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Christopher C. Joyner

Ethel R. Theis

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THE UNITED STATES AND ANTARCTICA: RETHINKING THE INTERPLAY OF LAW AND INTERESTS*

*Christopher C. Joyner†
& Ethel R. Theis‡*

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† Senior Research Fellow, Marine Policy Center, Woods Hole Oceanographic Institution (1986-87); Associate Professor of Political Science and Member of the School of Public and International Affairs, The George Washington University; Ph.D., University of Virginia (1977); M.A. (1973), M.A. (1972), B.A. (1970), Florida State University.

‡ Ph.D. Candidate, Department of Political Science, The George Washington University; M.A., The George Washington University (1983); B.A., Maryland State University (1979).

INTRODUCTION

One significant outcome of the Third United Nations Conference on the Law of the Sea (UNCLOS III) was the United States' decision not to sign the Convention when it was opened for signature in Jamaica in December 1982.¹ The United States' rejection of the Convention signaled an unfortunate end to over a decade of American efforts to produce a comprehensive and universally acceptable ocean regime.² The decision, however, sensitized American policy-makers to the importance of formulating policies on international regimes that promote U.S. interests. Presently, the United States is faced with another situation where it must examine U.S. interests in terms of competing international legal regimes. Antarctica stirs up many of the same fundamental issues presented by the Conference on the Law of the Sea. The question turns on how much the United States has learned from its previous experience.

The ongoing debate concerning the future of the Antarctic regime offers the United States a unique opportunity to formulate a coherent and comprehensive policy based on calculations of the costs and benefits of two primary available options: (1) preserving the current regime, or (2) restructuring the Antarctic legal status on the basis of the "common heritage" concept.³

Although some commentators have mistakenly observed that the Antarctic Treaty lasts only for thirty years, the Treaty has no termination date.⁴ Rather, it provides that after thirty years in force (i.e., in

1. United Nations Convention on the Law of the Sea, *opened for signature* Dec. 10, 1982, U.N. Doc. A/CONF.62/122 (1982), *reprinted in* 21 I.L.M. 1261 (1982). The U.S. rejected the Convention because of several objections to its provisions on deep seabed mining. For an insightful series of articles illuminating the controversy, see *LAW OF THE SEA: U.S. POLICY DILEMMA* (B. Oxman, D. Caron & C. Buderer eds. 1983) [hereinafter *LAW OF THE SEA*]; see also *SENSUS AND CONFRONTATION: THE UNITED STATES AND THE LAW OF THE SEA CONVENTION* (J. Van Dyke ed. 1982).

2. As used here, "regime" is defined as a set of explicit or implicit principles, norms, rules, and decision-making procedures, around which actors' expectations converge in a given area of international relations. See Krasner, *Structural Causes and Regime Consequences*, 36 INT'L ORG. 185, 186 (1982).

3. A common heritage arrangement is essentially the exercise of common sovereignty through institutions allowing all states a share in decisions. Such an arrangement is only one of a number of alternatives that have been proposed to restructure Antarctica's legal order. Other possibilities include: (1) a condominium wherein sovereignty is exercised jointly by a few states, and (2) a consortium, i.e., the exercise of limited jurisdiction by a few states. This paper focuses on the common heritage approach because it is the alternative favored by a Third World majority with considerable influence in decision-making in the United Nations' General Assembly. For discussions of these and other proposed solutions, see, e.g., B. MITCHELL, *FROZEN STAKES: THE FUTURE OF ANTARCTIC MINERALS* 81-125 (1983); Note, *Thaw in International Law? Rights in Antarctica Under the Law of Common Spaces*, 87 YALE L.J. 804 (1978).

4. F.M. Auburn has rightly pointed out that the sole method of termination in the Treaty is linked with the amendment process. Art. XII, para. 2(a) allows for revision by a

1991), any Consultative Party may request that a meeting "be held as soon as practicable to review the operations of the Treaty."⁵ It seems unlikely that the Treaty will be reviewed in 1991. None of the Consultative Parties have expressed a pressing reason to request such a review, since the cooperation that has taken place under the Antarctic Treaty system has been mutually beneficial to all of them and the international community as a whole.⁶ Nonetheless, it is reasonable to expect that, in the future, international pressure will mount to redefine Antarctica's legal status within the context of universalist terms.

This Article contends that the best way to protect U.S. interests in Antarctica is to ensure that the 1959 Treaty framework is sustained. In order to respond to the proponents of the "common heritage" concept, the United States must articulate a coherent position in advance. Recognition of this need for a prompt response compels a cogent reevaluation of U.S. Antarctic policy.

The major purpose of this study is to evaluate whether the U.S. national interest—defined in terms of its legal, political, economic, and security dimensions—is best served by preserving the current Antarctic regime. An additional concern is to sharpen the parameters of the debate on the relevance of international law as a factor in world politics.⁷ This analysis should place discussion of the importance of the present Antarctic regime for advancing U.S. interests in a fuller perspective by underscoring the confluence of law and politics in foreign policy-making.

To accomplish these ends, this study is organized into four parts. Part I introduces Antarctic issues that allow for a more thorough understanding of the themes elaborated on in the following sections. It provides an overview of the environmental characteristics of Antarctica and discusses the origins and nature of the Antarctic regime. Part II examines the legal, political, economic, and security (i.e., strategic) values of the current regime for promoting U.S. interests. Part III begins by surveying major elements of the "common heritage" concept, the universalist notion embodied in several Third World proposals for restructuring the politico-legal basis of Antarctica. It then assesses whether restructuring the Antarctic regime according to

review conference in 1991 if any of the Contracting Parties requests it. See F. AUBURN, *ANTARCTIC LAW AND POLITICS* 143 (1982).

5. Antarctic Treaty, Dec. 1, 1959, art. XII, para. 2(a), 12 U.S.T. 794, T.I.A.S. No. 4780, 402 U.N.T.S. 71 [hereinafter Antarctic Treaty].

6. See Heap, *Cooperation in the Antarctic: A Quarter of a Century's Experience*, in *ANTARCTIC RESOURCES POLICY* 107 (F. Vicuna ed. 1983) [hereinafter *ANTARCTIC RESOURCES POLICY*].

7. For arguments on the relationship between international law and international politics, see generally F. BOYLE, *WORLD POLITICS AND INTERNATIONAL LAW* (1985); L. HENKIN, *HOW NATIONS BEHAVE: LAW AND FOREIGN POLICY* (2d ed. 1979).

“common heritage” principles substantially enhances, or militates against the U.S. national interest, as well as the stability of the international legal order.

II. BACKGROUND

In order to assess the utility of the current Antarctic regime for promoting U.S. interests, it is necessary to understand the geopolitics of Antarctica.⁸

A. GENERAL FEATURES OF THE ANTARCTIC ENVIRONMENT

Appreciating the harshness and hostility of the continent's environment is essential to understanding the complexities of managing Antarctica. The geography and climate of the region influence Antarctica's legal, political, economic, and security dimensions. Accordingly, these considerations should enter into any debate on the type of regime governing the region and any assessment of the successful exploitation of the continent's natural resources.

Antarctica is cold, dry, mountainous, windy, largely inaccessible and rarely visited.⁹ The South Pole marks the proximate center of this icy expanse of 5,500,000 square miles. Antarctica is roughly the combined size of the United States and Mexico and holds more than ninety percent of the world's supply of ice and snow.¹⁰ Ninety-eight percent of Antarctica is covered with a permanent mantle of ice.¹¹ In addition to this massive land area, vast floating ice sheets have formed along more than half of the coast, and an enormous band of pack ice ranging

8. The word Antarctica owes its origin to Greek mythology. For it was the ancient Greeks who named the constellation that rotates above the North Pole *arktos* (the bear). *Arktos*, now modified to arctic, came to mean the area surrounding the North Pole. Antarctic is a shortening of anti-Arctic: i.e. those regions which lie 'anti' or directly opposite the constellation of *arktos*.

I. CAMERON, *ANTARCTICA: THE LAST CONTINENT* 21 (1974).

9. The continent is roughly divided into East Antarctica and West Antarctica by the Transantarctic Mountains. "Whereas Eastern Antarctica consists largely of a high ice-covered plateau, Western Antarctica consists of an archipelago of mountainous islands covered and bonded together by ice." Bernhardt, *Sovereignty in Antarctica*, 5 CAL. W. INT'L L.J. 297, 298 (1975). David Sudgen finds the terms East and West to refer to Antarctica "very misleading in view of the fact that the continent is centered on the South Pole." See D. SUDGEN, *ARCTIC AND ANTARCTIC* 29 n.1 (1982).

10. I. CAMERON, *supra* note 8, at 12.

11. Peter Bernhardt described it well when he wrote,

Antarctic ice occurs in three forms: pack ice, ice shelves, and ice sheets. Pack ice . . . is formed by the freezing of sea water. . . . [It] is normally brittle and [is often] broken up by the sea. . . . Shelf ice, . . . generally the same as pack ice, forms on the surface of the sea, . . . normally in bays or other sheltered areas. [It often breaks away into the sea in large pieces.] Ice sheets . . . are generally considered land ice, and are formed . . . by the freezing of fresh water or the compacting of snow. . . .

Bernhardt, *supra* note 9, at 302.

from 300 to 1,000 miles wide surrounds the continent in winter. During the summer months—from October to February—the warming effects of the sun and the ocean waves break the pack ice apart. Even in summer, the ice and snow covering the land melt only occasionally, and the temperature rarely rises above freezing.¹²

Antarctica is a continent of contradictions. It presents the paradox of having the world's greatest store of fresh water in a climate that is one of the driest on earth. The South Pole receives less than two inches of precipitation a year.¹³ The ice sheet is the central and most striking feature of Antarctica. The total volume of ice in the continent is estimated at a staggering thirty million cubic kilometers.¹⁴ This ice lies in an average thickness of 1,600 meters and constitutes seventy percent of the world's fresh water reserves.¹⁵

Antarctica is also the windiest place on earth.¹⁶ Winds sometimes gust up to 200 miles per hour, whipping up the surface into blizzard-like storms.¹⁷ The combination of cold and wind is particularly dangerous to humans because it disrupts the layer of warmth trapped by skin pores and hair.¹⁸ These extreme conditions—the sub-zero temperatures, the wind, and the winter darkness—have made it

12. On July 23, 1983, the Soviet base at Vostok recorded a temperature of -128.6° F., more than 40° below that recorded anywhere else. See THE WORLD ALMANAC BOOK OF FACTS 1985, at 760 (H. Lane ed. 1984). The previous low was -127° F. See B. BREWSTER, ANTARCTICA: WILDERNESS AT RISK 4 (1982). The point was graphically made by Ian Cameron:

In this sort of cold, . . . if you drop a steel bar it is likely to shatter like glass, tin disintegrates into loose granules, mercury freezes into a solid metal, and if you haul up a fish through a hole in the ice within five seconds it is frozen so solid it has to be cut with a saw.

I. CAMERON, *supra* note 8, at 14. Although the sun never sets during the five summer months, only the areas along the coast experience a warming effect. The rest of the continent remains locked in glacial ice.

13. Antarctica is a desert; rainfall is virtually nonexistent. Precipitation is in the form of snowfall and has a water equivalent of under six inches a year. See Gow, *The Ice Sheet*, in ANTARCTICA 225 (T. Hatherton ed. 1965).

14. B. BREWSTER, *supra* note 12, at 1.

15. *Id.*

16. Winds are a particularly important aspect of the polar surface because they can greatly intensify the chilling effect of low temperatures. See I. CAMERON, *supra* note 8.

All who have set foot in Antarctica agree that its predominant and most malevolent characteristic is wind. When we wintered in Adlie Land the wind on 5th July blew non-stop for eight hours at an *average* speed of 107 mph In these conditions it was possible to stand for no more than a few seconds, and then only by leaning forward at an angle of 45°.

Id. at 14.

17. B. BREWSTER, *supra* note 12, at 5. The total absence of trees and the generally smooth ice surfaces over the sea and on land permit winds to blow unretarded by friction at ground level. *Id.*

18. As Ian Cameron has observed, "each knot of wind has an effect on life commensurate to a drop of one degree in temperature. Thus whereas a man can live quite happily at -20 [C] in the still air, when the temperature is -20 and the wind 60 knots he will very quickly die." I. CAMERON, *supra* note 8, at 14.

impossible for all but the hardiest of life to exist. No trees grow in Antarctica; only algae, lichens, mosses, and microscopic fungi survive.

