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The Common Heritage Principle: *Antarctica and the Developing Nations*

By BERNARD P. HERBER*

ABSTRACT. An effort is underway to apply the *common heritage principle* to certain unique *global resources* while promoting *economic development*. Under this precept, *property rights* to such resources are said to belong to all nations and their citizens rather than being subject to *national sovereignty*. The doctrine is examined in theory and as applied in the *outer space* and *law of the sea* treaties. Its possible application to Antarctica is explored in relationship to the *Antarctic Treaty System* (ATS) which is now considering a *minerals* regime for the continent. Assessing the international political situation suggests the powerful bloc of ATS nations will ignore the common heritage principle. However, a different outcome is possible, given a convergence of the *Antarctic mining* and global atmospheric issues of the *greenhouse* and *ozone* varieties. Under this scenario, the *global atmosphere* and Antarctica would be common property resources whose property rights are owned by all nations.

I

The Common Heritage Principle in Theory

DURING RECENT DECADES a number of developing nations have endorsed the *common heritage principle* (CHP) as a means of promoting both economic growth and political goals. This effort has been associated, at times, with a wider global politico-economic movement known as the “new international economic order” (NIEO), which seeks a more equitable distribution of resources and income between the developed (industrial) and developing nations of the world.¹ The resources of outer space, the deep seabed (ocean floor), and the continent of Antarctica have been selected as the primary targets for application of the common heritage doctrine.

The CHP constitutes an alternative to the traditional *res nullius* approach for determining property rights among nations. The latter postulates that land and natural resources belong to no nation until such activities as discovery, exploration, and occupancy establish a widely recognized national sovereignty over them. Under *res nullius*, the “ex ante” distribution of economic, military, and political power largely determines the actual or “ex post” distribution of national

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property rights and sovereignty. In contrast, the common heritage principle provides a *res communis* interpretation of property rights which postulates that the rights to certain unique global resources transcend national political boundaries and reside, instead, in global ownership by all nations as “common property resources.”² Hence, such rights are not subject to appropriation by any nation regardless of its ability to appropriate them.

The present paper will examine the theoretical foundations of the common heritage concept as well as major efforts to implement the doctrine through international treaties. Emphasis will be placed upon the concept as a force in behalf of economic development, with economic development itself being viewed as an international public good yielding multinational collective consumption benefits directly to developing nations and indirectly to industrial nations as well.³ Focus will also be placed on the important relationship which exists between “property rights” as an economic *supply* force and “collective consumption” as an economic *demand* force. The discussion must take on interdisciplinary dimensions due to the limitations of orthodox economics in dealing with the distributional value judgments that are required to establish property rights both “within” and “between” nations. The paper will analyze the CHP as a force in economic development, using a politico-economic framework that is complicated by the functioning of frequently vague international social choice institutions which operate in the absence of sovereign international government.

II

The Common Heritage Principle as a Force for Economic Development: The Outer Space and Law of the Sea Treaties

THE COMMON HERITAGE CONCEPT began to draw global attention during the 1960s when a number of nations used the forum of the United Nations (UN) to advocate the “common property ownership” and “shared economic use” of the *deep seabed (ocean floor)* and *outer space*. Following the second World War, the dissolution of centuries-old colonial empires led to a threefold increase in the number of sovereign nations. The UN at the present has 159 member nations. This major parameter change accentuated the macroeconomic disparities between the industrial, or developed nations of the world, which are primarily in the northern hemisphere, and the developing nations, which are primarily in the southern hemisphere. In turn, the 1970s witnessed a major response to this situation in the form of the aforementioned NIEO movement, which built upon the efforts of two emerging international political groups—the “Nonaligned Movement” and the “Group of 77” developing nations.

