

3-2015


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Recommended Citation

Leonid A. Krasnozhon, Pedro A. Benitez, and Walter E. Block, *The Privatization of Antarctica*, 6 Wash. & Lee J. Energy, Climate & Env't. 379 (2015), <http://scholarlycommons.law.wlu.edu/jece/vol6/iss2/3>

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The Privatization of Antarctica

Leonid A. Krasnozhon, Pedro A. Benitez,
and Walter E. Block*

Abstract

The seventh continent, Antarctica, is a no man's land in terms of economic development. This is not due to its harsh weather conditions. Parts of Alaska, Canada and Russia are almost equally inhospitable. Rather, this Article argues that Antarctica's economic isolation is the result of political paralysis and a lack of appreciation for private property rights. This Article makes the case for adding Antarctica to the family of nations, whether as one or several countries.

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I. Introduction

It is not uncommon to hear claims that humanity will be the cause of its own demise.¹ Most people have a fatalistic view that they are bound to bring about their own doom.² Recently, the

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1. See Nick Bostrom, *Existential Risks: Analyzing Human Extinction Scenarios and Related Hazards*, 9 J. EVOLUTION & TECH. 2002, at 1, 3 (describing the threats facing humanity).

2. See *id.* at 5 (stating that it is pointless to “wallow in gloom and doom”).

environment has been a great source of distress.³ Are we running out of resources? Are we extracting them in such a way that we will contaminate the planet and provoke climate catastrophes? Is it possible to stop this seemingly oncoming Armageddon?

Humanity's greatest resource is creativity.⁴ Historically, we have proved fatalists like Thomas Malthus⁵ wrong,⁶ demonstrating that even with growing populations we can control our reproduction and boost our food production. Since humans always face scarcity, they have been forced to innovate.⁷ When competing in a free market, the desire to reduce costs and maximize profits leads them to seek ways to obtain the most out of available resources.⁸ Substitutes also appear, often times a result of technological advances. All that is necessary is some quantity of resources that can be exploited for the aforementioned innovation to take place. That is where Antarctica comes in.

When considering the continents, the names of the big six tend to pop into mind. Yet this is the fifth largest continent, and as a landmass of such magnitude, contains much untapped potential.⁹ From oil to a gigantic mass of protein in the form of

3. See *id.* (noting that intelligent life could go extinct in sudden disaster).

4. See JULIAN SIMON, *THE ULTIMATE RESOURCE* 3 (Princeton University Press, ed., 1st ed. 1981) (noting that Julia Simson a free market economist, offered a wager to economist Paul Ehrlich to disprove the idea that humanity was running out of resources). By tracking the prices of several resources over a period of ten years, they would decide if they'd become more scarce or plentiful. See *id.* Simon won the bet as businesses develop new ways to more efficiently use their resources, as well as seek alternate resources. See *id.*

5. See generally THOMAS MALTHUS, *AN ESSAY ON THE PRINCIPLE OF POPULATION* (1798).

6. See LIONEL ROBBINS, *THE THEORY OF ECONOMIC DEVELOPMENT IN THE HISTORY OF ECONOMIC THOUGHT* 22-33 (1966) (analyzing the relation between world population size and well-being).

7. See Beth Gardiner, *Jugaad Innovation: The Businesses Getting Creative in the Face of Scarcity*, *THE GUARDIAN* (Dec. 3, 2013), <http://www.theguardian.com/sustainable-business/jugaad-innovation-business-creativity-scarcity> (describing how innovation tends to happen when businesses face scarcity of resources) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

8. See *id.* (noting how entrepreneurs are often forced to cut costs dramatically to survive)

9. See *What is Antarctica?*, NASA (Dec. 8, 2010), <https://www.nasa.gov/audience/forstudents/k-4/stories/what-is-antarctica-k4.html> (describing the size and value of Antarctica) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

krill, the development of Antarctica could change the playing field of international trade in a huge way. Yet, for decades, it has really just sat there, unproductive, unyielding, undeveloped and unpopulated.¹⁰ This is a direct result of the international politics that stifle Antarctica in a complicated political limbo. Conflicting political interests and policies make it difficult for a decision to be made on this landmass that pleases all the parties involved.¹¹

There is huge potential in the Antarctic continent and to understand how to best access it, we must look at different paths. An approach through privatization would certainly result in better resource exploitation and care of the continent than that given by political bodies that seek their own interest at the expense of others.¹² Through free enterprise, Antarctica would be subjected to market forces that would determine the best ways to reach equilibrium of sustainability and exploitation, as well as benefitting humanity as a whole.¹³ The privatization of Antarctica is a concept that requires a good understanding of history, Antarctic resources, and the concept of ownership.

In Section II of this paper we discuss the history of Antarctica.¹⁴ Section III is devoted to an examination of the resources offered by this continent that might serve as the basis for homesteading.¹⁵ Finally, Section IV deals with criticisms of this Article's proposal.¹⁶

10. See *id.* (noting that Antarctica is too cold for people to live there a long time, and huge swaths of the continent are uninhabitable).