In great contrast to the poverty of Antarctica's continental life, the circumpolar Southern Ocean supports a very rich marine ecosystem. Fin fish, which are intensively harvested by the Soviet Union, East Germany, and Poland, are plentiful, as are squid, crabs, and lobsters. Particularly important is krill, a shrimp-like crustacean which has a high protein content—roughly equal to that found in beef, lobster, or shrimp.¹⁹ Krill dominates the food chain in the Antarctic ecosystem.²⁰

Climate imposes significant constraints on human activities in Antarctica, particularly the economic development of its natural resources. These constraints take many forms, but are primarily associated with low temperatures, impeded visibility, and climatic seasonal contrast. The low temperatures create special problems, the resolution of which is costly both in terms of materials and human expertise.²¹ Offshore pack ice also affects the relative accessibility of the coastline to shipping. "This pack ice is never still, . . . expanding and contracting according to temperature and season; so that whereas in summer its size may be no greater than that of the British Isles, in winter it covers an area larger than that of the United States and Canada combined."²² Antarctic pack ice is mixed with icebergs, and the differential movement of the two ice types can create unpredictable disturbances. Winter access is difficult everywhere except in the sub-Antarctic islands.²³ Another deterrent to the development of Antarctica is the Southern Ocean, which has the worst sailing conditions on earth.²⁴

B. THE ANTARCTIC REGIME: ORIGINS AND NATURE

Treaties are widely recognized as a primary source of interna-

19. B. BREWSTER, *supra* note 12, at 68-71; *see also* D. SUDGEN, *supra* note 9, at 394.

20. *See* El-Sayed & McWhinnie, *Antarctic Krill: Protein of the Last Frontier*, 22 OCEANUS 13 (1979).

21. D. SUDGEN, *supra* note 9, at 59.

22. I. CAMERON, *supra* note 8, at 17.

23. *Id.* at 15.

24. *Id.* The "Southern Ocean" refers to the marine area south of the natural boundary formed by the Antarctic Convergence. The Convergence is a zone of water demarcating the transition between the warm, high salinity oceans to the north and the colder, lower salinity waters of the south. *See* de Blij, *A Regional Geography of Antarctica and the Southern Ocean*, 33 U. MIAMI L. REV. 299, 300 (1978). "Even on relatively calm days, there is a 15-foot swell in the Southern Ocean; and in days of storm great rollers surge endlessly . . . three-quarters of a mile from crest to crest, 50 feet from trough to summit." I. CAMERON, *supra* note 8, at 15.

tional law.²⁵ Some commentators contend that because governments must agree to treaty terms before they go into effect, treaties furnish the only source of international law to which countries are truly bound. Treaties, therefore, have a substantial political content. They merge a state's perceived national interest with considerations of international law, thereby revealing the symbiotic relationship between law and politics. Thus, in evaluating the Antarctic system from the perspective of U.S. national interests, it is necessary to first examine certain salient features of the legal regime that governs Antarctica.

The legal basis of the Antarctic regime is embodied in the 1959 Antarctic Treaty,²⁶ augmented by the following treaties, recommendations, and agreements: "Recommendations" of the Consultative Parties' meetings under Article XII of the Treaty,²⁷ the Agreed Measures for the Conservation of Antarctic Flora and Fauna,²⁸ the Convention for the Conservation of Antarctic Seals,²⁹ and the Convention on the Conservation of Antarctic Marine Living Resources.³⁰

The Antarctic Treaty itself originated in the work of the International Geophysical Year (IGY)³¹ during 1957-59. The premise for the IGY was an attempt to coordinate geophysical activities on a world scale in order to conduct research on meteorology, the upper atmosphere, cosmic rays, and other scientific areas. The project involved twelve nations operating sixty-six stations in Antarctica.³² While the original intent of the IGY was to foster scientific cooperation in Antarctica, the Treaty prevented the continent from becoming a site of future international conflict.³³

25. For useful discussions of treaties as a source of international law, see generally J. BRIERLY, *THE LAW OF NATIONS* 57-59 (6th ed. 1963); I. BROWNLIE, *PRINCIPLES OF PUBLIC INTERNATIONAL LAW* 12-15 (3d ed. 1979).

26. Antarctic Treaty, *supra* note 5.

27. *See id.* art. XII.

28. Agreed Measures for the Conservation of Antarctic Flora and Fauna, June 2-13, 1964, 17 U.S.T. 996, T.I.A.S. No. 6058, *modified in* 24 U.S.T. 1802, T.I.A.S. No. 7692 (1973).

29. Convention for the Conservation of Antarctic Seals, June 1, 1972, 29 U.S.T. 441, T.I.A.S. No. 8826.

30. Convention on the Conservation of Antarctic Marine Living Resources, May 20, 1980, 80 Stat. 271, T.I.A.S. No. 10240.

31. The I.G.Y. was a cooperative, nongovernmental research project carried on by various national members of the International Council of Scientific Unions. For relevant discussions of the I.G.Y., see H. BULLIS, *THE POLITICAL LEGACY OF THE INTERNATIONAL GEOPHYSICAL YEAR* (1973); W. SULLIVAN, *ASSAULT ON THE UNKNOWN* (1961).

32. Of the sixty-six stations in the Antarctic during the I.G.Y., forty-six were actually on the continent. *See* Hanessian, *National Activities and Interests in Antarctica*, 2 POLAR AREAS SERIES No. 7, at 27-28 (1962).

33. The Treaty is predicated upon three major principles: demilitarization, freedom of scientific research, and international cooperation. For excellent analyses of the Treaty, see F. AUBURN, *supra* note 4, at 84-204; C. BEEBY, *THE ANTARCTIC TREATY* (1972); Hanesian, *The Antarctic Treaty 1959*, 9 INT'L & COMP. L.Q. 436 (1960); Hayton, *The Antarctic Settlement of 1959*, 54 AM. J. INT'L L. 349 (1960); Taubenfeld, *A Treaty for Antarctica*, 531

The Antarctic Treaty applies to the area south of 60 S. latitude, and was negotiated by twelve states. Seven of these states—Argentina, Australia, Chile, France, New Zealand, Norway, and the United Kingdom—had claimed parts of Antarctica between 1908 and 1940.³⁴ These seven claimants plus Belgium, Japan, South Africa, the Soviet Union, and the United States signed the Treaty in Washington in 1959. The Treaty entered into force in 1961. Since then several other states have acceded to the Treaty: Bulgaria, Cuba, Czechoslovakia, Denmark, Finland, German Democratic Republic, Hungary, Italy, the Netherlands, Papua New Guinea, People's Republic of China, Peru, Romania, South Korea, Spain, Sweden, and Uruguay.³⁵

The Treaty has been criticized because it failed to establish a large bureaucracy. There is neither a secretariat nor a permanent international headquarters.³⁶ The United States was a leading opponent of creating a secretariat. At an early Consultative Parties meeting, Australia recommended establishing a secretariat at Canberra.³⁷ Privately, the United States opposed the recommendation for two reasons. First, the United States noted that a secretariat would include Soviet representation. Second, the United States wanted to avoid U.N. interference in Antarctic affairs. Australia's recommendation was defeated without the United States having to speak against it, largely because of the eloquent speech of the French delegate on the evils of bureaucracy.³⁸ While the Treaty did not create what probably would have become an unwieldy bureaucracy, it did establish a perma-

INT'L CONCILIATION 245 (1961). Among the cardinal provisions of the Treaty are Article I, which restricts the use of the Treaty area to peaceful purposes; Article III, which obligates members to exchange scientific information and personnel; Article IV, which freezes the legal status of claims to territorial sovereignty; Article V, which prohibits nuclear explosions and disposal of radioactive waste material; Article VII, which grants each Consultative Party the right to carry out inspections of all installations and equipment, ships and aircraft in all parts of Antarctica; and Article XI, which sets a unanimity requirement for Treaty amendments.

34. For discussion of the claims issue, see F. AUBURN, *supra* note 4, at 48-83, 104-10; Bilder, *The Present Legal and Political Situation in Antarctica*, in *THE NEW NATIONALISM AND THE USE OF COMMON SPACES* 167-205 (J. Charney ed. 1982) [hereinafter *NEW NATIONALISM*]; Joyner, *The Exclusive Economic Zone and Antarctica*, 21 *VA. J. INT'L L.* 691, 704-11 (1981).

35. U.S. DEP'T OF STATE, *TREATIES IN FORCE: A LIST OF TREATIES AND OTHER INTERNATIONAL AGREEMENTS OF THE UNITED STATES IN FORCE ON JANUARY 1, 1986*, at 211 (1986); see also Kimball, *Report on Antarctica: United Nations Focus: 1984 and Recent Developments Within the Antarctic Treaty System*, Report prepared for the International Institute for Environment and Development (Nov. 1, 1984).

36. While the Treaty does not establish a secretariat or other permanent machinery, Article IX provides for continuing consultations on matters of common interest pertaining to the region. Article IX specified that the first consultative meeting be held in Canberra within two months after the Treaty came into force. See P. QUIGG, *A POLE APART: THE EMERGING ISSUE OF ANTARCTICA* 158 (1983).

37. *Id.*

38. *Id.*

ment mechanism for consultation among the parties and for implementation of Treaty principles and objectives.³⁹

Antarctic policy is made by the original signatories designated as the Permanent Antarctic Treaty Consultative Parties (ATCPs) and those acceding states that have demonstrated serious "interest in Antarctica by conducting substantial activity there" as accepted by the Consultative Parties.⁴⁰ Since 1961, only six states have gained "Consultative Status": Poland in 1977, the Federal Republic of Germany in 1981, Brazil and India in 1983, and the Peoples Republic of China and Uruguay in 1985. Representatives of these states convene every two years in regular Consultative Meetings.⁴¹

The major instrument through which the Consultative Parties have sought to develop the Treaty-based Antarctic regime are the "Recommendations." These Recommendations are intended to further the Treaty's objectives and principles and must be adopted unanimously. They become binding once ratified by all Consultative Parties. As of 1985, some 138 Recommendations had been adopted by the ATCPs, concerning various subjects including environmental issues, meteorology, agenda setting, logistics and telecommunications.⁴²

III. THE ANTARCTIC REGIME AND THE U.S. NATIONAL INTEREST

Although the Antarctic Treaty has successfully governed the cold continent for the last twenty-six years, it has come under unprecedented attack in the last decade or so.⁴³ Many states outside the Treaty—primarily countries in the Third World—seek a new international arrangement which will accommodate their demands on how Antarctica will be managed and for whose benefit its resources will be exploited. Overwhelmingly, the proposals for the political, legal, and

39. Article IX, para. 1, of the Treaty provides that the contracting parties meet regularly to develop measures in furtherance of the principles and objectives of the Treaty. While the Treaty "does not say with what frequency meetings should be held . . . two years has become the norm, excluding occasional special sessions." *Id.* at 150.

40. Antarctic Treaty, *supra* note 5, art. IX.

41. For a fuller discussion of the Consultative Meetings, see Hanevold, *The Antarctic Consultative Meetings: Form and Procedure*, 6 COOPERATION & CONFLICT 183 (1985).

42. See Joyner, *Polar Politics in the 1980s: Some Preliminary Thoughts on Polar Contrasts and Geopolitical Considerations*, 11 INT'L STUD. NOTES 3 (1985). It is interesting to note that over half of these Recommendations deal with the protection of the Antarctic environment and ecosystem. See Boczek, *The Protection of the Antarctic Ecosystem: A Study in International Environmental Law*, 13 OCEAN DEV. & INT'L L.J. 366 (1983).

43. See, e.g., Mitchell, *Cracks in the Ice*, 5:4 WILSON Q. 69-84 (1981); Moneta, *Antarctica, Latin America, and the International System in the 1980s: Toward a New Antarctic Order?*, 23 J. INTERAMERICAN STUD. & WORLD AFF. 29 (1981); Peterson, *Antarctica: The Last Great Land Rush on Earth*, 34 INT'L ORG. 379 (1980).

organizational future of Antarctica call for a universalist regime. Such a regime presumably would be based on shared decision-making by the entire United Nations membership, nearly 160 states. Notwithstanding these proposals, U.S. interests clearly are best served within the current Antarctic Treaty framework.