Meanwhile, in a widely publicized 1967 UN speech, Arvid Pardo of Malta argued impressively that the deep seabed and its resources are “the common heritage of mankind” and, further, that the “exploitation of its resources shall be carried out for the benefit of mankind as a whole, irrespective of the geographical location of states, whether landlocked or coastal, and taking into particular consideration the interests and needs of the developing countries.”⁴ The ocean floor would be designated a “common property resource” with the property rights thereto being shared by all nations of the world. Moreover, special consideration would be given to developing nations in any subsequent economic utilization of the deep seabed such as through the mining of mineral resources. The application of the CHP to the deep seabed, in effect, constitutes an extension of the “law of common spaces”—which has historically provided free access to the high seas—to the subsoil and its minerals beneath the ocean waters as well.⁵

The common heritage principle was also endorsed in the first *Treaty on Outer Space*, which was adopted by the UN General Assembly in 1967.⁶ Article I of that treaty states that “the exploration and use of outer space, including the moon and other celestial bodies, shall be carried out for the benefit and in the interest of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind.” Article II stipulates that “outer space . . . is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.” The treaty thus promotes the concept of global property rights to outer space, using a *res communis* premise, and stipulates that the use of outer space should reflect the interests of developing nations.

Furthermore, the treaty calls for (1) international collective consumption benefits in the form of the nonmilitarization of outer space, and includes a ban on testing weapons in space, (2) the free exchange and availability of information and scientific knowledge related to space, and (3) the free inspection of space stations, installations, equipment, and space vehicles by the various nations. While these international public goods have not been attained, for the most part, more than two decades later, the treaty nonetheless calls attention to the fact that important transnational collective consumption benefits are available in outer space if international political institutions can be organized to bring about their supply.

In 1979, a more sophisticated and detailed outer space treaty, known as the “Moon Treaty,” was adopted by the UN General Assembly.⁷ This *Second Outer Space Treaty* integrated the CHP into its body in a more comprehensive fashion than did the first treaty. However, the United States, which had ratified the first outer space treaty, declined to ratify the second one, thus diminishing the treaty’s

effectiveness due to the status of the United States as a leading world nation. The international political battlelines began to be more precisely drawn between proponents and opponents of the common heritage concept. The international controversy over the CHP intensified during the 1980s. This stemmed from two major developments: (1) 1982 saw the culmination of fourteen years of negotiations resulting in the *United Nations Convention on the Law of the Sea* (UNCLOS), and (2) 1983 marked the beginning of the *United Nations Debate on Antarctica*.⁸

UNCLOS built upon an historic resolution adopted by the UN General Assembly in December 1970 which, similar to the 1967 Pardo speech, stated that “the seabed and ocean floor, and the subsoil thereof, beyond the limits of national jurisdiction, as well as the resources of the area, are the common heritage of mankind” and, further, that the “area shall not be subject to appropriation by any means by States or persons, natural or juridical and no State shall claim or exercise sovereignty or sovereign rights over any part thereof.”⁹ As in the outer space treaties, the *res communis* doctrine for establishing property rights among nations is applied. UNCLOS declares the entire ocean floor beyond a designated 200 mile national jurisdictional limit, known as an exclusive economic zone (EEZ), to be the “common heritage of mankind.”

Formal procedures for deep seabed mining, including the creation of the International Seabed Authority (ISBA) to implement these procedures, were established. Moreover, a global revenue sharing plan was created so that all nations would receive a share of mining revenues as common property owners of the ocean floor. Such revenues would also serve a redistributive function on behalf of developing nations which are the least likely to possess the economic means to undertake such mining on their own. Although the United States had actively participated in the long-term negotiations which resulted in UNCLOS, it withdrew its support at a late hour declining to ratify it, thus, as had been true with the second outer space treaty, weakening its implementation.¹⁰ Meanwhile, the CHP moved to centerstage during 1983 in the UN debate concerning the political governance of the last undeveloped continent—Antarctica—which constitutes one-tenth of the land surface of the earth.

