foreign Ministry in the competition for influence over these negotiations. The internal dynamics in the United States, by contrast, have centered on the roles of the National Science Foundation, the Arctic Research Commission, and the National Academy of Sciences, with the Department of State contenting itself with a behind-the-scenes (but influential) voice and the Foundation generally becoming more influential in the negotiating process over time.

Similarly, there are obvious intraparty conflicts regarding the choice of adhering bodies to the Founding Articles of the IASC and the related issue of organizing national committees to manage the participation of individual countries in the activities of the Committee. To illustrate, the United States has often expressed the view that the IASC should be a nongovernmental body, a position suggesting that American participation in the Committee should be handled by the National Academy of Sciences (as in the case of SCAR). Yet the National Science Foundation, which is clearly a governmental organization, emerged as the dominant member of the American negotiating team in

⁶¹ See IASC Planning Group, *Founding Articles*, a report of the Planning Group following the May 1989 meeting in Helsinki, for the most recent written version of an IASC constitution.

⁶² For a seminal account consult Thomas C. Schelling, *The Strategy of Conflict*, Cambridge: Harvard University Press, 1960.

⁶³ Robert D. Putnam, "Diplomacy and Domestic Politics: The Logic of Two-Level Games," *International Organization* 42 (1988), 427-460.

developing plans for the IASC, and a complex bargaining process has taken place among the Academy, the Foundation, the Arctic Research Commission (another governmental organization), and the Department of State concerning the management of American participation in the Committee.

In Canada, confusion reigns with regard to these issues. External Affairs, which is presumably not a candidate for formal membership, has come to dominate the negotiating team. The Canadian Polar Research Commission might become a candidate for formal membership, but it is not yet officially in existence and, in any case, it is planned as a governmental organization.⁶⁴ And no one has proposed the Royal Society as the vehicle for managing Canadian participation, though the Society is probably the closest counterpart to the National Academy of Sciences in the United States and the Academy of Sciences of the USSR. For their part, those negotiating the basic terms of the IASC at the international level have adopted the undoubtedly sensible view that arrangements for national participation in the activities of the IASC are matters for each country to work out in accord with its own internal procedures and preferences.

POLITICAL WILL

Collective-action problems of the types described in the preceding paragraphs can and frequently do undermine efforts to reap joint gains through international cooperation. Still, these problems can be solved or simply swept aside when the will to act is strong on all sides. Perhaps the most dramatic illustrations of this phenomenon occur in the realm of arms control. Negotiations over the reduction of intermediate-range nuclear forces, for example, languished for years without any noticeable progress toward mutually agreeable terms. But when it became politically expedient for both the United States and the Soviet Union to conclude an agreement in this area, the two sides finalized and signed the Intermediate-Range Nuclear Forces Treaty of 1987 without delay.

It is well to bear in mind that circumstances in which the will to act is present simultaneously on all sides are exceptional and ordinarily fleeting. Regardless of the issue area, one or more of the key players will often be preoccupied with other concerns (for example, an election, a succession of leadership, domestic unrest) or find it expedient to drag out negotiations in the hope of benefitting from enhanced bargaining strength at a later date. In assessing the prospects for the IASC, then, we must constantly ask ourselves whether the will to act in this area is present in all the key parties. There is little doubt that the Soviets are keen to make progress in this area. The desire to take steps toward the development of multilateral cooperative arrangements for the Arctic has been expressed

repeatedly at the highest levels of Soviet leadership. But there is room for skepticism regarding the will to act on an International Arctic Science Committee in the United States and Canada. In the United States, the unmistakable enthusiasm of the scientific community for this project is not matched by unambiguous support from senior political leaders; it remains to be seen whether American policymakers can be persuaded to accord priority to any Arctic issue. With respect to Canada, on the other hand, it appears that there is some division between those hoping to use the issue to promote Canada's political agenda in the Arctic and those who would decouple the IASC from the rest of the Arctic agenda and treat it as a worthwhile enterprise in its own right.

CONCLUSION: THE ROAD AHEAD

There exists already a substantial network of cooperative arrangements in the Arctic. It is undeniable, also, that opportunities for new forms of international cooperation have grown steadily in this region during recent years as levels of human activity in the Arctic have risen. Yet it is equally apparent that there are significant obstacles impeding efforts to realize joint gains in the Arctic through international cooperation. This concluding section, therefore, seeks to spell out some key elements of a strategy designed to overcome these obstacles in the interests of linking together and building on the cooperative arrangements already in place in the Arctic region.