11. See *Antarctica*, THE WORLD FACTBOOK, <https://www.cia.gov/library/publications/the-world-factbook/geos/ay.html> (last visited Apr. 19, 2015) (discussing how complex the politics of who controls Antarctica is, and how many claims are not universally recognized) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

12. See RICHARD W. MANSBACH & KIRSTEN L. TAYLOR, INTRODUCTION TO GLOBAL POLITICS 182 (2013) (describing the effects of privatization of state responsibilities).

13. See *id.* (noting that privatization often results in slashing costs).

14. See *infra* Part II and accompanying text.

15. See *infra* Part III and accompanying text.

16. See *infra* Part IV and accompanying text.

II. History

Antarctica existed only as a rumor about a mysterious southern landmass for quite a while.¹⁷ Whalers and sealers who dared go south in pursuit of prey found themselves in extremely cold, arid temperatures.¹⁸ Throughout the sixteenth century, many of these men would make land claims and others would hide their discoveries from each other so as to obtain access to particular fishing locations.¹⁹ Interests in Antarctica were more focused on the waters around it than the actual landmass, an explanation of why very few people paid real attention to the continent.²⁰ This situation made ownership more difficult, as no one individual could be said to have acquired any entitlement to the land.²¹ The explorers had no interest in claiming the land for themselves, and countries did not regard the claims as worthy of recognition.²²

The actual discovery is greatly contested amongst the United States, Great Britain, and the former Soviet Union.²³ From the American Palmer, who supposedly made the first sighting in November 1820²⁴, to the Briton Bransfield who saw it

17. See STEPHEN MARTIN, A HISTORY OF ANTARCTICA (Rosenburg ed., 2013) (noting that the first European idea of the land was based on explanations of philosophers rather than actual exploration).

18. See M.J. PETERSON, MANAGING THE FROZEN SOUTH: THE CREATION AND EVOLUTION OF THE ANTARCTIC TREATY SYSTEM 32 (University of California, ed., 1988) (noting that human activity on the continent seemed impossible).

19. See *id.* (noting that these individuals preferred to settle disputes without getting others involved).

20. See *id.* at 31 (arguing that although the waters were more easily explored, the politics of the two entities have been connected).

21. See *id.* (describing how the government of the explorers would not follow up on any claims explorers made to the land).

22. See *id.* at 32 (revealing that “long distance and slow communication” made administration of the areas slow and costly—both reasons why the countries did not follow up on explorer’s claims”).

23. See DEBORAH SHAPLEY, THE SEVENTH CONTINENT 23 (Resources for the Future, Inc. ed., 1st ed. 1985) (noting that this battle over discovery has legal significance, “since discovery is sometimes considered a basis for territorial possession”).

24. See *id.* (noting that the American was from Stonington, Connecticut).

on January of 1819,²⁵ and to the Russian Imperial Navy officer Bellingshausen who supposedly saw it on 1819 (despite having no record of this year on his logs whatsoever)²⁶ many explorers had claims on the territory that no country upheld.²⁷

In the twentieth century, Antarctic interests evolved from sealing to whaling, until the point that stocks of the latter had been so reduced that the activity was no longer viable.²⁸ In 1912, a series of expeditions to the South Pole began as part of a renewed interest in exploring the entire planet.²⁹ This renewed interest in the area resulted in many governmental incursions.³⁰

The first nation to view Antarctica with serious interest was Britain, which began compiling old historical logs, making claims on the territory named Graham.³¹ As their claims started to grow, French action began, claiming the Adelie Land. World War I put a halt to this process, but almost immediately after its conclusion, Great Britain tried to annex the entire continent into the British Empire.³² German expeditions prompted by Hitler on the hope of making claims triggered an international reaction by Norway and the Soviet Union, which also began enforcing their own claims.³³ Argentina and Chile disputed islands and territory between their national territories and the South Pole, citing

25. See *id.* (stating that the British claim is hard to substantiate because the explorer's logbook is lost).

26. See *id.* (detailing that this explorer even seemed to credit the American for discovering Antarctica).

27. See PETERSON, *supra* note 18, at 31 (stating that discovery of the continent did not start to matter until explorers actually landed and "wintered over" the interior of the continent).

28. See *id.*, at 8–9 (noting that sealing died out after 1830 and whaling collapsed largely in the 1960s but some illegal and legal whaling still exists today).

29. See SHAPLEY *supra* note 23, at 11 (arguing that because the rest of the globe had been conquered, the Arctic saw a burst of exploration in 1890).

30. See PETERSON, *supra* note 18, at 34 (noting that governments made claims to lands because of "discovery, later exploration, or geographical proximity").

31. See *id.* at 33 ("Britain formally laid claims to all islands lying south of the 50°S between 20° and 80°W.").

32. See *id.* (describing the land as a stretch of the Antarctic coast between 136° and 142°E).

33. See *id.* at 33–34 (noting that this decision led to claims based on the previous actions of British explorers described previously).

geographic proximity and old agreements as their basis.³⁴ Soviets claimed that by being the alleged first discoverers of Antarctica, the entire continent was theirs.³⁵

Activities in the region ranged from exploitation of trade routes, water resources, strategic military placement, and preventive measures.³⁶ Unlike North and South America or other continents, the ownership status of Antarctica remained unclear.³⁷ Because of the nature of the land, agriculture and homesteading on the land was difficult, making claims problematic and hard to enforce.³⁸

Defining the ownership of Antarctica became a power struggle of political sluggishness and lack of private property rights.³⁹ Realizing the difficulties of actually settling disputes between rival governments, the United States proposed a trusteeship, with each country being able to exploit resources in Antarctica as it saw fit, with the United Nations giving a certain quantity of territory to all countries.⁴⁰ This suggestion, however, was rejected quickly by all parties involved in the negotiations.⁴¹ This rejection was accompanied with fears that Antarctica could become its own independent state, which to all contending parties seemed undesirable (Peterson, 1988: 55).⁴² Colonialism may have disappeared from Africa and the Americas, but it appeared to be thriving in Antarctica.