III

Antarctica as a Common Heritage: The Antarctic Treaty, Minerals Development, and the Interests of Developing Nations

DESPITE THE FAILURE to implement fully the common heritage principle in the outer space and the law of the sea treaties, the concept continues to survive with attention being focused during recent years upon its possible application

to Antarctica as a unique global resource. However, unlike outer space and the deep seabed, there is a governance regime “already in place” in Antarctica—the *Antarctic Treaty System (ATS)*—which grew out of the Antarctic Treaty of 1959.¹¹ Nonetheless, ATS is *not* a juridical system in which specific national sovereignty and property rights are widely recognized even though formal claims to sovereignty, by seven nations that signed the treaty, do exist. In any event, the presence of a governance arrangement, even one which does not officially recognize these seven claims to sovereignty, complicates the possible application of the CHP to Antarctica.

There were twelve signatory parties to the Antarctic Treaty: Australia, Argentina, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, the Soviet Union, the United Kingdom, and the United States. Two of these nations, Argentina and Chile, are developing nations, while the remaining ten are developed nations. Seven of the twelve nations (Argentina, Australia, Chile, France, Norway, New Zealand, and the United Kingdom) have formal territorial claims in Antarctica (some of which are overlapping). Treaty members with territorial claims are referred to as “claimant states.” Although the other five original signatories hold no claims, the Soviet Union and the United States each considers itself to have a “basis for claim.”

The Antarctic Treaty is open to accession by any member of the United Nations, which may be extended full voting membership as an Antarctic Treaty consultative party (ATCP) if the nation undertakes “significant scientific research activity” in Antarctica.¹² The number of ATCPs has now grown to 25 through the subsequent addition of Brazil, China, East Germany, Finland, India, Italy, Korea, Peru, Poland, Spain, Sweden, Uruguay, and West Germany.¹³ Thirteen other nations accede to the treaty, but are not voting members. Meanwhile, the founding treaty was supplemented by two additional treaties in 1972 and 1980 which regulate the harvesting of seals and “marine living resources,” respectively.¹⁴

Several collectively-consumed international public goods have emerged under ATS.¹⁵ Scientific research, with the free exchange of all research information stipulated under the treaty, has become the primary industry of the continent. In addition, Antarctica has been declared a continent for peace with military activities and nuclear testing explicitly prohibited. Moreover, a treaty-designated moratorium on sovereignty yields important collective consumption benefits by defusing possible conflict over the question of “who owns Antarctica?” Furthermore, the Antarctic environment and its associated ecosystems have been protected through the treaty ban on nuclear waste dumps, the aforementioned regulation of the harvesting of seals and marine living resources (which has been only partly successful), and an informal moratorium on minerals devel-

opment. The latter, however, is subject to possible change under the recently-proposed ATS minerals treaty which is discussed below.

ATS constitutes a unique arrangement whereby an entire continent is *governed by treaty* rather than by a number of individual sovereign nations as conventionally determined under the *res nullius* approach. Moreover, the treaty system is complicated by the fact that seven of the nations hold formal claims to sovereignty, which claims are not recognized by any other nation including the other treaty nations. In addition, the fact that thirteen of the acceding nations do not possess voting power results in a “two-tier” membership structure, a point that has received considerable criticism from nontreaty nations in the UN Antarctic debate. Meanwhile, the *res communis* precept of property rights determination is inapplicable under ATS since the vast majority of world nations (121 of 159) do not accede to the Antarctic Treaty. However, a “pure” version of the traditional *res nullius* property rights approach is also inapplicable due to the absence of widely recognized sovereignty in Antarctica. Nonetheless, since ATS voting members do make political decisions pertinent to the continent, such practices may be viewed as constituting a *de facto* “exercise of property rights” and, thus, to constitute a “variant” of the *res nullius* doctrine.