The importance of the Antarctic Treaty framework for promoting U.S. interests is easily understood if one considers that the initiative to find an international solution to the politico-legal status of Antarctica originated with the United States as early as 1948.⁴⁴ Although nothing came of this proposal, U.S. efforts were rewarded in 1958 when the other IGY-participating nations agreed to establish an accord aimed at preserving the continent for scientific research. The U.S. has always been an influential actor in the Antarctic system, and it played a major role in shaping the evolution of the current regime. The importance of Antarctica to the United States remains undiminished. It is essential, therefore, that the United States respond to pressure to transform the Antarctic Treaty with a coherent U.S. Antarctic policy. Hence, a decisive consideration for the United States hinges on its capacity to anticipate new pressures to alter the present regime and its willingness to re-examine Antarctic policy. In determining the proper policy, the United States must be guided by an awareness that short- and long-term interests are best promoted within the Treaty framework.

The national interest of a nation-state is the sum of various legal, political, security, strategic, and economic components.⁴⁵ The interrelationship of all these dimensions in foreign policy-making becomes particularly evident in examining Antarctic affairs where law, politics, security, economics, and science converge and become inextricably

44. At that time, the United States proposed that a small group of countries with interest in Antarctica join together in a condominium. For a discussion of the proposal, see Hanesian, *supra* note 32, at 436-44.

45. The concept of "national interest" has long been a subject of debate in international relations. The ambiguity of the concept, the lack of agreement as to its precise definition, and the absence of empirical indicators have moved some critics to discount its utility in the analysis of international behavior. Writing about the concept in the 1930s, the American scholar Charles Beard concluded that the concept "national interest" was "simply a telling formula which politicians . . . employed whenever they wished to accomplish any particular designs in the field of foreign affairs." C. BEARD, *THE IDEA OF NATIONAL INTEREST: AN ANALYTICAL STUDY IN AMERICAN FOREIGN POLICY* vvi (1966).

Critical academic judgments, however, have not inhibited the use of the term when referring to the motivating force behind foreign policy decisions. Indeed, despite its ambiguity, the concept of "national interest" remains of central importance to any attempt to describe, explain, predict or prescribe international behavior. In fact, most students and practitioners of foreign policy agree that the primary justification for state action is the national interest, however vaguely that term is defined. For interesting analyses of the concept, see generally J. FRANKEL, *NATIONAL INTEREST* (1970); Kratochwil, *On the Notion of "Interest" in International Relations*, 36 *INT'L ORG.* 1 (1982).

linked to the nature of Antarctic cooperation, as well as the role of Antarctica in the national policies of the Treaty members and the international system. This study now turns to consider each dimension within the context of the current Antarctic regime in order to evaluate how each has fared under the Treaty regime.

A. THE LEGAL AND POLITICAL DIMENSIONS OF U.S. INTERESTS

The Antarctic Treaty has held a prominent place in international political history during the last twenty-five years. It stands as a cohesive and dynamic force for social interaction among states with divergent world views and interests. The Treaty has also achieved a political balance that has served U.S. national interests well, not only by supporting and enhancing activities in the region, but also by replacing the struggle over territorial claims with an atmosphere of peaceful cooperation and orderly change. For example, the signatory states pragmatically handled the politically sensitive issue of claims to territorial sovereignty in Antarctica.⁴⁶ All the parties agreed to limits on the right to press their claims to territory, a most unusual act for sovereign states. In doing so, the Treaty sidesteps the critical issue of sovereignty without compromising either the claims or the policies of nonrecognition. It expressly preserves the positions of the claimants and the non-claimant states, thereby serving the interests of both by prohibiting new claims or expansion of existing ones.⁴⁷

46. The acquisition of territorial sovereignty in Antarctica has long presented a complex dilemma to international lawyers. In general, claims to Antarctic territory have been predicated upon three doctrines: (1) discovery; (2) the sector theory; and (3) effective occupation. Argentina and Chile have also used geographical proximity (contiguity), geological affinity (i.e., the Gondwanaland thesis), and succession to prior Spanish title (*uti posseditis*) as substantiation of their claims. For relevant analyses, see F. AUBURN, *supra* note 4, at 5-47; Bernhardt, *supra* note 9, at 297; Carl, *Claims to Sovereignty-Antarctica*, 28 CALIF. L. REV. 386 (1955); Daniel, *Conflict of Sovereignities in the Antarctic*, 1949 Y.B. WORLD AFF. 241; Jain, *Antarctica: Geopolitics and International Law*, 17 INDIAN Y.B. INT'L AFF. 249 (1974); Wilson, *National Interests and Claims in the Antarctic*, 17 ARCTIC 15 (1964).

47. In full, Article IV provides that:

- (1). Nothing contained in the present Treaty shall be interpreted as:
 - (a). a renunciation by any Contracting Party of previously asserted rights of or claims to territorial sovereignty in Antarctica;
 - (b). a renunciation or diminution by any Contracting Party of any basis of claim to territorial sovereignty in Antarctica which it may have whether as a result of its activities or those of its nationals in Antarctica, or otherwise;
 - (c). prejudicing the position of any Contracting Party as regards its recognition or non-recognition of any other State's right or claim or basis of claim to territorial sovereignty in Antarctica.
- (2) No acts or activities taking place while the present treaty is in force shall constitute a basis for asserting, supporting or denying a claim, to territorial sovereignty in Antarctica, or create any rights of sovereignty in Antarctica. No new claim, or enlargement of an existing claim, to territorial sovereignty in Antarctica shall be asserted while the present Treaty is in force.

Antarctic Treaty, *supra* note 5, art. IV.

The U.S. policy regarding its own sovereign status in Antarctica has been consistent in that it has never asserted any official claim to Antarctica. The fact that the United States has not staked a formal claim to Antarctic territory has often been explained in terms of a failure of policy.⁴⁸ Most of the available evidence supports the argument that the United States did not define its "territorial rights" in Antarctica because of its inability to formulate a claims policy.⁴⁹ The record of U.S. policy toward Antarctica arguably demonstrates a general lack of cohesiveness, revealing "a department's strong tendency to react to the initiatives of government rather than to take an overall view."⁵⁰

A more convincing argument, however, is that the United States refrained from asserting a formal claim in order to obtain agreement to the Treaty. Indeed, the U.S. decision not to claim sovereignty in the area has not been detrimental to U.S. interests. On the contrary, it was a pragmatic decision that has worked to the long-term advantage of the United States. American officials were well aware that pressing the claims issue might doom the Treaty. U.S. pragmatism thus became instrumental in obtaining ratification of the Treaty.

The obvious location for an American claim, Marie Byrd Land, was long considered unpromising because of its impenetrable terrain, and any broader claims presented the risk of antagonizing friendly governments. Moreover, if the United States were to exercise a territorial claim it would have required reciprocal recognition of claims asserted by other countries. Such a situation would "jeopardize free access [to the entire continent], and possibly stimulate further claims by others, including the Soviet Union."⁵¹ In addition, the United States would have had a difficult time reconciling the recognition of other claims, particularly since the claims of three states friendly to the United States—Argentina, Chile and the United Kingdom—overlapped in substantial part.⁵²

48. According to F.M. Auburn, "The reason for not making a claim before 1959 was not the political difficulty but rather the inability of the United States to formulate a claims policy." F. AUBURN, *supra* note 4, at 74. Auburn further argues that defining U.S. rights in Antarctica has been difficult because the government itself does not know what they are. *Id.* at 74-75; see also *The Antarctic Treaty Hearings, Senate Comm. on Foreign Relations*, 86th Cong., 2d Sess. 25 (1960) (testimony of John R. Pillion, U.S. Rep. for the State of N.Y.) ("[the State Department's] policy has been one of having 'no meaningful policy' with respect to the Antarctic").

49. F. AUBURN, *supra* note 4, at 74.

50. *Id.* at 77.

51. *Id.* at 74.

52. The Argentinean, British, and Chilean claims all overlap in an area including the Antarctic peninsula. The overlapping claims have produced some geographical controversies: The Antarctic peninsula is also known as Graham Land (U.K.), Tierra O'Higgins (Chile), and Tierra San Martin (Argentina). For a discussion of the positions adopted by Chile and Argentina see O. PINOCHET, *LA ANTARTICA CHILENA* (4th ed. 1976); G. PUIG,

The decision to forego making a claim to Antarctic territory proved advantageous for the United States. By declining to restrict its activities to a single sector, the United States maintained an interest in the entire continent.⁵³ As a result, the decision provided the United States with the freedom to consider the relative political, strategic, and economic advantages of several sites before locating its bases in Antarctica. For example, the United States has chosen sites of political importance for at least two of its bases. The U.S. decision to situate the Amundsen-Scott base at the South Pole turned on the political advantages of having a base at a point where all the sector claims converge.⁵⁴ Similarly, one reason the United States chose the Weddell Sea coast for the site of its Ellsworth base "was to forestall the construction of a Russian base there."⁵⁵ Economic considerations have also influenced the U.S. positioning of its bases in Antarctica. Perhaps the major reason the United States established a base on the Ross Sea coast was the oil potential of the sea's continental shelves.⁵⁶

The willingness of states to set aside the issue of conflicting territorial claims for the Treaty's duration has been an extraordinary demonstration of political cooperation. Moreover, such cooperation has significantly expanded the substance and scope of the politico-legal regime initially contemplated in the Treaty's text. For example, the cooperation produced by the Treaty has greatly facilitated U.S. scientific research and other activities in the South Polar region.⁵⁷ The Treaty system provides a maximum of scientific freedom in that it offers the United States unlimited opportunity to conduct scientific research activities both independently and jointly with other Treaty members. This freedom of movement has permitted the United States to engage in scientific expeditions and related activities regardless of territorial claims and without fear of intruding into sectors claimed by other states.

The United States and the Soviet Union have been the most active nations in Antarctica, both in supporting the largest stations and expe-

LA ANTARTIDA ARGENTINA ANTE EL DERECHO INTERNACIONAL (1960). For a critique of the three positions, see Hayton, *Chile, Argentina, and Great Britain in the Antarctic*, ANUARIO JURIDICO INTERAMERICANO 119 (1955-57).

53. See Mitchell & Kimball, *Conflict Over the Cold Continent*, 35 FOREIGN POL'Y 124, 135 (1979).

54. D. SUDGEN, *supra* note 9, at 408.

55. *Id.*

56. See *id.* at 392-93. "The sedimentary basins underlying the Ross, Weddell and Bellingshausen Seas are thick, and exploratory drilling has already found natural gas traces in all these areas." *Id.* Official reports indicate figures for recoverable oil of the same magnitude as those in Alaska. *Id.*

57. See, e.g., Butler, *Owning Antarctica: Cooperation and Jurisdiction at the South Pole*, 31 J. INT'L AFF. 35 (1977); Khlestov and Golitsyn, *The Antarctic: Arena of Peaceful Cooperation*, 8 INT'L AFF. 61 (1978).

ditions and in conducting the widest range of activities and programs.⁵⁸ The United States' wide-ranging scientific research program is designed to combine pure science objectives with the more practical concern of resource development. The U.S. Antarctic research program involves nearly 300 scientists and conducts research in the earth, ocean and atmospheric sciences, as well as in biology and medicine.⁵⁹ The overall program emphasizes a balanced approach for obtaining a comprehensive understanding of Antarctica and its role in the global ocean and atmospheric environment.⁶⁰

The Treaty fosters an extremely favorable attitude toward international cooperation that has permitted the United States to benefit greatly from the research efforts of other nations. Under the Antarctic Treaty, parties are required to exchange information "to the greatest extent feasible and practicable" regarding plans for their scientific programs in Antarctica.⁶¹ Furthermore, the exchange of scientific personnel between expeditions and stations is an additional obligation of the parties.⁶² Cooperation in these areas has transcended ideological and political differences. For example, the United States has participated actively in this cooperation by exchanging visits with the expeditions and stations of other Antarctic Treaty countries. During the long Antarctic winters, the United States traditionally exchanges sci-

58. P. QUIGG, *supra* note 36, at 60-63. The United States maintains four stations in four different sectors of Antarctica. McMurdo, the main U.S. base, houses the largest multi-purpose research and logistic center in Antarctica. It has a radio station and sophisticated biological and geophysical laboratories. B. BREWSTER, *supra* note 12, at 34.