34. See *id.* at 35 (arguing that claims by Norway and the United States spurred formal claims from Argentina and Chile).

35. See *id.* at 38 (relaying the USSR's argument supported by propaganda that historical discoveries by Russian explorers gave the country the right to all of Antarctica).

36. See *id.* at 37 (describing the near clashes that occurred between various naval forces).

37. See *id.* at 36 (noting that the seven states who laid claim to the land felt as if the land was "open to appropriation" but some private individuals proposed that the land be administered by the League of Nations).

38. See *id.* at 31–32 (explaining that the inhospitable nature of the land turned governments away from enforcing claims on Antarctica).

39. See *id.* at 32–39 (discussing the varying claims and debates surrounding ownership and use of Antarctica by a variety of nations).

40. See *id.* at 37 (explaining the origination of the idea of a trusteeship as a way to avoid conflict between the United States' allies in Great Britain and South America).

41. See *id.* (describing the near immediate rejection of the U.N. trusteeship proposal).

42. See *id.* at 54–56 (explaining why each participant disfavored several options for creation of law on Antarctica).

On one side, there was the concept of *Terra Nullis*, which claimed Antarctica as a political no-man's land, the property of whoever found and administered the territory.⁴³ All original claimants of Antarctica supported this view.⁴⁴ On the other hand, many other countries that had no connection whatsoever with the continent favored *res communis*, the land of all of humanity, which is similar to the ownership of the oceans.⁴⁵

After much debate, Chile suggested halting all arguments on claims of ownership and, instead, refocusing efforts on the peaceful development of scientific research.⁴⁶ This plan was adopted and revised by the United States delegation and a treaty was signed by twelve nations in 1959.⁴⁷ It was enacted in 1961.⁴⁸ Article IV Section 2 of the Antarctic Treaty demonstrates that its focus is on putting all claims and disputes on hold for an unspecified period of time while using the continent for scientific research only:

“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.”⁴⁹

43. See *id.* at 36 (explaining that *terra nullius* permitted open appropriation for any state administering the territory).

44. See *id.* (identifying the seven original claimants to Antarctica that supported *terra nullis*).

45. See *id.* (defining *res communis* as common land that is shared by all).

46. See *id.* at 38 (describing the Chilean proposals that led to the first international “gentlemen’s agreement” for scientific research for a designated period of time).

47. See *id.* at 41 (identifying the twelve signatory states to the Antarctic Treaty).

48. See *id.* (explaining that the treaty came into effect after the last of the twelve signatory states ratified the treaty).

49. The Antarctic Treaty, art IV, Dec. 1, 1959.

The number of signatories grew from twelve to fifty-one because the Treaty allowed any member of the United Nations to accede to it.⁵⁰

The treaty is vague regarding ownership or what is to be done if resources are more plentiful than is currently known. Its purpose is mostly to ensure peaceful cooperation by denigrating ownership issues.⁵¹ Mineral and fossil fuel extractions were forbidden to preserve Antarctica in its original condition.⁵² No military development of any kind is allowed.⁵³ As shown in Picture 1, the Antarctic Treaty maintains the status quo of Antarctic land ownership with seven territorial claims made by Argentina, Australia, Chile, France, New Zealand, Norway, and the United Kingdom.⁵⁴ Argentina, Chile, and the United Kingdom have overlapping claims.⁵⁵ The United States and Russia, the nation taking the role of the former Soviet Union, maintain a “basis of claim.”⁵⁶ In addition to the treaty, the Madrid Protocol (1991), formally known as the Protocol on Environmental Protection to the Antarctic Treaty, designates Antarctica as a wilderness area.⁵⁷

50. See *The Antarctic Treaty*, SECRETARIAT OF THE ANTARCTIC TREATY, <http://www.ats.aq/e/ats.htm> (last visited Apr. 19, 2015) (“The total number of Parties to the Treaty is now 52.”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

51. See PETERSON, *supra* note 18, at 41 (explaining the principles of the Antarctic Treaty).

52. See Rick Rozzof, *Scramble For World Resources: Battle For Antarctica*, GLOBAL RESEARCH, May 16, 2009, <http://www.globalresearch.ca/scramble-for-world-resources-battle-for-antarctica/13639> (describing the ban on exploitation of any resources from Antarctic except for scientific research) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

53. See *id.* (explaining that development and exploitation of Antarctica is limited to endeavors for peace).

54. See *Antarctica: Territorial Claims, Map 13567*, AUSTRALIAN ANTARCTIC DATA CENTER, https://www1.data.antarctica.gov.au/aadc/mapcat/display_map.cfm?map_id=13567 (last visited Apr. 19, 2015) (showing the territorial claims of the seven original claimants) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