In view of this situation, a number of developing nations initiated the *Debate on Antarctica* in the United Nations with hopes of extending the world common heritage principle to the continent.¹⁶ The Government of Malaysia, a leader in the debate, pointed out that “Antarctica as the common heritage of mankind requires a regime that is truly universal in character and committed to serving the interest of the entire international community” and, further, that “the exploration of Antarctica and exploitation of its resources must be carried out for the benefit of mankind.” The debate, which initially formed a consensus of both treaty and nontreaty nations, led to the publication during 1984 of a comprehensive United Nations study on Antarctica.¹⁷ The consensus between treaty and nontreaty nations later ended with one of the major points of contention being the question of “universality,” that is, whether or not there should be a formal “internationalization” of Antarctica in accordance with the common heritage concept.

At about the same time, partially in response to the UN debate, the members of ATS began formal negotiations directed toward the preparation of a framework for possible future exploration and development of Antarctic mineral resources. Despite the historical absence of formal prospecting and exploration efforts, the many years of scientific research have suggested that widespread minerals deposits, including oil and gas, are likely to exist in Antarctica.¹⁸ Nonetheless, such minerals could not be developed in a cost-effective manner under present-day mining technology and world mineral price parameters. Meanwhile, after

the ATS minerals negotiations had been initiated, several resolutions were passed in the United Nations, at the behest of developing nations, which asked that ATS include the UN in these negotiations.¹⁹ They were without success, as the politically powerful block of treaty nations sought to avert any movement toward the "internationalization" of Antarctica. Finally, the minerals negotiations culminated on June 2, 1988, with the adoption of the ATS *Convention on the Regulation of Antarctic Mineral Resource Activities* (CRAMRA).²⁰

IV

An Evaluation of the ATS Minerals Treaty

THIS TREATY, now awaiting possible ratification, would significantly change the ATS governance regime for the continent. Moreover, it would move ATS closer to *de facto* sovereignty over Antarctica since a close relationship must inevitably exist between the authority to grant mining rights, as provided under CRAMRA, and *de facto* political sovereignty. Ratification of CRAMRA requires that at least 16 of the 20 voting ATS members at the time of treaty adoption ratify the document, and also requires that the 20 include at least eleven of fourteen developed-nation members, at least five of six developing-nation members, and all seven claimant states. Meanwhile, the performance of the treaty system in protecting the Antarctic environment, with its associated ecosystems, has been questioned in light of some ATS practices regarding the protection of seals, the harvesting of marine living resources, and protection of the environment around scientific stations.²¹ However, though imperfect, ATS has done much to protect the Antarctic environment to this moment.

Importantly, CRAMRA ignores the world common heritage principle. For example, it does not provide for a United Nations role in minerals planning nor does it contain a global revenue sharing plan whereby all nations would share in minerals revenues as "common property owners" of Antarctica. In the latter case, it contrasts sharply with UNCLOS which specifically provides for the global sharing of revenues derived from deep seabed mining in areas outside of national jurisdiction. Moreover, since developing nations are the least likely to be economically capable of undertaking minerals activities in Antarctica, the failure to recognize Antarctica as the common heritage of mankind strikes an economic blow at these nations. Technically, however, CRAMRA would not preclude the undertaking of joint exploration and mining ventures between treaty industrial nations and nontreaty developing nations. Moreover, ATS could accommodate nontreaty developing nations by sponsoring joint industrial and developing nation scientific research activities on the continent. Furthermore, as treaty nations

point out, any member of the United Nations has the option to accede to the Antarctic Treaty, as stipulated in the original treaty.

Meanwhile, a consideration of the primary arguments “for” and “against” CRAMRA will shed further light upon the relevance of the Antarctic minerals question to both the common heritage doctrine, as well as to, the economic growth of developing nations. Perhaps, the strongest argument “for” ratification is that the treaty seeks to provide an orderly process for eventual minerals development, if that should become economically feasible, thus averting a possible global land race for Antarctica. The latter might occur under an unrestricted application of the *res nullius* doctrine which throughout history has produced conflicts and even wars as nations competed in establishing sovereignty over land and resources. Meanwhile, if the minerals treaty can be made to function as planned, it would allow minerals exploitation “without” the explicit assignment of national property rights and sovereignty to Antarctic territory. This would be “something new” in the development of an entire continent.