59. P. QUIGG, *supra* note 36, at 60.

60. The results of American research in the region have been critical to management of local pollution and natural resource problems. For example, American research into the functioning of the Antarctic marine ecosystem (i.e., the relationships and interactions of living organisms in the area with each other and with their physical environment) has been significant from both a scientific and policy perspective. The Antarctic marine ecosystem is uniquely dependent upon a single species, *Euphausia superba*, a shrimp-like crustacean commonly known as krill. Krill is the major food supply of most of the marine and bird population of the continent. These findings prompted U.S. concern—shared by other Treaty members—that the commercial exploitation of krill should be regulated in order to prevent a possible collapse in the delicate Antarctic marine food chain. During the negotiation of the Convention on the Conservation of Antarctic Marine Living Resources, *supra* note 30, the Consultative Parties agreed with the United States that the Convention should adopt an "ecosystem approach," which emphasizes the conservation of living resources. See Barnes, *The Emerging Antarctic Living Resources Convention*, 73 PROC. AM. SOC'Y INT'L L. 272, 272-75 (1979).

In addition, research activity in Antarctica holds further importance for the United States because of its military applications. Such research provides American strategists with valuable information on the impact of extreme weather on men and machinery. Psychological information regarding the performance of difficult tasks under harsh conditions has also been compiled. F. AUBURN, *supra* note 4, at 95. Barney Brewster has pointed out that even the U.S. space program has benefited from Antarctic research. The primitive soils of the region were used to develop tests for the Martian soils carried out by the Mariner probes. B. BREWSTER, *supra* note 12, at 411.

61. Antarctic Treaty, *supra* note 5, art. III, para. 1.

62. *Id.* art. III, para. (b).

entific personnel with other signatories. In addition, the United States has been involved in many international cooperative projects which have linked it with virtually all the countries actively engaged in scientific research in Antarctica.⁶³

The cooperation in scientific research that exists among Treaty members is further evidenced in their handling of sensitive political issues related to the management of Antarctica's natural resources. The recognized value of cooperation and the shared perception that it is in the common interest to preserve the Treaty framework has enabled the ATCPs to resolve problems through peaceful bargaining and compromise. These arrangements are particularly striking when one considers the lack of such cooperation in the Arctic.⁶⁴ Antarctica is even more unusual in that the East and West exchange not only scientists, but also the results of scientific investigations.

International prestige and influence constitute another aspect of the political dimension within the context of cooperation in scientific research. Polar programs are carried out by governments whose purpose is to further their countries' self-interests. Scientific advances play an important role in enhancing a country's influence and prestige within the international community. When the Antarctic Treaty came into effect, the United States was a leader in research on polar affairs. Scientific cooperation within the Treaty framework has allowed the United States to not only maintain that role, but also to enhance it.

The Treaty's flexibility, buttressed by its respect for opposing positions among the participants, has allowed the Treaty to evolve and respond to changing conditions. For example, the problems associated with the management of natural resources has been eased by the Treaty's adaptability and dynamism. The malleability of the Antarctic Treaty has advanced the U.S. goal of having effective legal instruments to regulate the development of Antarctica and its resources. The responsiveness of the Treaty has allowed the Consultative Parties to resolve problems as they have arisen.⁶⁵

63. The plan of the twenty-third Soviet Antarctic expedition (1977-1979), for example, included an American geophysicist at the Vostok Station and an American glaciologist at the Morny Observatory. In turn, a Soviet scientist wintered on the American Amundsen-Scott Station and took part in the study of geomagnetic processes. Khlestov & Golitsyn, *supra* note 57, at 62.

64. See Boczek, *The Arctic Ocean: An International Legal Profile*, 11 INT'L STUD. NOTES 10, 14 (1985) ("[E]ven modest regional cooperation in the Arctic in such fields as the environment and safety navigation would encounter serious difficulties . . ."); Shusterich, *International Jurisdictional Issues in the Arctic Ocean*, in UNITED STATES ARCTIC INTERESTS 240 (W. Westermeyer & K. Shusterich eds. 1984) (discussing the unsettled jurisdictional issues in the Arctic region).

65. In this regard, three agreements developed specifically by the Treaty members to protect and conserve the continent's living resources deserve special mention. The first of these, the 1964 arrangement entitled Agreed Measures for the Conservation of Antarctic

B. THE SECURITY DIMENSION OF U.S. INTERESTS

United States security and strategic interests in Antarctica are less urgent because of the area's geographic location.⁶⁶ The geopolitical position of the continent does not impact upon U.S. national security to the degree that it does more proximate claimant nations. To Argentina, Chile, New Zealand, and Australia, the Antarctic is not viewed as a distant frigid ice mass, but a nearby continent on which hostile military activity could easily threaten their national security.⁶⁷ Nevertheless, the United States retains some security interests in Antarctica. These interests have shifted from an almost exclusive sensitivity to the possibility of a hostile naval presence in the Southern Ocean (particularly following German activity in the Antarctic seas during World War II) to a broader conception of security that extends into the economic realm.

Military neutralization of Antarctica was a prominent concern of American policy-makers during the 1959 Treaty negotiations.⁶⁸ In this context, the Antarctic Treaty resolves the singularly important problem of insulating the region from armed conflict by providing that the continent will not be used for military purposes.⁶⁹ It specifically prohibits "any measures of a military nature, such as the establishment of military bases and fortifications, the carrying out of military maneuvers, as well as the testing of any type of weapons."⁷⁰ Under Article V, atomic plants are allowed as sources of energy, but nuclear test explosions are forbidden throughout the continent, as is the dis-

Flora and Fauna, *supra* note 28, addressed the urgent need to conserve living resources within the Treaty area. A similar effort, the Convention for the Conservation of Antarctic Seals, *supra* note 29, came in response to the realization that living resources in the high seas needed management and protection. Its purpose is to safeguard species of seals in Antarctica by establishing catch limits and otherwise regulating the hunting of certain species. *Id.* art. 2. An even more striking example of cooperation is the Convention on the Conservation of Antarctic Marine Living Resources, *supra* note 30, which has been referred to as a landmark in international law because of the strictness of its ecosystem conservation standards.

The success of the Antarctic Treaty System stands as a viable organizational model for other projects which require international cooperation. One commentator stated that the Antarctic Treaty "began one of the most rapidly growing branches of international law which concerns the peaceful and orderly regulation of the environment." Sollie, *The Political Experiment in Antarctica*, in FROZEN FUTURE: A PROPHECIC REPORT FROM ANTARCTICA 46, 50 (R. Lewis & P. Smith eds. 1973) [hereinafter FROZEN FUTURE]. Indeed, the Antarctic Treaty has been recognized as the prototype of the Nuclear Test Ban Treaty, the NonProliferation Treaty, and the Outer Space Treaty. *Id.*

66. *But see supra* note 60.

67. See Joyner, *Security Issues and the Law of the Sea*, 15 OCEAN DEV. & INT'L L. J. 171, 181-82 (1985).

68. See generally Almond, *Demilitarization and Arms Control: Antarctica*, 17 CASE W. RES. J. INT'L L. 229 (1985).

69. Antarctic Treaty, *supra* note 5, art. I, para. 1.

70. *Id.*

posal of nuclear wastes in the area.⁷¹

The Treaty also provides the signatories with extensive inspection rights. The primary purpose of inspections is to verify compliance with the nonmilitarization provisions, to monitor the ban on nuclear explosions, and to check for the dumping of radioactive materials.⁷² The inspection provisions also serve to check on the Parties' compliance with regulations, such as those designed to protect the Antarctic environment. Linking the nonmilitarization of Antarctica with inspection opportunities was a U.S. proposal. In doing so, the United States prevailed in its insistence on an unlimited right of unilateral inspection.⁷³ It is interesting to note that the Soviet Union submitted to these inspection rights, particularly since it never before had agreed to any on-site inspection.⁷⁴ Only five nations have exercised the right of inspection: New Zealand, Australia, the United Kingdom, Argentina, and the United States. The United States has exercised the right most often (in 1964, 1967, 1971, 1975, 1980, and 1982-83). Significantly, no violations of the Treaty provisions have been reported.⁷⁵

The inspection process has proven useful in ways unforeseen by the Treaty's drafters. In addition to the benefits inherent in the inspection process, one U.S. official stated that an inspection team "with adequate technical and linguistic expertise serves a representational function, provides a special opportunity for the exchange of information, and, by hauling mail and people from station to station, helps to replace suspicion with amity."⁷⁶

Clearly, the advent of missile-launching nuclear submarines has decreased the strategic military value of Antarctica. Moreover, local climatic conditions make it unlikely that a nation would use the continent as a permanent base for stationing military units. Nevertheless, it should not be assumed that U.S. interests would not be seriously jeopardized were Antarctica to lose its demilitarized status under some new legal regime. Under such conditions, Antarctica could become an area of military competition between the United States and the Soviet Union, with each state striving to establish a military foothold in the region.

There are, however, two major constraints to any military competition in Antarctica. Admittedly, the Soviet Union presently pursues

71. *Id.* art. V.

72. *Id.* art. VII.

73. P. QUIGG, *supra* note 36, at 147.

74. Boczek, *The Soviet Union and the Antarctic Regime*, 78 AM. J. INT'L L. 834, 855 (1984). This shift in Soviet policy is understandable in light of the observations of a Soviet jurist that in the Antarctic environment verification by inspection cannot compromise national security. *Id.*

75. *Id.*; see also F. AUBURN, *supra* note 4, at 110.

76. P. QUIGG, *supra* note 36, at 148.

one of the most intensive research and resource-oriented programs in Antarctica, and it retains the largest number of stations on the continent. Even so, and first, the financial burden of maintaining a military presence in Antarctica would be substantial and would be compounded by the severe logistic complications, climatic problems, and movement restrictions inherent in Antarctic-based programs. Second, and very importantly, the Treaty-based demilitarized status of the continent allows the United States to investigate any suspected Soviet misconduct within an atmosphere that requires all Consultative Parties to act for the common good and to show flexibility in their dealings with each other.

C. THE ECONOMIC DIMENSION OF U.S. INTERESTS

The economic dimension of U.S. interests in Antarctica presents an unusual set of problems and opportunities. This paradox stems from the unavoidable intricacies of resolving the natural resource issues in a manner that accommodates the interests of the Treaty members, as well as the interest of nations outside the Treaty and the growing demands for a new Antarctic regime.

Widespread international economic interest in Antarctica is relatively recent. It was not until the early 1970s, when the land-based and marine resources of Antarctica received publicity, that the economic potential of the continent became generally recognized.⁷⁷ Many claims regarding the vast wealth of Antarctica's living and non-living resources have been greatly exaggerated.⁷⁸ Current geological information about the continent is incomplete, particularly regarding the existence of mineral resources.⁷⁹ In general, accounts of the economic potential of Antarctic resources also de-emphasize or ignore the problems associated with resource development in a land mass that is only two percent ice-free and surrounded by the ice-covered Southern Ocean.⁸⁰ Nonetheless, considerable evidence exists to suggest that Antarctica is rich in natural resources, both in the surrounding ocean and on the continent itself.

In the economic realm, three primary U.S. interests in Antarctica are compatible with the current regime. First are those interests that

77. See, e.g., McWethy, *Heating Up: Global Race for Antarctica's Riches*, U.S. NEWS & WORLD REP., Feb. 28, 1977, at 62, 65.

78. See, e.g., Spivak, *Frozen Assets*, WALL ST. J., Feb. 21, 1974, at 1, col. 1; Shapley, *Antarctica: World Hunger for Oil Spurs Security Council Review*, 184 SCI. 776, 777 (1974).

79. See Zumberge, *Potential Mineral Resource Availability and Possible Environmental Problems in Antarctica*, in NEW NATIONALISM, *supra* note 34, at 115, 124.

80. At its maximum extent in September, the sea ice pack covers nearly 19 million square kilometers; by March, the summer melting and other environmental conditions reduce the area of the ice pack to about 2.6 million square kilometers. See C.I.A. POLAR REGIONS ATLAS 38 (1978).

can be cast primarily in economic terms, such as the profitability of mineral development in the South Polar region. Second are those interests that have a strategic dimension. For example, the security of supply of some important Antarctic minerals is questionable. Third are interests of economic efficiency. The United States needs to ensure that the Antarctic continent's resources are not over-exploited and that the environment is soundly protected. The recent focus of economic interests has concentrated on mineral resources, and almost exclusively on oil and gas. This focus is largely a result of the small U.S. commercial interest in harvesting and processing Antarctic marine living resources relative to its strong interest in the potential exploitation of Antarctic hydrocarbons.