55. See *id.* (showing the overlapping claims of several claimants).

56. See *Antarctic Treaty*, *supra* note 53 (explaining modern claims on Antarctica following the Antarctic Treaty).

57. See *Protocol on Environmental Protection to the Antarctic Treaty*, SECRETARIAT OF THE ANTARCTIC TREATY, <http://www.ats.aq/e/ep.htm> (last visited Apr. 19, 2015) (designating Antarctica as a “natural reserve, devoted to

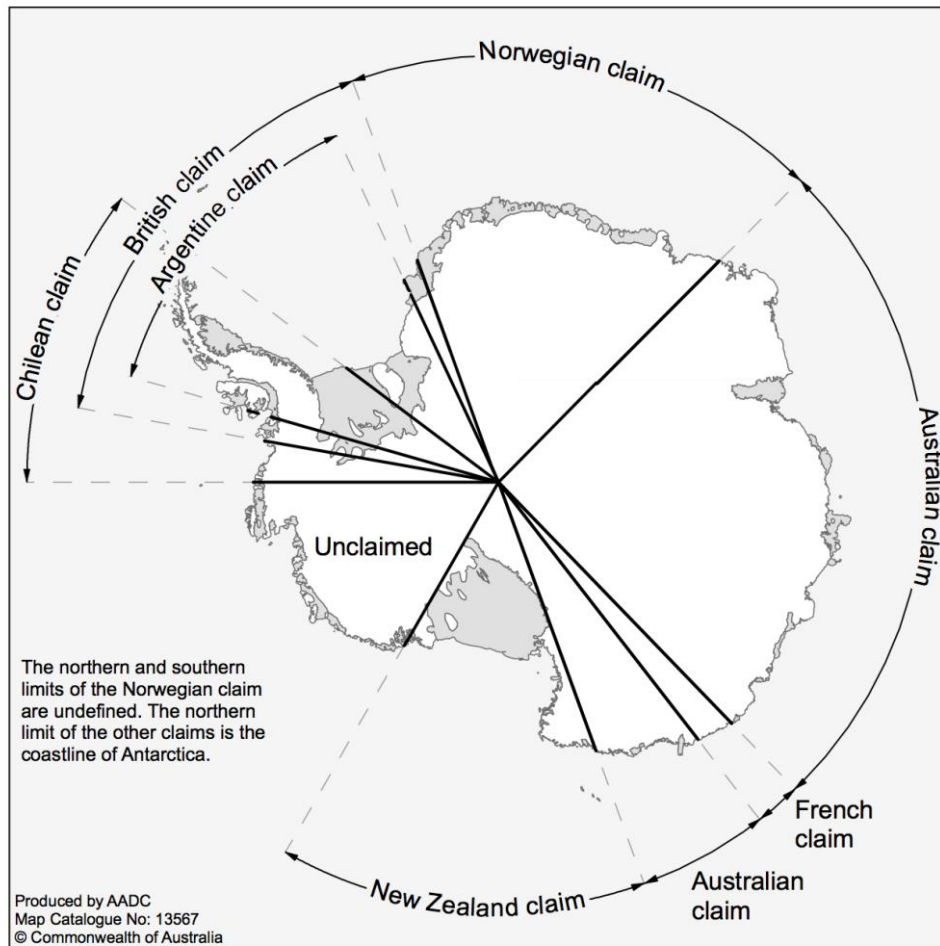


FIGURE 1: National Claims to Antarctic Territory.⁵⁸

III. Resources

At first glance, Antarctica appears to be an uneconomical landmass. Its surface is covered 98% in ice, has little vegetation, extremely cold temperatures, great winds, no rainfall, and

peace and science”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

58. Territorial Claims, *supra* note 54.

difficult terrain.⁵⁹ It was that harshness that made the continent appear as a barren wasteland that drew little attention from explorers and governments.⁶⁰ Upon closer inspection, however, Antarctica's true potential becomes apparent.

Food may not be as available in Antarctica as in other continents, but its surrounding waters tell quite the opposite story. Because of the constant daylight during half the year, nutrient rich waters, and the flow of underwater currents, the Southern ocean has been estimated to be up to eight times more productive than the north Atlantic, giving it an amazing biomass.⁶¹ In fact, the stock estimates in 1996 projected around 4.83 million tons of krill in the waters off of East Antarctica alone.⁶²

Antarctica's biggest untapped resource could potentially be those tiny shrimplike creatures that exist in massive quantities off its coasts.⁶³ Due to the high amount of protein they contain in their bodies, krill is the single largest protein mass on the planet.⁶⁴ Their present use in Japanese and Russian meals is something that could be introduced to the rest of the world, providing a new, cheap food source that could potentially substitute for shrimp and other types of seafood in the global market.⁶⁵ Currently, however, krill are being over-exploited as a

59. See *Antarctica Fact File*, UNITED KINGDOM NATURAL HISTORY MUSEUM, <http://nhm.ac.uk/nature-online/earth/antarctica/antarctica-fact-file/index.html> (last visited Apr. 19, 2015) (discussing the characteristics of the continent in general) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

60. See PETERSON, *supra* note 18, at 31–32 (explaining that the inhospitable nature of the land turned governments away from enforcing claims on Antarctica).