Another argument in support of CRAMRA is that it would help make available new supplies of important minerals at a time of possible future world need for them. An opposite side of this argument, however, contends that it is unwise to make available additional supplies of fossil fuels (coal and oil) since these minerals are the primary causes of the growing environmental problem of global warming known as the “greenhouse effect.” A third supportive argument observes that the proven success of ATS should justify the right of treaty nations to undertake another major step in the governance of Antarctica by adding a minerals treaty to the existing treaties which constitute the treaty system. Finally, since the treaty nations are in the best economic position to undertake the possible exploitation of Antarctic minerals, it may be argued that it is most efficient for these nations to lead the way in planning such development.

Arguments “against” CRAMRA generally emphasize the advantages of keeping Antarctica in its pristine state. One such argument suggests that Antarctica be set aside as a world park which would promote the collective consumption benefits to be derived from the general preservation of the continent as a nature preserve. The harvesting of marine life and seals would continue to be permitted in a world park, but under more effective regulations than those in use at present, and science would continue as Antarctica’s primary industry. A limited tourist industry would also be allowed. In addition, the world park approach would help to prevent the potentially large international public bads (negative externalities) which some experts feel could result if the minerals plan would fail to prevent serious environmental damage to Antarctica. Since an important relationship, though one that is not fully understood by scientists, is believed to

exist between the Antarctic environment and both global climates and ocean levels, this argument appears to be well-founded.²²

Furthermore, there is concern that CRAMRA may fail to meet its objective of a stable political climate for minerals development and, instead, create the opposite outcome—international political instability. Historically, territories opened up to economic exploitation have often become sources of international friction. It is suggested that competition between claimant and nonclaimant, or between developed and developing nation, ATS members, or between treaty and nontreaty nations, could precipitate such friction. As a case in point, CRAMRA does not provide for royalties derived from mining activities on claimant-state territory to be paid to the claimant nation unless that nation is itself engaged in such activities. The chances for such global political conflict would seemingly be less under a world park, than under a minerals regime, since commercial interests and, therefore, national political interests, would be more subdued in the absence of competition for minerals profits.

v

The Future of the Common Heritage Principle

IN VIEW OF THE ABOVE factors, what may be expected concerning future international acceptance of the common heritage principle? Relatedly, will the corollary application of the doctrine as a means of promoting economic development for lesser-developed nations be widely endorsed in the international political arena? A preliminary effort to shed light on these complex and difficult questions should start from the observation that the CHP is presently more of an “emergent principle” or “proposal” than a widely-accepted tenet of international law.²³ This statement is generally true, even though the concept has been included in the outer space and law of the sea treaties, since these treaties have never been fully implemented. However, this raises important and closely-related questions: “what is international law?” and “how is it determined?”

Since national sovereignty ends at the political boundaries of each of 159 world nations and, accordingly, since no sovereign international government exists, there is *no* sovereign global political authority to determine international law directly. Thus, a secondary mechanism, which relies upon traditional practices under the guidance of *res nullius* as loosely internalized through international agreements, is utilized to determine the distribution of property rights and sovereignty among nations. This mechanism, in effect, relies upon such factors as discovery, exploration, and occupancy to establish national property rights. The result is a major barrier to application of the common heritage concept since there is no global sovereign government to appropriate (award/deny)

global property rights. In turn, this means that the geographical space of property rights on the “supply” side of international economic output, and the geographical space of international collective consumption on the “demand” side of such output, do not correspond. In other words, the geographical space of international collective consumption is greater than the political boundaries of any single nation.