There is, to begin with, a need to reconcile two fundamentally different approaches to Arctic cooperation. On one account (which may be described loosely as the western approach), it is desirable to decouple Arctic issues in order to pursue cooperation regarding those matters that are not politically sensitive while, at the same time, setting aside the more sensitive issues in the hope that the growth of cooperation will make them easier to deal with at some later date.⁶⁵ The principal implication of this approach is that the politicostrategic issues associated with the militarization of the Arctic should be passed over at this stage in favor of efforts to cooperate in areas like scientific research and environmental protection. This view also suggests an emphasis on issue-specific, in contrast to comprehensive, cooperation for the Arctic.

The alternative strategy (which may be described loosely as the Soviet approach) rests on an extended conception of security, under which security is indivisible so that economic security, environmental security, and cultural security are inextricably linked with military security. Because it assumes that security cannot be tackled on a piecemeal basis, this strategy calls for a comprehensive approach to international cooperation in the Arctic. Whatever the merits of its constituent elements, it seems evident that the six-point plan articulated in Gorbachev's Murmansk speech of October 1987 is an expression of this

⁶⁴ See Canadian Polar Research Commission (the Symons Commission), "The Shield of Achilles: The Report of the Canadian Polar Research Commission Study," Ottawa: Department of Indian Affairs and Northern Development, 31 May 1988.

⁶⁵ Willy Ostreng, "Political-Military Relations among the Ice States," paper presented at the International Conference on Arctic Cooperation, Toronto, October 1988.

broader approach to Arctic cooperation. It is not the purpose of this analysis to say which of these approaches is more promising today, much less which of them is ultimately correct. But it does seem evident that a mutual understanding of the premises underlying these alternative approaches constitutes a necessary condition for genuine progress toward enhanced international cooperation in the Arctic.

With regard to specific cases (for example, the negotiations pertaining to the IASC), there is a critical need for political leadership in the form of entrepreneurial activities aimed at solving the collective-action problems that threaten to bog down negotiations even when there is agreement on all sides regarding the availability of joint gains. The role of the political entrepreneur in such situations is not to exercise power in the conventional sense, bringing pressure to bear on parties to accept particular forms of cooperation. Rather, the entrepreneur works to heighten awareness of opportunities to reap joint gains, to package issues in ways that facilitate agreement, and to build coalitions in support of cooperative arrangements.⁶⁶

In my judgment, the smaller Arctic states (with Canada perhaps in the lead) are in the best position to assume this entrepreneurial role regarding the growth of international cooperation in the Arctic during the near future. Yet the entrepreneurial efforts of the smaller Arctic states concerning specific issues have not been particularly well conceived or effective. While the Finns now appear to be making a vigorous effort to assume such a role in connection with multilateral arrangements to protect the Arctic environment, the smaller Arctic states have experienced trouble in playing an entrepreneurial role in connection with the creation of the IASC. Still, this does nothing to alter the proposition that these states must accept an entrepreneurial role if we are to solve the collective-action problems that will inevitably arise in connection with the pursuit of international cooperation in the Arctic.

Finally, it is worth noting the role of organized groups and even dedicated individuals in providing the innovative political thinking that must be coupled with political entrepreneurship to achieve progress toward international cooperation. In essence, this is a matter of providing the intellectual capital needed to reconceptualize the international agenda and to generate imaginative policy options relating to newly defined issues. It is hard to overlook the impact of the World Commission on Environment and Development (the Brundtland Commission), for instance, not only in pushing the issue of sustainable development to the forefront of the international agenda but also in generating the intellectual capital needed to broaden our thinking about security to encompass economic security, environmental security, and even cultural security.⁶⁷

With respect to the Arctic more specifically, similar comments are in order. There is no doubt that Weyprecht and his associates played a role of enormous significance not only in launching the International Polar Year of 1882-1883 but also in stimulating a vision of science as a transnational activity which we generally take for granted today.⁶⁸ And it is already clear that a small group of well-placed individuals have been instrumental in recent efforts to redefine the role of the Arctic in world affairs in such a way as to highlight both the need for and the feasibility of international cooperation in this increasingly important international region. Those who choose to play such roles must often rest content with the knowledge that they are contributing to the growth of international cooperation over the long term. They cannot expect to supplant political entrepreneurs in solving collective-action problems on a day-to-day basis. Nonetheless, such dedicated groups and individuals may exercise remarkable influence over time by shaping the way in which we think about international cooperation in the Arctic.

⁶⁶ Oran R. Young, "The Politics of International Regime Formation: Managing Natural Resources and the Environment," *International Organization* 43 (Summer 1989), 349-375.

⁶⁷ World Commission on Environment and Development, *Our Common Future*, New York: Oxford University Press, 1987.

⁶⁸ Roots, "International and Regional Cooperation," and William Barr, *The Expeditions of the First International Polar Year, 1882-83*, Arctic Institute of North America, Technical Paper No. 29, Calgary: Arctic Institute of North America, 1985.

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