61. See SHAPLEY, *supra* note 23, at 115 (describing the immense krill resource available in the waters surrounding Antarctica).

62. See Timothy Pauly, *et. al.*, Distribution and Abundance of Antarctic Krill (*Euphausia superba*) Off East Antarctica (80–150°E) During the Austral Summer of 1995/1996, 47 *Deep Sea Research Part II: Topical Studies in Oceanography*, 2465 (Aug. 2000) (identifying the number of krill estimated in an hydroacoustic survey in East Antarctica).

63. See SHAPLEY, *supra* note 23, at 115 (describing the immensity of the biomass of the krill in the Southern Ocean).

64. See *id.* at 113 (explaining the protein content of krill to be nearly 16 percent).

65. See W. Nigel Bonner, *The Future of Antarctic Resources*, 152 *THE GEOGRAPHICAL J.* 248, 253 (1986) (“Most Krill is caught by the USSR and Japan.”).

result of fishing in international waters, an example of the tragedy of the commons.

Patagonian toothfish is currently the most valuable of Antarctica's sea produce at the moment.⁶⁶ It is a large fish, with fine white meat and few bones, fetching up to 10 dollars a kilo.⁶⁷ These fish are very common in southern waters, yet illegal fishing and excessive commercial fishing has slowly reduced its numbers in recent years.⁶⁸ This problem also constitutes a tragedy of the commons, as the fish are depleted with no incentive to regenerate lost fish, as they are fair game to other fishermen.

Antarctica has also been a historically great source of whale and seal products.⁶⁹ Most of these aquatic mammals migrate south to feed on the swarms of krill that surround Antarctica.⁷⁰ However, like the Patagonian toothfish, excessive whaling and sealing, both legal and illegal, has greatly reduced the numbers of these creatures.⁷¹ This practice was greatly reduced due to near extinction.⁷²

A huge cap of ice that is pushing down the actual continent 600 feet underground covers Antarctica's surface. It is estimated that Antarctica contains around 70% of the world's fresh water.⁷³ This massive water deposit is a market that, in the future, could be exploited once sufficient drilling and transportation technologies are developed. The uses for this could be commercial, agricultural, or even environmental. A single

66. See Dick Williams, *A History of the Patagonian Toothfish Fishery*, AUSTRALIAN ANTARCTIC MAGAZINE 47 (Spring 2001) ("Today the Patagonian Toothfish is the most valuable fishery in Antarctic or subantarctic waters.").

67. See *id.* (explaining that the white flesh and few bones in Patagonian Toothfish lead to high market prices).

68. See *id.* (noting that illegal fishing around the subantarctic islands has been a large-scale problem since 1996).

69. See Bonner, *supra* note 65, at 253 (detailing the few living resources found in and around Antarctica).

70. See *id.* at 253 (noting that whales are a major predator of krill).

71. See *id.* at 252 (describing the history of the seal harvesting and whaling that has taken place in Antarctica).

72. See *id.* (highlighting the international legislation and regulations in place to prevent over-exploitation).

73. See *id.* at 250 ("The Antarctic contains approximately 70 per cent of the world's supply of fresh water locked up in its ice-cap . . .").

iceberg, the Trolltunga, for example, had an area of nearly the size of Delaware, and could be a source of fresh water for nine times the annual requirements of the United States.⁷⁴

When first discovered, explorers were surprised to find lumps of coal scattered throughout the ice, as these two substances are almost never found together.⁷⁵ In fact, the presence of any mineral was considered unusual. Geological studies have since then revealed the existence of a massive continent, Gondwana, which was composed of Antarctica, Australia, South America, and Africa.⁷⁶ These countries have many kinds of resources which suggests that the Antarctica too must be mineral rich.⁷⁷ Some pockets of resources have been found and deemed “commercially insignificant,” yet the amount of land surveyed for resources is analogous to “prospecting in an area the size of Delaware for clues to the mineral wealth of the United States and Mexico.”⁷⁸ This gives a sense of perspective to the vast potential that could lie below the ice, and could serve as the basis for private property rights.

Coal and iron are the most prevalent of the minerals found, with one of the largest reserves on the planet.⁷⁹ Along with this, various pockets of natural gas and petroleum have been found, sparking certain degrees of interest in them.⁸⁰ Yet they remain unexploited as a result of the Antarctic Treaty.⁸¹ These resources could in effect lower global fuel prices, as well as shift coal production away from countries like China, the United States and India.

74. See F.M AUBURN, ANTARCTIC LAW AND POLITICS 32 (Ind. Univ. Press Bloomington, 1st ed. 1982) (providing one example of a large tabular berg composed of mostly fresh water).

75. See SHAPLEY, *supra* note 23, at 5 (questioning how coal and ice could coexist).

76. See Bonner, *supra* note 65, at 249 (providing an overview of the former supercontinent).

77. See *id.* (connecting the presence of minerals on the supercontinent derivatives).

78. See SHAPLEY, *supra* note 23, at 127.

79. See *id.* at 249 (hypothesizing that the Antarctic might contain the largest coalfield in the world).

80. See *id.* (noting that layers of sediments associated with oil deposits have been found).

81. See *id.* at 255 (explaining that the Antarctic Treaty keeps Antarctica a ‘continent for science’ for the benefit of the greatest number of people).