1. *Marine Life*

Although the Antarctic land mass is practically lifeless, the seas surrounding the continent teem with biological bounty. Relatively few species of marine life are found, but their numbers are very significant. The biologically productive Antarctic waters contain an abundance of whales, seals, fish, and crustaceans such as krill, lobsters, and crabs.⁸¹ Fifty species of birds, including penguins and albatross, feed on marine organisms.⁸² These birds nest and breed on the coast, but they rely exclusively on the sea for their sustenance, consuming nearly as much krill as do whales.⁸³ As such, these birds are considered part of the marine rather than the continental ecosystem.

Of all Antarctic marine life, krill are particularly important because they represent the greatest natural resource in Antarctic waters. Krill—a Norwegian term meaning “whale food”—are shrimp-like crustaceans. Krill have recently become the focus of considerable attention due to their unusually large numbers and their high protein content.⁸⁴ Containing approximately the same amount of protein by net weight as lobster, beef, or shrimp, krill are an abundant

81. See generally KNOX, *The Living Resources of the Southern Ocean: A Scientific Overview*, in ANTARCTIC RESOURCES POLICY, *supra* note 6, at 21, 42 (The harvesting of whales has diminished steadily since the 1930s. In addition, the exploitation of the seal and penguin populations has ceased. Although fish have been recognized as a significant resource and exploited in certain limited areas, krill, squid, and some species of large algae are considered the primary resources for the future); J. BARNES, LET'S SAVE ANTARCTICA 16-20 (1983).

82. The total population of Antarctic birds is estimated at 200 million, with penguins being the largest single specie. See Boczek, *supra* note 42, at 353.

83. *Id.*

84. See UNITED STATES DEP'T OF STATE, FINAL ENVIRONMENTAL IMPACT STATEMENT ON THE NEGOTIATION OF AN INTERNATIONAL REGIME FOR ANTARCTIC MINERAL RESOURCES 5-10 (1982); El-Sayed & McWhinnie, *supra* note 20, at 13.

food source. Krill is highly nutritious and easily harvested.⁸⁵ Although the size of the Southern Ocean's krill population is yet undetermined, the fact that potential estimates of the annual sustainable yield exceed the record total world fish catch (approximately seventy million tons in 1977) holds significant economic interest for several countries.⁸⁶

The marketing of krill has proved somewhat problematic in terms of consumer acceptance, save in Japan and the Soviet Union. In Japan, krill serves as a ready substitute for a similar variety of native shrimp.⁸⁷ The Soviet catch has been by far the largest. Of the total krill harvest of 386,000 metric tons reported by the U.N. Food and Agriculture Organization for the 1978-79 season, some 326,000 tons were accounted for by the Soviet Union.⁸⁸ Krill meal for animal feed has also been manufactured on a commercial scale by the Soviets and the Japanese for several years. Poland, East Germany, Taiwan, Chile, Norway, West Germany, and South Africa also account for notable shares of the annual catch.⁸⁹

Seals have long been hunted in Antarctic waters. Fur seals are just now recovering from over-exploitation, and their harvesting, along with other species of seals, is regulated by the Convention for the Conservation of Antarctic Seals, which became effective in March 1978.⁹⁰

The number of whales, another important Antarctic resource, was so diminished by 1932 that the International Whaling Commission was established in that year to regulate whaling through voluntary annual quotas.⁹¹ While these quotas have been widely disregarded by the Soviet Union and Japan, all other nations have abandoned Antarctic whaling.⁹²

85. Krill drift in large concentrations, or swarms, usually at depths from 18 to 180 meters. El-Sayed & McWhinnie, *supra* note 20, at 14. Estimates of total stocks range from 1.24 million to 6 billion metric tons. *Id.* at 17.

86. Krill has been touted as the answer to the world's food shortage and the protein deficiency. Yet only the major fishing nations such as Japan and the Soviet Union have found krill economically and politically appealing. Such countries harvest krill not only because of its high protein content, but also because overfishing and marine pollution have depleted commercial fishing stocks. See B. BREWSTER, *supra* note 12, at 69; F. AUBURN, *supra* note 4, at 205.

87. Mitchell & Kimball, *supra* note 53, at 127.

88. B. BREWSTER, *supra* note 12, at 70. The Soviet Union began experimenting with krill in 1961, and krill paste has been used in a variety of processed Soviet foods. The Soviets have actually marketed a krill pate, a krill-cheese spread, a shrimp butter, and krill snacks and sausages. See Peterson, *supra* note 43, at 384.

89. P. QUIGG, *supra* note 36, at 84.

90. Convention for the Conservation of Antarctic Seals, *supra* note 29.

91. Prior to 1904, the Antarctic whale population is estimated to have reached 975,000, but they are now believed to number no more than 338,000. See Zumberge, *supra* note 79, at 122.

92. *Id.*

2. Mineral Resources

While Antarctic mineral wealth remains largely a matter of conjecture and inference, circumstantial evidence suggesting its potential is fairly impressive. The notion that Antarctica is richly endowed in mineral resources derives from two major sources: (1) discovery of mineral occurrences in the ice-free areas of Antarctica,⁹³ and (2) the generally accepted scientific hypotheses about the geological history of the continent. The theory of continental drift postulates that the Antarctic continent once existed in close juxtaposition with South America, South Africa, India, and Australia, forming an old supercontinent called Gondwanaland.⁹⁴ The abundance of minerals found in those parts of the world suggests that Antarctica holds comparable mineral deposits.⁹⁵

Geologists have reported occurrences of minerals such as lead, zinc, tin, silver, gold, copper, nickel, and chromium, but no commercially valuable mineral deposits have been discovered to date.⁹⁶ Iron and coal have also been found. The coal is of low quality occurring in thin seams, the inaccessibility of which renders exploitation highly unlikely.⁹⁷ Furthermore, because its content is high in ash and low in volatiles, the coal deposits are uneconomical for use in cooking and gasification.⁹⁸ Antarctic iron ore discoveries have been estimated to be sufficient enough "to satisfy world demand for the next 200 years, but vast resources are already known in more accessible areas of Australia, [the Soviet Union], and Canada;" consequently, it is unlikely that nations will exploit Antarctic mineral deposits in the foreseeable future.⁹⁹ Exploitation is even more doubtful because Antarctic mineral deposits are of inferior quality to those found in other parts of the

93. *Id.* The U.S. Geological Survey has pointed out that the lack of exposed rock in the continent necessarily makes surveys of mineral resources incomplete. *Mineral Resources of Antarctica*, UNITED STATES GEOGRAPHICAL SURVEY CIRCULAR 705 (N. Wright & P. Williams eds. 1974).

94. See Craddock, *Antarctic Geology and Gondwanaland*, in *FROZEN FUTURE*, *supra* note 65, at 101; Zumbege, *Mineral Resources and Geopolitics in Antarctica*, 67 *AM. SCIENTIST* 71 (Jan.-Feb. 1979).

95. *Mineral Resources of Antarctica*, *supra* note 93, at 18-27.

96. An "occurrence" refers to the presence of a mineral, often in a very small quantity. A "deposit" is a more substantial quantity of a mineral that may warrant commercial exploitation. A "reserve" is a deposit of considerable size that is known to be commercially exploitable today or in the future. B. MITCHELL, *supra* note 3, at 17; see also Rowley, Williams & Pride, *Mineral Occurrences of Antarctica*, in *PETROLEUM AND MINERAL RESOURCES OF ANTARCTICA* (J. Behrendt ed. 1983) (Geological Survey Circular 909).

97. D. SUDGEN, *supra* note 9, at 122.

98. B. BREWSTER, *supra* note 12, at 102.

99. D. SUDGEN, *supra* note 9, at 392.

world.¹⁰⁰

Of even greater international interest is the possibility that Antarctica's continental shelves may contain substantial oil and gas deposits. Although drilling presently is regarded as uneconomical, petroleum is generally considered to be commercially exploitable from Antarctica within the next few decades, provided that huge deposits are discovered. Contradictory statements have circulated regarding the potential size of the deposits. One estimate placed recoverable reserves at about 45 billion barrels of oil and 115 billion cubic feet of natural gas.¹⁰¹ This estimate was attributed to the U.S. Geological Survey, which insisted it had been misrepresented since it considered only a third of the deposits to be recoverable.¹⁰² Other investigators have concluded that, absent further drilling, insufficient reliable data is available to justify any meaningful estimates of potential oil and gas reserves.¹⁰³

D. THE ANTARCTIC REGIME AND U.S. NATIONAL INTERESTS: AN INTEGRATED ANALYSIS

The exploration and exploitation of Antarctic natural resources should not be studied in wholly economic terms; rather, consideration of the political and legal environments must also be included. This requires an examination of the Antarctic Treaty and other Treaty-based arrangements affecting the development and preservation of Antarctic natural resources.

The Antarctic Treaty did not provide specific guidelines for regulating the development of Antarctic natural resources. The topic is mentioned only once, in Article IX, where reference is made to the powers and functions of the Consultative Parties as regards the protection of living resources.¹⁰⁴ In all probability, the reason for the Treaty's scant coverage of Antarctic resources is not because of an oversight by the Treaty parties, but rather because economic factors did not figure prominently during the Treaty's negotiation in 1959.¹⁰⁵ The Treaty evolved as a pragmatic response to the issue of resource development, dictated by the relatively undeveloped state of the appropriate technologies at the time, as well as insufficient information

100. For example, the iron content of Antarctic ore has been evaluated at only about 35-38 percent, while Australian ore contains some 62-65 percent. B. BREWSTER, *supra* note 12, at 102.

101. See W. WESTERMAYER, *THE POLITICS OF MINERAL RESOURCE DEVELOPMENT IN ANTARCTICA: ALTERNATIVE REGIMES FOR THE FUTURE* 37 (1984).

102. P. QUIGG, *supra* note 36, at 94.

103. See B. MITCHELL & J. TINKER, *ANTARCTICA AND ITS RESOURCES* 7-8 (1980).

104. Antarctic Treaty, *supra* note 5, art. IX.

105. See Oxman, *The Antarctic Regime: An Introduction*, 33 U. MIAMI L. REV. 291 (1978).

on the environmental aspects of exploitation.¹⁰⁶

The Treaty's silence on the question of resource development has proven fortunate in that it has allowed the Consultative Parties to develop a politico-legal system capable of defining and resolving Antarctic resource issues as they arise. Since the Treaty came into effect, the Consultative Parties have developed specific criteria for the proper management of Antarctica's natural resources, such that a continuous food supply for humans and animals will be assured, and that the continental environment will remain protected.¹⁰⁷ In fact, the conservation and protection of the Antarctic ecosystem has been the proclaimed *sine qua non* for negotiating Treaty-based agreements dealing with natural resource issues.¹⁰⁸

In the mid-1960s, as prospects for the economic development of the region improved, the Treaty parties first began to consider resource issues. Milestones among the resource initiatives undertaken were the Convention for the Conservation of Antarctic Seals,¹⁰⁹ the Agreed Measures for the Conservation of Antarctic Flora and Fauna,¹¹⁰ and the Convention on the Conservation of Antarctic Marine Living Resources.¹¹¹

The Agreed Measures for the Conservation of Antarctic Flora and Fauna is the first, and so far only, mandatory Recommendation produced by the Consultative Parties.¹¹² The Agreed Measures have been hailed as one of the most comprehensive and successful international instruments for wildlife conservation on land ever negotiated.¹¹³

The Convention for the Conservation of Antarctic Seals has further promoted the evolution of the Treaty system and expanded the domain of international law in Antarctica. The Convention estab-

106. See Scully, *Alternatives for Cooperation and Institutionalization in Antarctica: Outlook for the 1990s*, in ANTARCTIC RESOURCES POLICY, *supra* note 6, at 283.

107. See Joyner, *The Southern Ocean and Marine Pollution: Problems and Prospects*, 17 CASE W. RES. J. INT'L L. 165, 185-91 (1985) [hereinafter Joyner, *The Southern Ocean*].