The above suggests that ATS is likely to continue as the dominant political force in Antarctica and, accordingly, that the common heritage principle is unlikely to be applied to the continent. This conclusion is reinforced by the fact that ATS membership includes the two superpowers, the Soviet Union and the United States, all permanent members of the UN Security Council, leading developing nations such as China and India, and nations whose overall population amounts to a large percentage of the world’s population. With such a powerful bloc of nations opposing application of the CHP in Antarctica, it would be surprising if it were applied. However, this conclusion is based upon the possibly tenuous assumptions that: (1) ATS members can continue their past performance of reaching “unity” on important treaty matters, and (2) that the demonstrated past “resiliency” of the treaty system to adjust to changing demands and pressures can be maintained.

Overall, the established procedures of international law thus appear to be unfavorable for widespread global acceptance of the common heritage concept. Nonetheless, ATS and its proposed minerals treaty, CRAMRA, must eventually be reconciled with UNCLOS and its International Seabed Authority which apply the CHP their global revenue sharing plan. Among the significant questions in this regard is how to define “national territorial jurisdiction” in the deep seabed off Antarctica since there is no widely recognized territorial sovereignty over Antarctica. In other words, where would the jurisdiction of ISBA under UNCLOS end and that of CRAMRA under ATS begin? The answer to this question must ultimately confront the common heritage question.

This question is also impacted by the primary results of the UN Antarctic debate which appear to be twofold: (1) it has prompted the treaty nations to become “more open” in their conduct of political governance activities concerning Antarctica, especially by allowing a greater participation in ATS activities by non-ATCP (nonvoting) members, and (2) it has demonstrated that the world community—treaty and nontreaty nations alike—generally endorse the concepts of scientific cooperation, nonmilitarization, and environmental protection in Antarctica as collectively-consumed international public goods. In fact, the debate has helped bring increased attention to the global environmental importance of Antarctica. The final political battleground over acceptance of the CHP may

well center on Antarctica and the relationship of the proposed minerals treaty to both the Antarctic and global environments.

Meanwhile, there are signs that the ratification of CRAMRA may not be an easy matter since significant opposition to the treaty has recently developed among the treaty nations, including Australia, France, India, and Italy. Importantly, during the period May-August 1989, the governments of Australia and France, both original signatories to the Antarctic Treaty as well as claimant states, announced their opposition to CRAMRA and their support, instead, for a world park, no mining, regime in Antarctica.²⁴ Opposition to CRAMRA among treaty nations arises from a number of sources including the perceived infringement of territorial claims, the failure to prohibit subsidized minerals development, and concern for the environment. In addition, there is the question as to what influence, if any, nontreaty nations may be able to exert in the United Nations on the ratification outcome.

The importance of Antarctica to the global community thus appears to be a matter that cannot be escaped. Moreover, the politico-economic interests of developing nations—both nontreaty and treaty—are likely to remain closely associated with Antarctic affairs and, especially, to the minerals issue. In this regard, an important question is whether the developing-nation ATCPs (Argentina, Brazil, Chile, China, India, Korea, Peru, and Uruguay) will be willing, and able, to pursue policies within the treaty system that will adequately represent not only their own interests as developing nations but the interests of nontreaty developing nations as well. The role of China and India as the world's two most populous nations, and as nations which have become ATCPs during recent years, is especially important in relationship to this question. For example, at the time it signed the Antarctic Treaty, India argued that it could better represent the interests of developing nations from "within" ATS.²⁵

VI

Possible Convergence of the Antarctic Minerals and Global Environmental Issues

THE PAPER WILL NOW CONCLUDE with the consideration of an interesting *scenario* which, if realized, could prove to be a major catalyst for synthesizing the seemingly diverse interests of those developing nations outside ATS, many of which advocate the common heritage principle, and the interests of ATS members (both developed and developing nations alike) which tend to reject the doctrine. This scenario relates closely to the rapidly growing awareness of the need to protect the earth from severe environmental hazards such as those allegedly posed by the greenhouse warming and ozone layer problems. It is quite possible

that the subject of Antarctica, and especially its proposed use for minerals development with the implications therefrom for world climates and ocean levels, could be added to this list of major global environmental concerns.