The year 1973 was a big one for Antarctic fossil fuels.⁸² It included a rise in Middle Eastern oil prices as well as a discovery of hydrocarbons by the accidental drilling of a scientific U.S. ship. Antarctic oil reserves are hard to accurately calculate, but there are approximately 45 billion barrels of oil in West Antarctica alone.⁸³ This oil deposit might equal the production of the U.S. Atlantic continental shelf. Still, in a world where fear of oil depletion still haunts some, Antarctica could potentially be nestled on large reserves. This belief is also coupled with several hydrocarbon findings, which make Antarctica potentially one of the world's biggest untapped oil sources. Prospecting combined with improvements in better extraction techniques could enable us to more accurately assess future prospects of oil production.⁸⁴

Antarctica's location in the south, a convergence point for the Indian, Atlantic and Pacific oceans, gives it a key location for accessing various landmasses. Were technology to advance to a point where Antarctica could actually be used as a settlement or trade area, the flow of products across the world could radically change. The most important thing, however, is that human creativity could come up with new ways to exploit the Antarctic continent and extract resources from it in ways that today seem impractical or beyond the scope of current human ability.⁸⁵ The major challenge in Antarctica is not weather, or skills, or technology; rather, it is to fix the political system so that private property rights can be respected.⁸⁶

82. See *id.* at 125 (explaining that the treaty powers moved to both claim jurisdiction and prioritize preservation in Antarctica in 1973).

83. See *id.* (stating that there is little known of what lies under the surface and waters surrounding Antarctica).

84. See *id.* (highlighting the fact that using Antarctica's natural resources can boost world oil production).

85. See *id.* (noting the melting of the Arctic Ice cap, with new nuclear boats opening their way through the ice between Russia, China, and other northern countries). The Antarctic Treaty does not allow for or even contemplate a market economy to internalize cost and benefits of the melting of the Arctic Ice cap. See *id.*

86. See Paul Lincoln Stoller, *Comment: Protecting the White Continent: Is the Antarctic Protocol Mere Words or Real Action?*, 12 ARIZ. J. INT'L & COMP. LAW 335, 336 (1995) (outlining the numerous problems associated with Antarctica and how these problems led to the adoption of the Antarctic Treaty).

IV. Criticisms

Antarctica is currently at a standstill, and this is the result of the nature of politics and governments worldwide.⁸⁷ Antarctica's current level of stagnation is a direct result of government mismanagement, which seeks to retard resource exploitation.⁸⁸ This government mismanagement consists of abuse of jurisdiction to prevent people from claiming parts of Antarctica, coalitions to prevent countries from entering the markets, the desire to prevent expansion by other nations, and the overall inefficiency to determine what to do with Antarctica is a result of government officials who seek to pursue their own interests.⁸⁹

An example of this is the American attempt to divide Antarctica, which was summarily rejected due to political tensions.⁹⁰ Instead of allowing economic freedom, governments use their political weight to prevent others from trying to compete.⁹¹ Another example was the refusal to accept any type of treaty that could have resulted in a separate sovereign state.⁹² This was quite hypocritical as many of the countries, including the United States, were colonies that later became independent.

For decades, Antarctica has remained static while its resources, which could be used for the benefit of all humanity, remain untouched.⁹³ Instead, the fifth largest continent is used

87. See Rozzof, *supra* note 52 (discussing historical territorial claims made by different countries).

88. See *id.* (giving the current political structure in Antarctica, which limits it to scientific endeavors).

89. See *id.* (limiting what countries can do in Antarctica).

90. See MARIE JACOBSSON, BUILDING THE INTERNATIONAL LEGAL FRAMEWORK FOR ANTARCTICA, at 4 <http://www.atsummit50.org/media/book-5.pdf> (providing background of previously proposed Antarctic plans for development) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

91. See ADRIAN JOHN HOSKINS, FROZEN EMPIRES: A HISTORY OF THE ANTARCTIC SOVEREIGNTY DISPUTE BETWEEN BRITAIN, ARGENTINA, AND CHILE, 1939–1959 172 (2008) (stating the different ways that countries used their influence to overrule previous treaty attempts).

92. See Rozzof, *supra* note 52 (describing the different attempts to privatize Antarctica).

93. See Bonner, *supra* note 65, at 249 (discussing different resources, including minerals and oil, that are present in Antarctica).

only for research stations.⁹⁴ Is that really what is needed? Obviously, individuals, politicians, or even combinations of them can't be certain. Markets, on the other hand, would best determine the proper allocation between mining companies and research stations as they do for every other good and service.⁹⁵ Private property rights better determine resource usage. Have we learned nothing for the economic disarray of East Germany, Cuba, the U.S.S.R? These lessons are not being applied to Antarctica.⁹⁶ Competition would ensure that those who waste resources go out of business, that pollution would be internalized to prevent legal action and that innovation to differentiate products would actually be brought forth.