108. See Joyner, *Protection of the Antarctic Environment: Rethinking the Problems and Prospects*, 19 CORNELL INT'L L.J. 259 (1986); Joyner, *The Southern Ocean*, *supra* note 107; Joyner, *Oceanic Pollution and the Southern Ocean: Rethinking the International Legal Implications for Antarctica*, 24 NAT. RESOURCES J. 1 (1984).

109. Convention for the Conservation of Antarctic Seals, *supra* note 29.

110. Agreed Measures for the Conservation of Antarctic Flora and Fauna, *supra* note 28.

111. Convention on the Conservation of Antarctic Marine Living Resources, *supra* note 30.

112. One author has astutely noted that none of these milestones could have been achieved were it not for the system created by the general Recommendations which were approved by the Consultative Parties and which governed all Treaty-based legal agreements. See Heap, *supra* note 6, at 107.

113. The Agreed Measures commit Treaty members to regulate those activities in Antarctica which may result in harmful impact upon native fauna and flora and provides for, *inter alia*, the designation of specially protected areas and specially protected species. See F. AUBURN, *supra* note 4, at 127.

lishes specific quotas for the harvesting of seals in the Antarctic Treaty area. Unlike the Agreed Measures, the Convention stands as a separate legal instrument from the Treaty. It is, however, closely tied to the Treaty and the Antarctic Treaty system.¹¹⁴

The Convention on the Conservation of Antarctic Marine Living Resources culminated a process of rulemaking for the protection of Antarctic natural resources developed by the Consultative Parties within the Treaty framework. The Convention supervises national involvement in the Treaty area by regulating the exploitation of all Antarctic marine life. The Convention is a rational and timely compromise, harmonizing competing national interests. Moreover, it has been touted as a useful model for the forthcoming Mineral Resource Convention and as a continuing symbol of the cooperation that characterizes Antarctic affairs.¹¹⁵

Treaty parties have not been overly eager to exploit Antarctic mineral resources, largely because insufficient data exists regarding their quantity, quality, and concentration. In addition, the environmental aspect of economic development activities in the South Polar region is unclear. Successful exploration for petroleum in the Arctic, as well as technological developments for oil exploitation in the deeper parts of the ocean, have also heightened interest in Antarctica's hydrocarbon potential. Given these developments, the Consultative Parties recently reviewed the issue of mineral development, both in Consultative Party and special mineral meetings.¹¹⁶ Political, environmental, and other related factors affecting the exploitation of mineral resources in the South Polar region are beyond the scope of the present study. The Consultative Parties must resolve several major issues before they can adopt a satisfactory minerals regime. Many of the issues concerning minerals are contentious and could mar the cooperative atmosphere that marked the first twenty years of the Antarctic Treaty. Prospects for continued cooperation appear encouraging, however, at least in the short term. Each Treaty member still feels that it can achieve the greatest benefits through cooperation and group decision-making.¹¹⁷

114. For details on the Seals Convention, see F. AUBURN, *supra* note 4, at 209; Boczek, *supra* note 42, at 372.

115. For an interesting discussion of the general provisions of the Convention on the Conservation of Antarctic Marine Living Resources, see Frank, *The Convention on the Conservation of Antarctic Marine Living Resources*, 13 OCEAN DEV. & INT'L L.J. 291 (1983).

116. See Joyner, *The Evolving Minerals Regime for Antarctica*, in THE ANTARCTIC LEGAL REGIME (C. Joyner & S. Chopra eds. 1987) (forthcoming); see also Charney, *Future Strategies for an Antarctic Mineral Resource Regime—Can the Environment Be Protected?*, in NEW NATIONALISM, *supra* note 34, at 206.

117. See Vicua, *Antarctic Resources Policy: An Introduction*, in ANTARCTIC RESOURCES POLICY, *supra* note 6, at 10; Joyner, *supra* note 116.

Resources have always figured prominently in the hierarchy of U.S. Antarctic interests. This interest intensified after World War II, when the notion that Antarctica might contain commercially exploitable resources became more widespread. In 1953 Admiral Richard Byrd stated that Antarctica was a vast, untouched reservoir of natural resources. He also posited in reference to Antarctica that "[a]s we recklessly squander our natural resources in this country, . . . we will come to need new resources. It is imperative that they do not fall into the hands of a potential enemy."¹¹⁸ Changing world economic conditions continue to spur the U.S. interest in Antarctic natural resources.

The Antarctic Treaty parties have successfully demonstrated responsible management of the continent's living resources by negotiating resource management agreements that give due consideration to national interests, as well as to those of the international community. The Treaty framework has established a pattern for advancing U.S. interests. This pattern of cooperation and conciliation continues to present the United States with a lucrative opportunity for negotiating a regime to govern the possible future development of minerals that will at the same time protect U.S. interests.

International political and economic interaction involves disparate degrees of conflict and cooperation. Wealth, a goal pursued by all nation-states, often leads to conflict over access to and control of resources, markets, and the means of production. Such conflicts have taken on an added dimension as national economies have become increasingly vulnerable to external influences. The United States has been able to manage the multifarious impacts of interdependence more effectively than most other countries because of its firm economic base. But U.S. economic power has experienced a relative decline since the 1970s. Neither policy-makers nor economists have found long-term solutions to persistent inflation, sluggish economic growth, and high unemployment rates. Particularly under such conditions, it would be extremely unwise for the United States to discard those principles that underlie U.S. economic interests in Antarctica: free access to the development of the region's resources; the establishment of non-preferential, uniform rules for access; and the prudentially managed exploitation of the area's mineral resources. Current U.S. policy for the Antarctic has been formulated with these principles in mind.

Despite the great expense and difficulty of drilling for hydrocarbons in the South Polar region, reasonable expectations exist that suitable exploitation technology could be available in the foreseeable future. As one commentator put it, "[w]hether and when Antarctic mineral will be exploited is more likely to be a function of economics

118. Quoted in B. BREWSTER, *supra* note 12, at 106.

than of technological development or environmental protection since it is the high cost of the last two factors rather than their lack of development that presents an obstacle."¹¹⁹ The Bellagio Report confirmed the assessment that

technology may already be adequate for exploratory drilling for oil in many parts of the Antarctic seas. The pace of technological advance is such that within five years even more areas will be accessible if the incentive is there to overcome the much higher logistic costs caused by the substantially greater distance from support facilities in Antarctica compared with the Arctic.¹²⁰

Even taking into account the high costs and developmental and technical problems, it would be economically and politically short-sighted for the United States to assume that drilling for oil might not become commercially attractive in the future. In an era of declining oil and gas production, rising world demand, and instability in some of the main oil-producing countries, Antarctic hydrocarbons could become significant to American economic, political, and strategic well-being.

The United States is perhaps the only country in the world that possesses the necessary technological and financial capacity to develop and exploit Antarctica's hydrocarbons. United States companies probably already have the technological and financial capability to locate and exploit hydrocarbon deposits off the Antarctic coast. Certainly, U.S. oil companies have already developed a high degree of expertise for operating in ice-infested waters and for drilling in the deeper parts of the ocean.¹²¹ Some major oil companies have already expressed interest in Antarctica. For example, in 1970 Texaco initiated inquiries on how to obtain a license for exploration rights in the Antarctic region.¹²² Arco and Exxon have also expressed interest in prospecting in the region.¹²³ Expanding the operations of U.S. oil companies in Antarctica presumably could generate benefits for the American economy, albeit at an unknown environmental cost.¹²⁴ Such an expansion could generate activity in engineering and ship-

119. Dugger, *Exploiting Antarctic Mineral Resources—Technology, Economics, and the Environment*, 33 U. MIAMI L. REV. 331, 339 (1978).

120. HOLDGATE & TINKER, *OIL AND OTHER MINERALS IN THE ANTARCTIC* 19 (Mar. 5-8, 1979) (report of a workshop sponsored by the Rockefeller Foundation at Bellagio, Italy).

121. Experience in ice conditions has been growing in the Arctic. In 1979, for example, the *Discoverer Seven Seas* drilled a well in 1846 meters of iceberg-infested waters off the coast of Newfoundland. See B. MITCHELL, *supra* note 3, at 10. For an in-depth look at the problem of oil exploration in the Arctic, see generally *ARCTIC TECHNOLOGY AND POLICY* (I. Dyer & C. Chrysostomidis eds. 1984); U.S. NATIONAL PETROLEUM COUNCIL, *U.S. ARCTIC OIL & GAS* (1981).

122. The U.S. government told Texaco that there were no procedures for the grant or acquisition of such exclusive rights in Antarctica. Because of this, the U.S. government could not grant Texaco a license and advised it against applying to any other country. See B. MITCHELL, *supra* note 3, at 15.

123. See W. WESTERMEYER, *supra* note 101, at 42.

124. See Joyner, *The Southern Ocean*, *supra* note 107, at 173-77.

building, increase the U.S. gross national product, provide increased employment opportunities, and might very well produce technical advances in underseas commercial activities, spinning off beneficial economic and strategic side effects. Other indirect economic benefits might also arise from leases of U.S. technology and joint investment projects with other governments or international organizations.

Another salient U.S. interest in Antarctic hydrocarbons is linked to strategic considerations, such as the security of supply.¹²⁵ No industrialized nation can tolerate a sustained interruption in its supply of industrial raw materials. Serious shortages of petroleum and chromium could create an economic and political crisis in many nations. Securing potential future access to Antarctic oil remains attractive to the United States because it imports a large percentage of its consumed hydrocarbons.¹²⁶ The Arab oil embargo of 1973-74 demonstrated to U.S. policy-makers that disruption of access to foreign sources of oil not only causes economic hardship, but also represents a security and political threat. The embargo made the United States particularly sensitive to the political and economic power of foreign oil suppliers, and underscored the need to achieve a degree of self-sufficiency in raw materials. Continuous supplies of oil and other raw materials at stable prices are essential to the health of the U.S. economy.

In the last decade, changing political circumstances have combined with constraints on the free play of international market forces to restrict access to raw materials. Threats of embargoes, boycotts, and political instability in many producer countries have undermined the reliability of supply sources. Under these conditions, it becomes crucial that the United States minimize its vulnerability to such unstable conditions. Simply put, U.S. policy-makers cannot afford to disregard the possibility that eventually Antarctic oil deposits may be developed. Accordingly, the United States should keep open its oil production options in the South Polar region as a potential means of reducing dependence on foreign sources.

United States access to potential development of Antarctica's hydrocarbons is also too valuable to ignore within the context of American political competition with the Soviet Union. Independent

125. See Joyner, *supra* note 67, at 179-81. While the need for assured supplies of raw materials is most dramatically seen with oil, it is hardly limited to that commodity. The United States also imports more than half of its supplies of bauxite, cobalt, chromium, columbium, manganese, mica, platinum, natural rubber, and industrial diamonds. See Russett, *Security and the Resources Scramble: Will 1984 Be Like 1914?*, 58 INT'L AFF. 42, 44 (1982).

126. In 1981, the United States imported 30 percent of its oil requirements. See Schuler, *Coping with Oil Dependence*, 6 WASH. Q. 53 (1983).

commentators, as well as Soviet officials, have stated that the Soviets have had a long-standing interest in exploiting Antarctic resources.¹²⁷ Despite this avowed interest, the Soviet Union has consistently opposed on environmental grounds any exploitation of Antarctic minerals. This position seems dubious, given that environmental scruples have not prevented Soviet mining and oil production in the Arctic. The real motivation appears to be that the Soviets, with adequate petroleum reserves of their own, have no political interest in facilitating U.S. access to any Antarctic oil. Moreover, the Soviets wish to protect their interests in the harvesting of krill, the survival of which can be endangered by an oil spill in the region.¹²⁸ Nevertheless, the Soviet Union has built two stations in the Ross Sea area—a region earmarked by promising oil and gas deposits. Some analysts have interpreted this action as a move by the Soviets to undercut not only the legal, but also the economic interests of the United States.¹²⁹ By working within the Treaty system to legally secure access to Antarctic oil supplies, the United States would both thwart Soviet counter-aims and reduce its dependence on oil imports.