If the above scenario should take hold, the proposed minerals regime may give way to the world park concept, thus removing the potential destruction of the Antarctic environment and its associated ecosystems from minerals development along with any resulting negative effects on world climates and ocean levels that might occur. In fact, a major step in this direction took place during October 1989 when the voting members of ATS agreed at their biennial meeting to hold two separate ad hoc meetings during 1990: *one* to further develop CRAMRA and the *second* to consider the possible adoption of an ATS comprehensive environmental protection convention (CEPC)—which could be the forerunner of an ATS world park regime.²⁶

Thus, a convergence of the greenhouse, ozone, and Antarctic minerals issues in world opinion could restore momentum for the application of the CHP to Antarctica under a world park regime that would preclude minerals development. Meanwhile, even though it is true that a world park would not directly contribute to the economic growth of developing nations, except for those nations geographically proximate to Antarctica which might gain from tourism, there are other potential economic gains to developing nations such as a greater appreciation of the global implications of actions taken to protect the global atmosphere and environment.

Accordingly, national government concerns over global environmental issues could be used as a rationale for the undertaking of mutually-advantageous multinational political actions between developed and developing nations alike regardless of their proximity to Antarctica. These cooperative supranational political actions, such as the highly publicized “debt for nature swaps” concept, could be used to discourage the deforestation of rain forests in developing nations, thus reducing the greenhouse problem that has been causing much concern in developed nations since trees help absorb the excess carbon dioxide caused by the burning of fossil fuels. At the same time, the economic welfare of developing nations could be enhanced through a reduction in their international debt burdens. This could be viewed by the economist as the taking of legitimate economic rents by the developing nations, which are not the major producers of the various gases and other pollutants which cause the greenhouse and ozone problems, and not as a redistributive handout from the wealthy to the poor nations of the world.

The convergence of global environmental concerns, linked to the collective consumption of international public bads, may thus be used to promote the economic growth of developing nations while, in a Pareto-efficient fashion,

simultaneously improving the welfare of industrial-nation citizens as well. In fact, such Pareto-efficient gains could be attainable for all world nations and their citizens if massive, earth-destroying, international public bads are averted by such multinational actions. One might even view this to be an extension of the concept of *res communis* to the global environment as the latter is impacted by the greenhouse, ozone, and Antarctic minerals issues.

Hence, the global environment, inclusive of the atmosphere, would be treated as the “common property of all mankind” and, as such, to be “owned by all nations.” Accordingly, there would be a correspondence between “global property rights” on the supply side, and “global collective consumption” on the demand side, since the geographical parameters of each would be truly “global in scope.” In other words, the global environment would be a global public good owned by all nations. This could prove to be an important theoretical step toward bridging the “international social choice gap” that is caused by the absence of a sovereign international government to deal with transnational allocational decisions.

Thus, even though sovereign international government does not exist to perform this internalization function, it is possible that a specialized “functional international institution” could be established to increase allocational efficiency in major global environmental and atmospheric matters. The recognition of global property rights to the global atmosphere under the *res communis* precept, as contrasted to property rights that are dispersed among 159 nations under the *res nullius* precept, should give such an international institution greater authority than would flow from the typical international treaty or alliance which operates through delegated sovereignty stemming from national property rights. Perhaps, the United Nations—though not itself sovereign—could play a major organizational role in sponsoring such a global atmospheric/environmental institution. So also might the Antarctic Treaty System for the Antarctic segment of the global environmental issue, as recently suggested by Australia. In fact, ATS might appropriately be viewed as performing a “global trusteeship” function in this regard.