Lack of ownership in Antarctica has already had damaging effects on the environment.⁹⁷ Due to the unusual status of maritime claims around the land as a result of riparian law, there has been a tremendous abuse of fish, whales, and seals to the point that extinction was a real threat.⁹⁸ Attempts at regulation of the harvest of these creatures have proven ineffective, with declining populations resulting from both legal and illegal fishing.⁹⁹ Without private ownership, there is little or no incentive to keep the animals alive, no way to farm them, and

94. See Stoller, *supra* note 86, at 338 (outlining the results that could occur through scientific research).

95. *The Madrid Protocol*, AUSTRALIAN ANTARCTIC DIVISION <http://www.antarctica.gov.au/law-and-treaty/the-madrid-protocol> (last visited Apr. 19, 2015) (outlining the limits of Antarctic claims and further limiting the 1595 Antarctica Treaty) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

96. See Rozzof, *supra* note 52 (describing the political problems that have arisen in relation to Antarctica).

97. See Christina A. Hoefsmit, *Note and Comment: Southern Ocean Shakeup: Establishing Sovereignty in Antarctica and the Consequences for Fishery Management*, 15 ROGER WILLIAMS U. L. REV. 547, 548 (describing the overall effect that the Antarctic political situation has had on the fish environment).

98. See *id.* (stating the risk that the environment faces due to this lack of enforcement).

99. See *id.* (highlighting the fact that the 1959 Antarctica Treaty does not extend to aquatic resources).

no reason to spare any to the competition.¹⁰⁰ This situation puts the Antarctic biodiversity at great risk.¹⁰¹

There are many ways that this issue could be approached: governments could enforce their claims,¹⁰² the land could be split evenly among countries,¹⁰³ the continent could be opened to citizens of the world to homestead,¹⁰⁴ etc. The methods and approaches are numerous but privatization is an alternative that will not only yield better results, but the optimal ones.¹⁰⁵

Delineating private property can be done in several ways. The Lockean view, in which mixing labor with the land actually gives a person claim over the property, is ideal.¹⁰⁶ In the case of Antarctica, this interpretation could be followed in some degree in an approach similar to the Homestead Act, either under a free Antarctica, or under different national claims.¹⁰⁷ This might well center on resource extraction.¹⁰⁸ Technological developments

100. See *id.* (outlining problems that could result if this environment is not regulated in the future).

101. See *id.* (giving the possible solution that could occur to the local environment and providing a way to fix that problem).

102. See Christy Collis, *Critical Legal Geographies of Possession: Antarctica and the International Geophysical Year 1957–1958*, 75 GEO J. (No. 4) 387, 389–91 (2010) (explaining one historical viewpoint of Antarctica as under territorial claim).

103. See *id.* at 392 (outlining another view of the Antarctic as *terra communis* being “a continent communally owned by every person on Earth”).

104. See Scott J. Shackelford, *The Tragedy of the Common Heritage of Mankind*, 28 STAN. ENVTL. L.J. 109, 112 (2009) (promoting the benefits of a homesteading system for international commons).

105. See *id.* at 168 (advocating that a form of privatization “would better promote economic growth, achieve optimal levels of pollution, reduce inefficiency, and modify the legal regime by responding to societal needs”).

106. See Walter E. Block & Michael R. Edelstein, *Popsicle Sticks and Homesteading Land for Nature Preserves*, 7 ROM. ECON. & BUS. REV. (No. 1) 7, 7 (2012) (“According to libertarian theory if private property rights are to be properly conferred on unowned virgin territory, it must be done through a process of homesteading.”); see also HANS-HERMANN HOPPE, *THE ECONOMICS AND ETHICS OF PRIVATE PROPERTY: STUDIES IN POLITICAL ECONOMY AND PHILOSOPHY*, 332 (2d ed., Ludwig von Mises Institute 2006) (“Every person owns his own body as well as all scarce goods which he puts to use with the help of his body before anyone else does . . . [which] implies the right to employ these scarce goods however one sees fit [without harming another] . . .”).

107. See Shackelford, *supra* note 104, at 112 (suggesting “a modified leasehold system somewhat reminiscent of the Homestead Act”).

108. See *id.* at 119 (noting developing nations’ drive for “direct participation in the international management of resource extraction”).

would aid this process.¹⁰⁹ In the future, this could facilitate the habitation of Antarctica.¹¹⁰ A procedure similar to sea steading,¹¹¹ an idea of creating nations on international waters, could facilitate privatization. An approach as this one would require that the nations with claims over the land declare this as *res communis*, however.¹¹²

A formal privatization can be an alternative to homesteading. There are four different methods of such privatization: direct sale, mass privatization, management-employee buyout, and restitution.¹¹³ Privatization increases the role of the private sector and private property rights in the

109. See *id.* at 111 (“With resources becoming increasingly scarce and technology advancing to meet surging demand, longstanding principles of communal property in the international commons will either be reinterpreted or rewritten outright.”).