The Treaty framework also promotes economic efficiency. The Treaty ensures the rational utilization of Antarctica's natural resources and protects the continent's environment. The U.S. protectionist stance toward the Antarctic region is clearly seen in the emphasis which American foreign-policy makers have placed on regulating the use and management of the region's natural resources. United States concern with economic efficiency is not merely a product of altruism. Rather, the need to protect the Antarctic environment is based on the strong political motive of self-interest. This concern has assumed increased importance because the United States can no longer simply equate national security with military power and the use of force. For example, U.S. national security can also be undermined by deterioration of biological systems, progressive depletion of fossil fuel reserves, and economic stresses brought about by resource scarcities.

Clearly, it is in the national interest of the United States to ensure that no permanent, irreversible damage is done to the fragile Antarctic ecosystem. These concerns motivated the United States in 1978 to advocate regulation of the harvesting of krill, because overfishing could collapse the entire South Polar ecosystem.¹³⁰ Environmental protection of Antarctica holds further importance for U.S. interests

127. See Boczek, *supra* note 74, at 851.

128. *Id.*

129. See F. AUBURN, *supra* note 4, at 80.

130. See Joyner, *The Southern Ocean*, *supra* note 107, at 169.

because the region's pristine environment is useful as a standard of comparison in monitoring global pollution levels. The circumpolar region is also critical for maintaining the stability of the earth's oceans and atmosphere. Antarctica acts as a giant heat sink, absorbing heat which flows towards it from equatorial regions and radiating it back into space.¹³¹

These environmental priorities dictate that U.S. policy strike a balance between commercial resource development and ecosystemic preservation in the Antarctic. Given the pristine quality of the environment and the delicate nature of the ecosystem, no mineral or hydrocarbon exploitation should proceed until adequate and reliable safeguards are in place. At the same time, however, if resource development is available to some states, then the United States must secure access to resources with development potential. In this way, the United States will be capable of promoting environmental safeguards, as well as sharing in any resource benefits.

IV. "COMMON HERITAGE" AND THE U.S. NATIONAL INTEREST

A. KEY ELEMENTS OF THE COMMON HERITAGE CONCEPT

During the 1960s, there emerged a new movement aimed at a general reordering of the international economic system on terms both more concessional and more beneficial to the industrialization needs of developing countries. The "common heritage of mankind" (CHM) concept was inspired and based on this new movement.¹³²

The CHM notion embodies a new approach to economic development of natural resources beyond the boundaries of national jurisdiction. Although the term was first jurisprudentially applied to space,¹³³ its conceptual evolution was articulated more clearly in deliberations affecting the law of the sea. In 1967 Arvid Pardo, the Maltese delegate to the United Nations, proposed that seabed resources beyond the limits of national jurisdiction should be declared the "common heritage of mankind," and therefore not subject to appropriation by any nation for its own use.¹³⁴ Pardo exhorted the United Nations to create a new

131. See K. SUTTER, *WORLD LAW AND THE LAST WILDERNESS* 60 (1980).

132. See Larschan & Brennan, *The Common Heritage of Mankind Principle in International Law*, 21 COLUM. J. TRANSNAT'L L. 305 (1983); Wolfrum, *The Principle of the Common Heritage of Mankind*, 43 ZEITSCHRIFT FÜR AUSLÄNDISCHES ÖFFENTLICHES RECHT UND VÖLKERRECHT 312 (1983).

133. The Outer Space Treaty of 1967 defines outer space as the "Common Province of Mankind," and astronauts as the "envoys of mankind." The treaty was the first to use such language. Yet, the language lacks precise legal content. See A. DOLMAN, *RESOURCES, REGIMES AND WORLD ORDER* 254-55 (1981).

134. See *id.* at 225.

international agency to oversee jurisdiction and to serve as a trustee for all countries. Such an authority would regulate seabed activities and supervise exploitation of seabed resources—with the net financial gains used primarily for the industrialization needs of developing countries.¹³⁵ Three years after Ambassador Pardo's proposal, the General Assembly formally adopted the CHM notion.¹³⁶ Ambassador Pardo's proposal has had profound ramifications for areas of the planet over which no nation has demonstrated a generally recognized exclusive jurisdiction. This initial suggestion, together with the Declaration of Principles, prompted subsequent initiatives that eventually led to a radically new juridical regime for the oceans. In addition, it fostered an attempt to extend the application of the CHM concept to other areas, both on earth and in space.

The application of the CHM notion to Antarctica is currently the subject of serious debate.¹³⁷ Recently, the debate has been sharpened by new information on the extent of Antarctica's resources, concern that current supplies of raw materials are being depleted, and the improvement of resource extraction technology for polar regions. These developments, and the increased politicization of the Third World majority in the United Nations (the "Group of 77"), have exerted pressure on the United Nations to place the issue of Antarctica on its agenda. The late Shirley Amerasinghe, the Sri Lankan representative to the United Nations and President of the Third United Nations Convention on the Law of the Sea, expressed these demands well. In 1975 he raised the issue of Antarctica in the General Assembly, observing that the region is an area where international economic cooperation could foster the equitable sharing of the world's resources.¹³⁸ The debate became more strident in 1976 when another Sri Lankan, Ambassador Christopher Pinto, noted that the international community has an "undoubted and continuing interest" in the Southern Ocean and called for an Antarctic regime "of rational management and utilization to secure optimum benefits for mankind as a whole and, in particular, for the developing countries."¹³⁹ Other Third World leaders have voiced similar sentiments with increasing frequency. Some have stated that the "Antarctic Treaty should be

135. See Van Dyke & Yuen, "Common Heritage" v. "Freedom of the High Seas": Which Governs the Seabed?, 19 SAN DIEGO L. REV. 493, 522 n.132 (1982).

136. G.A. Res. 2749, 25 U.N. GAOR Supp. (No. 28), U.N. Doc. A/8028 (1970).

137. See Joyner, *Antarctica and the Common Heritage of Mankind*, 79 PROC. AM. SOC'Y INT'L L. (forthcoming).

138. P. QUIGG, *supra* note 36, at 167-68.

139. See *id.* at 169.

understood as an eminently provisional arrangement,"¹⁴⁰ and that it should be considered "with a view to widening international cooperation in the area."¹⁴¹

Those who advocate the application of the CHM approach to Antarctica have acquired a new sense of urgency in pressing their proposal. This urgency derives from the knowledge that, since 1981, the Antarctic Treaty Consultative Parties ("ATCPs") have been engaged in negotiations for the development of a minerals regime in Antarctica.¹⁴² Thus, states outside the Treaty framework have become suspicious that the ATCPs are planning to unilaterally expropriate the mineral wealth of Antarctica. The Law of the Sea Treaty, concluded and opened for signature in December 1982,¹⁴³ has also inspired efforts to extend CHM to Antarctica. Completion of the Treaty, which applied the CHM concept to the exploitation of minerals on the ocean floor,¹⁴⁴ arguably lends legitimacy to the demands of Third World leaders with regard to Antarctica.

Application of the CHM notion to Antarctica generally connotes a regime in which the South Polar region is held in common by all peoples, who are entitled to share in revenues derived from any resource exploitation on the continent and in the seas that surround it.¹⁴⁵ Under this regime, Antarctica would become subject to the legal and political control of a new international institution or authority, ostensibly representing the interests of all members of the international community. This universalist regime essentially involves global exploitation and access to resources. As such, it is not surprising that no state would be legally entitled to exploit Antarctic resources unilaterally. Under this concept, a nation could legally conduct unilateral resource development only after an appropriate international regime is established to control and manage these activities.

The CHM notion's political appeal and strength compensates for its dearth of legal soundness. The industrialized nations should not discount the Third World's enthusiastic support for the CHM concept. Indeed, some developing countries have made a determined

140. Alvaro de Soto, a Peruvian diplomat, offered this remark at an Earthscan seminar on Antarctic resources and the environment held in Washington, D.C., on September 14, 1981. See B. MITCHELL, *supra* note 3, at 67.

141. ISSUES BEFORE THE 38TH GENERAL ASSEMBLY OF THE UNITED NATIONS: 1983-84, at 107 (D. Puchala ed. 1983) (quoting the final communiqué of the March, 1983 nonaligned summit meeting).

142. See Joyner, *supra* note 116; Kimball, *Whither Antarctica?*, 11 INT'L STUD. NOTES 16-21 (1985).

143. United Nations Convention on the Law of the Sea, *opened for signature* Dec. 10, 1982, U.N. Doc. A/CONF.62/122, *reprinted in* 21 I.L.M. 1261 (1982).

144. See LAW OF THE SEA, *supra* note 1, at 44.

145. See generally Joyner, *Legal Implications of the Concept of the Common Heritage of Mankind*, 35 INT'L & COMP. L.Q. 190 (1985).

effort to employ CHM as a quasi-legal justification for alleviating the economic disparities between the industrialized countries and themselves. Although both developing and developed states agree that resources outside areas of national jurisdiction may be subject to the CHM concept, each group interprets the concept differently.¹⁴⁶ When Ambassador Pardo proposed in 1967 that the concept be applied to the resources of the ocean floor, he failed to precisely define its parameters.¹⁴⁷ The developed countries, particularly the United States, have since explained that they interpret the CHM concept as a right that all countries enjoy to exploit resources outside national jurisdiction, subject to the corresponding duty not to interfere with the correlative rights of other countries to engage in similar exploitation.¹⁴⁸ By contrast, the developing countries have interpreted the concept as a legally binding prohibition on unilateral exploitation of resources designated as common heritage.¹⁴⁹

International lawyers have grappled with the difficult task of defining "common," "heritage," and "mankind," but thus far have been unable to agree on a universally acceptable definition.¹⁵⁰ One scholar has opined that, "the reference to the . . . 'common heritage of mankind,' no matter how well motivated, in a legally binding document . . . carries no clear juridical connotation but belongs to the realm of politics, philosophy or morality, and not law."¹⁵¹ Similarly, another commentator has pointed out that whatever the merits of the concept,

as an appeal for a new international regime for Antarctica and in particular, wider international participation in decision making concerning Antarctic resource and other issues, there seems little present legal authority to support this position. There is as yet no coherent and generally recognized 'international law of common spaces'—particularly one that could persuasively be argued to be *jus cogens* or superior to all other international rules, thus overriding the Antarctic Treaty or other arrangement.¹⁵²

Notwithstanding the persuasiveness and legal validity of these objections, inclusion of the CHM notion in the Law of the Sea Treaty legitimizes it as a potential element of international legal consideration.¹⁵³

Differences in perception regarding the meaning of CHM foster another disagreement particularly relevant to the Antarctic debate—

146. See Comment, *UNCLOS III: The Remaining Obstacles to Consensus on the Deep Seabed Mining Regime*, 16 TEX. INT'L L.J. 85, 90 (1981).

147. See A. DOLMAN, *supra* note 133, at 227.

148. See Comment, *supra* note 146, at 85.

149. *Id.* at 90.

150. See Joyner, *supra* note 145, at 193-97.

151. Gorove, *The Concept of "Common Heritage of Mankind": A Political, Moral, or Legal Innovation?* 9 SAN DIEGO L. REV. 390, 402 (1972).

152. Bilder, *supra* note 34, at 184.

153. See Borgese, *The Law of the Sea Treaty*, 248 SCI. AM. 47 (Mar. 1983).

whether the CHM notion applies to Antarctica. To most ATCPs, attempts to apply the CHM to the Antarctic region gainsay the political realities of the situation.¹⁵⁴ Although comparison of Antarctica to other areas beyond recognized national jurisdiction might reveal some similarities, it clearly shows that there are vast disparities as well. Unlike the ocean floor, the electromagnetic spectrum, and outer space, Antarctica is not an area outside the sphere of man's juridical activity since it has been governed for twenty-five years by a "valid and operative juridical system of advanced maturity."¹⁵⁵ More importantly, Antarctica is unlike other international common spaces in that several states assert sovereignty over Antarctic territory.¹⁵⁶ Although legal opinions differ on the validity of such sovereignty claims, most, if not all, of the claimant states genuinely regard Antarctica as their legitimate national territory.

B. ANTARCTICA AS COMMON HERITAGE: THE PERCEIVED THREAT TO U.S. INTERESTS

The legitimacy conferred upon the CHM notion by its inclusion in the Law of the Sea Treaty challenges the preservation of the Antarctic Treaty system. This event alone has alerted the ATCPs to the need to unite in support of the Treaty and to resist, through diplomacy, attempts to replace it with a CHM regime.¹⁵⁷ A CHM regime is particularly inimical to U.S. interests because it fails to protect U.S. objectives in Antarctica. Internationalization of the continent may unravel the delicate political balance that the ATCPs have painstakingly achieved and which is the foundation of the Antarctic system's effectiveness. Disruption of this balance would likely destabilize the full range of U.S. interests in the area, with unknown ramifications throughout the international community.