Under these conditions, international agreements related to the environment would become more meaningful in an economic sense and, hopefully, easier to negotiate and implement in a political sense, if the global environment is perceived as a “common property resource” belonging to all nations and their citizens as the “common heritage of mankind.” The theoretical basis for such agreements, and for the externality-internalization policies which they would generate, would be largely those of the economist. In other words, the goal would be one of efficient resource allocation, to be achieved through the internalization of the international public bads that are threatening the global

environment, at the efficient equilibrium point where “marginal social benefits” equal “marginal social costs” within the world community as a whole. In this manner, public goods and externality theory may be used as an effective guidepost to Pareto-efficient moves by the nations of the world, with the legal authority to do so stemming directly from global property rights under the common heritage doctrine. While national sovereignty would continue to prevail in other allocational matters, international sovereignty would rule in this uniquely important matter of protecting the global atmosphere and environment inclusive of its “Antarctic connection.”

If the above scenario should occur, the *common heritage principle* could survive as a meaningful force for both the economic growth of developing nations as well as for the general welfare of the citizens of all nations. Admittedly, the international social choice task to accomplish this global environmental objective would be very great, but the payoff to mankind from its success would potentially be even greater.

Notes

1. For a general discussion of NIEO, see Agarwala (1983). See also Peterson (1986): pp. 161–62.

2. A less rigorous version of the CHP would advocate “free access” to such resources, but would stop short of formally stipulating “common property ownership” if the latter should be interpreted as a mandate for global political institutions, such as the United Nations, to implement free access. However, the economist’s experience with the “tragedy of the commons” phenomenon suggests that free access, alongside the scarcity of a fixed resource, may eventually lead to a need for global political institutions to manage the efficient allocation of such resources.

3. Collective consumption benefits may accrue to developing and to industrial nations alike from multinational policies which promote economic development. These mutual gains may take a variety of forms, perhaps the most important being the enhancement of international political stability.

4. Pardo (1967).

5. Under the law of common spaces, all nations possess an equal right to use the open seas. If applied to the deep seabed, all nations would possess an equal right to exploit the minerals beneath the subsoil of the ocean floor. The latter issue was further refined in the Law of the Sea Treaty of 1982, which provided 200 mile exclusive economic zones to coastal states.

6. United Nations (1967).

7. United Nations (1979).

8. United Nations (1982; 1983).

9. United Nations (1970).

10. The momentum for ratification of UNCLOS by the required sixty nations has recently gained strength, thus suggesting possible early ratification.

11. Antarctic Treaty (1959).
12. There are no strict guidelines for defining "significant" scientific research activity and, in admitting new consultative parties, ATS has not always applied consistent standards in this regard. See Beck (1986): p. 196.
13. At the October 1989 ATCP meeting in Paris, three new voting members were admitted to ATS. These were: Finland, Korea, and Peru.
14. Antarctic Treaty (1972; 1980).
15. See the discussion in Herber (1990).
16. United Nations (1983).
17. United Nations (1984).
18. See De Wit (1985).
19. For example, see the *UN Chronicle* (1988).
20. Antarctic Treaty (1988).
21. For example, see the discussion in Mitchell (1988) which elaborates upon some of the environmental problems which have arisen under ATS governance of the continent.
22. For discussions pertinent to this topic, see Gordon (1988) and Whitworth (1988).
23. Joyner (1986): p. 199.
24. See the joint statement released by the Australian and French governments on August 18, 1989.
25. Beck (1986): p. 284.
26. These special ATCP meetings during 1990 were held in Santiago, Chile without any firm decision being reached concerning Antarctica's economic future.

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Editorial Statement

THE *American Economic Review* has announced a policy which we have been considering and with which we wish to join. Henceforth we shall only publish papers when the data used are clear, well-documented and easily available to any researcher for replication, and where the manner of computation is sufficiently well-explained to permit this. If proprietary data is used and it is unavailable to others, this situation must be explained to the Editors when the paper is submitted.

F.C.G.