Several considerations indicate that a CHM regime would run counter to U.S. interests in Antarctica. Two are directly related to fundamental characteristics of the CHM concept. First, a CHM regime raises a serious possibility of either future militarization of the continent or acts of outright hostility, or both.¹⁵⁸ In supporting the Antarctic Treaty, the United States was primarily motivated by the desire to transform an area of international discord into a zone of peace and cooperation. The United States soon realized, however,

154. See Kimball, *supra* note 142, at 18-19.

155. Zegers Santa Cruz, *The Antarctic System and the Utilization of Resources*, 33 U. MIAMI L. REV. 427, 433 (1978).

156. See F. AUBURN, *supra* note 4, at 23-83.

157. See Kimball, *supra* note 142, at 18.

158. See Joyner, *Anglo-Argentine Rivalry After the Falklands/Malvinas War: Laws, Geopolitics, and the Antarctic Connection*, 15 LAW. AM. 467, 497, 502 (1984).

that in order to obtain agreement from other states on the accord, it would have to guarantee that the juridical position of the claimant states would not be jeopardized.¹⁵⁹ Indeed, the ATCPs' cooperation and adherence to the Treaty's principles have resulted largely from the perception of the claimant states that their Antarctic interests are best protected within the Treaty framework. This perception has been reinforced by a tacit but long-standing consensus among the ATCPs that development of legal instruments to manage Antarctica will respect that compromise. All legal instruments developed by the Treaty members since 1961 have respected this delicate equilibrium by continuing to avoid the sovereignty issue.

The second consideration is that a CHM regime would regard Antarctica as a region excluded from national sovereignty. This situation would be tantamount to outright denial of territorial claims, something that most of the claimant states are not prepared to relinquish.¹⁶⁰ It would be a gross misreading of history to underestimate the intensity of the claimant states' feelings about Antarctic territory, particularly those of Chile and Argentina.¹⁶¹ A CHM regime's *de facto* denial of these claims could thrust Chile and Argentina into an uncompromising political position. A probable outcome is that they might seek to buttress their territorial claims by establishing military bases or, worse, by resorting to force. While the use of force in Antarctica might represent the most serious and obvious challenge to U.S. interests, other geopolitical disequilibria could also exert similar effects, although to a lesser degree. Stability is often difficult to restore once law and order are undermined in international politics. Additional consequences of the disintegration of the Treaty system include the probable exacerbation of the Soviet-American rivalry and the ruin of the existing spirit of cooperation in scientific research and in the search for common solutions to Antarctic problems.

Coincident to the political problems associated with the application of the CHM concept to Antarctica are economic issues. Natural resources, a primary focus of international interest in Antarctica, highlight another basic characteristic of the CHM approach that the United States perceives as unfavorable to its interests in the region. The United States views the CHM philosophy as prejudicial to those

159. See Guyer, *Antarctica's Role in International Relations*, in *ANTARCTIC RESOURCES POLICY*, *supra* note 6, at 272.

160. Most countries have expressed opposition to abandoning their claims. For the positions of three of the claimants, Brazil, Chile, and Argentina, see Milenky & Schwab, *Latin America and Antarctica*, 82 *CURRENT HIST.* 90 (1983).

161. See Joyner, *supra* note 158, at 469-81.

states that are based on the free enterprise market system.¹⁶²

The economic problem emerges from the differing philosophies of the developed and developing countries concerning exploitation of natural resources in common spaces. The United States, representative of the developed countries' viewpoint, prefers maximum freedom to exploit resources in these areas and to earn maximum revenues for itself and its nationals.¹⁶³ Louis Henkin aptly summarized the U.S. position when he wrote that the United States and other developed nations "resist international organizations with substantial authority, surely organizations run by simple majority Mankind, they might say, would enjoy the benefits of its heritage, and enjoy them most quickly and cheaply, if the developed states were allowed to exploit it competitively for profit."¹⁶⁴ While the United States accepts the notion that developing countries should benefit from economic development of Antarctic resources, it argues that development should not come at the cost of unduly restricting access to those states which have the technology and financial capability to exploit those resources. By contrast, the CHM concept, as interpreted by the Third World, stands for the notion that development of resources "to which no single decision-making unit holds exclusive title"¹⁶⁵ must be undergirded by safeguards and strict controls to ensure that the most needy countries benefit the most. Under this approach, the international equivalent of a government monopoly would carefully manage and regulate natural resources. This "monopolistic" form of socialism would restrict U.S. economic activity in Antarctica, and would consequently represent an unprecedented move toward central management of the international economy. Recognition of such likely effects of a CHM regime in Antarctica forms the basis of the Reagan administration's aversion to the CHM notion.¹⁶⁶

The environmental issues suggest a further argument that a CHM regime would work against U.S. interests in Antarctica. The U.S. Antarctic policy has consistently revealed a deep interest in the preservation of the Antarctic environment and in the conservation of the region's natural resources. A review of the Treaty-based arrangements that the ATCPs have developed illustrates the strong protectionist stance of the United States.¹⁶⁷ It is questionable, however, whether a

162. See Cheever, *American Objectives and the Law of the Sea*, in U.S. POLICY IN INTERNATIONAL INSTITUTIONS 139, 140-41 (S. Finger & J. Harbert eds. 1982) [hereinafter U.S. POLICY].

163. *Id.*

164. See Henkin, *Politics and the Changing Law of the Sea*, 89 POL. SCI. Q. 54 (1974).

165. See Wijkman, *Managing the Global Commons*, 36 INT'L ORG. 512 (1982).

166. See Malone, *Who Needs the Sea Treaty?*, 54 FOREIGN POL'Y 44 (1984).

167. The United States has repeatedly recognized its prime responsibility for protecting the Antarctic environment. See, e.g., *Exploitation of Antarctic Resources: Hearings Before*

CHM regime would adhere to the present policies of environmental protection and resource management. Coordination and harmonization of conservationist activities in Antarctica could be extremely unwieldy under a CHM regime of more than 150 states with divergent interests and disparate ideologies and little knowledge of the Antarctic environment.¹⁶⁸ For example, many developing countries have relatively poor conservationist records.¹⁶⁹ Several of them are unwilling to limit opportunities for economic growth by adhering to restrictive and costly environmental controls. Many of these states, for instance, have yet to sign agreements aimed at lessening ocean pollution prepared under the auspices of the Intergovernmental Maritime Consultative Organization (now known as the International Maritime Organization).¹⁷⁰ Given these divergent views, a CHM regime would have a difficult time proscribing and preventing pollution-causing activities or other environmental hazards.

Another perceived threat to U.S. interests inherent in the adoption of a CHM regime to Antarctica is the probable deterioration of the unique cooperation that the Treaty supports. International cooperation in Antarctica has insulated the region from most of the influence of international politics, and thus has contributed to order and stability. Issues which have strained relations between Treaty members in other parts of the world have had little or no effect on the members' relations with respect to Antarctica. Two of the most dramatic examples involve Argentinean-British relations and United States-Soviet Union relations. Notwithstanding the Falkland Islands War, both Argentina and Great Britain were represented at the Consultative Party meetings of May-June 1982, and no war-related political complications arose during these discussions.¹⁷¹ Similarly, during the Afghanistan crisis of 1980, the United States reduced scientific cooperation with the Soviet Union as a retaliatory measure, but cooperation on Antarctic research was unaffected.¹⁷²

Finally, establishment of a CHM regime in Antarctica could present U.S. negotiators with the difficult task of seeking to attain U.S. interests in a politically and ideologically unsympathetic forum. In recent years, a politicized Third World majority has used the U.N. General Assembly as a sounding board for criticizing U.S. policy, and, some have argued, for diminishing U.S. influence in world affairs.

the Subcomm. on Arms Control, Oceans, and the International Environment on the Senate Comm. on Foreign Relations, 95th Cong., 2d Sess. 34 (1978).

168. Joyner, *supra* note 67, at 184-86.

169. *See* Cheever, *supra* note 162, at 147.

170. *Id.*

171. Joyner, *supra* note 158, at 498-99.

172. *See* F. AUBURN, *supra* note 4, at 295.

These actions have created doubts among American foreign-policy makers regarding the efficacy of the U.N. for negotiating accords protective of U.S. interests.

The actions of the Third World majority in the U.N. General Assembly often appear aimed at creating an international bias against U.S. policies. This bias becomes readily apparent in the voting proclivity of the Third World majority, which, backed by the Soviet bloc, criticizes human rights violations in South Africa, Chile, and the territories occupied by Israel, while glossing over or ignoring egregious violations elsewhere, such as those of the Soviet Union in Afghanistan.¹⁷³ Given these biases, U.N. regulation of Antarctic resource exploitation would not bode well for U.S. interests. Further, these actions have convinced the Reagan administration that egalitarianism, fairness, and justice in international organizational dealings can be subverted into policies earmarked by a decidedly anti-American bias. Irrespective of the propriety of these contentions, they dominate the perception of the present U.S. government. Therefore, the administration views a CHM regime as being fundamentally antagonistic to U.S. interests in Antarctica—politically, economically, ideologically, and legally. Thus, a CHM regime remains patently unacceptable to the United States as a substitute for the present Antarctic Treaty-based system.

V. CONCLUSION

The Antarctic Treaty is generally considered a milestone in international law. The Treaty made it possible to defuse a series of conflicts which had progressively worsened since World War II. At the same time, the Treaty established a system of rules and principles for managing activities in Antarctica and its circumpolar oceans that has proved politically effective and legally resilient. The Antarctic Treaty preempted potential international conflict by establishing the principle of demilitarization in the region. It also circumvented the delicate issue of sovereignty claims to Antarctic territory in a manner that did not prejudice the positions of either the claimant or non-claimant states. This compromise proved essential for reaching an accord.

The Treaty and the cooperative arrangements that have evolved under it have served U.S. interests well. The demilitarization and denuclearization of Antarctica, the establishment of freedom of scientific research, and the cooperative arrangements for the protection of the Antarctic environment are all complementary goals which were

173. For a collection of essays on the problems associated with U.S. participation in a U.N. General Assembly dominated by the Third World, see U.S. POLICY, *supra* note 162.

important to the United States at the time the Treaty was signed and which have continued to be critical.

The Treaty has also served U.S. interests by establishing a formal mechanism—the consultative meetings—for anticipating problems which might arise in the future. As such, the Consultative meetings have proven to be a dynamic instrument responding to the need for change as knowledge of Antarctica expands. This flexibility has allowed the Treaty to evolve into a regime capable of defining Treaty-based regulatory agreements for the protection and preservation of Antarctic resources.

Recently, some nations have moved to modify the Treaty and to manage the Antarctic region under a different politico-legal regime. The widespread publicity about the continent's vast living and non-living resources has stimulated this increased interest in Antarctica. The most vocal group calling for a new Antarctic regime is a politicized Third World majority in the United Nations that purportedly would replace the existing system with a CHM regime emulating the one embodied in the Law of the Sea Treaty. Such a regime ignores the political realities of Antarctica and could militate against U.S. interests. Any internationalization of the region under a CHM regime could signal the end of the political compromise that made the Treaty possible, and mark the beginning of a period of confrontation in the cold continent. Beyond the possible political instability that a CHM regime in Antarctica might pose, such an arrangement also impinges upon U.S. interests in other ways. The most prominent effect of a CHM regime in Antarctica is the unacceptable limitation that a prohibition of unilateral exploitation of Antarctic resources would place on the free enterprise system.

Political and economic realities place a premium on the Antarctic Treaty framework for advancing U.S. interests, particularly those centered on preserving the demilitarized status of Antarctica, protecting the region's resources and environment, maintaining international cooperation in the region, and ensuring the negotiability of a minerals regime that will preserve the Antarctic environment as well as protect domestic interests. These considerations require that the United States enhance the coherency and comprehensiveness of its Antarctic policy. The United States must work to preserve the Treaty and to ensure that new developments in the management and regulation of economic activity in the region take place within the Treaty system.