110. See British Antarctic Survey, Natural Environment Research Council, *Living in Antarctica* (describing currently established “comfortable living quarters, with living areas and bedrooms, a kitchen, offices, communication room, generator rooms and facilities” in Antarctica) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT); see also Felicity Aston, *Polar Vehicles Get Ice Traction*, ENGINEERING & TECH. MAG. (Mar. 16, 2015) (finding it “far too comfortable to be proper polar exploring” as modern technology offered an Antarctic-capable vehicle with “a conveniently placed holder,” a “heated driver’s seat,” and “music on a six-speaker audio system”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

111. See Doug Bandow, *Getting Around Big Government: The Seastead Revolution Begins to Take Shape*, FORBES (Jul. 30, 2012) (defining “seasteading” as “living on a floating city outside of any country’s jurisdiction”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

112. See Shackelford, *supra* note 104, at 139 (“The legal status of Antarctica remains unsettled. It is not *terra communis*, since a number of states formally uphold their claims over sections of the continent.”) Shackelford indicates that a privatization effort such as he proposes would require “renouncement of all [state] territorial claims and a movement towards an internationalized regime.” *Id.*

113. See Oleh Havrylyshyn & Donal McGettigan, *Privatization in Transition Countries: Lessons of the First Decade*, ECON. ISSUES (No. 18) (International Monetary Fund, Aug. 1999), available at <http://www.imf.org/external/pubs/ft/issues/issues18> (defining direct sale, mass privatization, management-employee buyout, and restitution); see also John Bennet, et. al, *The Choice Of Privatization Method In A Transition Economy When Insiders Control A Firm*, 23 EUROPEAN J. OF POL. ECON. 806, 806–07 (2007) (discussing methods of privatization for economies transitioning from communism to capitalism).

economy.¹¹⁴ Properly-defined and enforced private property rights are key ingredients of economic progress.¹¹⁵ Privatization of Antarctica is an effective process of property transfer from the current status quo of no man's land to the private sector (*i.e.*, private business and private ownership).¹¹⁶

The modern concept of privatization is often associated with its implementation by Britain's Prime Minister Margaret Thatcher in the early 1980s.¹¹⁷ Facing dire economic conditions, the Thatcher government decided to sell state-owned companies to raise revenues and improve the efficiency of state-owned enterprises.¹¹⁸ The success of the privatization of the British Telecom in 1984 made privatization a popular policy in the United Kingdom and across the world.¹¹⁹ A series of successful

114. See *id.* ("Owners must be assured of the right to use assets, to decide on their use by others, and to profit from their use and sale.")

115. See James Gwartney, et. al, *Economic Freedom of the World: 2011 Annual Report*, 6 (Fraser Inst. 2011) ("Protection of persons and their rightfully acquired property is a central element of economic freedom and a civil society. Indeed, it is the most important function of government."); See also James Gwartney, et. al, *Economic Freedom of the World 1975-1995*, 27 (Fraser Inst. 1996) ("A legal structure that clearly defines property rights, enforces contracts, and provides a mutually agreeable mechanism for the settlement of contractual and property right disputes provides the foundation for a market economy.")

116. See Shackelford, *supra* note 104, at 165 ("[F]ormalized property rights are . . . the starting point for sustained economic growth . . . [and with those rights,] the market would better promote economic growth, achieve optimal levels of pollution, reduce inefficiency, and modify the legal regime by responding to societal needs.")

117. See Saul Estrin, *The Impact of Privatization in Transition Economies*, 2 (London Sch. of Econ. & Pol. Sci., Jan. 2007) ("[Privatization] has been a major activity for governments in both the developed and developing world since Mrs. Thatcher's first modern privatization programme in the UK between 1979 and 1984.")

118. See Richard Seymour, *A Short History of Privatisation in the UK: 1979-2012*, THE GUARDIAN, Mar. 29, 2012, <http://www.theguardian.com/commentisfree/2012/mar/29/short-history-of-privatisation> ("In response to the prolonged crisis of the 1970s, . . . [the Thatcher government] focus[ed] . . . on privatising already profitable entities to raise revenues and thus reduce public-sector borrowing.") (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

119. See Amy L. Chua, *The Privatization-Nationalization Cycle: The Link Between Markets and Ethnicity in Developing Countries*, 95 COLUM. L. REV. 223, 223 (1995) ("By the early 1990s, 'at least eighty-three countries were conducting some significant form of privatization' . . ."); see also Maxwell O. Chibundu, *Law and the Political Economy of Privatization in Sub-Saharan*

privatizations between the late 1980s and the early 1990s greatly reduced the share of the public sector in the British economy.¹²⁰

The Thatcher government started a wave of privatization copied across the world.¹²¹ Italy, France, Germany, and other European countries also launched privatization programs in the 1990s.¹²² Asian countries including Japan and China followed suit.¹²³ While the government involvement in China's economy remains significantly large, small-scale privatization has been moving China's economy towards capitalism since the 1970s. Latin American countries (*i.e.*, Chile, Mexico, Brazil, and Guatemala) also used privatization for both political and economic purposes with different rates of success.¹²⁴ Sub-Saharan Africa remains a region with the lowest number of privatizations, while Antarctica is completely excluded from this market reform.¹²⁵ The most recent wave of privatization is

Africa, 21 MD. J. INT'L L. & TRADE 1, 10 (1997) (describing "the emergence of privatization as a global phenomenon . . . [substantially because of] Britain, and more specifically her combative former Prime Minister, Margaret Thatcher, [who] blazed the path").

120. See Larry Elliott & Jill Treanor, *A Whole World Sold on Sell-Offs*, THE GUARDIAN, NOV. 21, 2000, <http://www.theguardian.com/business/2000/nov/22/thatcher.politics1> ("In one stroke, the dead hand of the state was removed from the economy, unleashing a new spirit of enterprise and derring do.") (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

121. See Chibundu, *supra* note 119, at 11 (discussing privatization in Eastern Europe and Latin America).

122. See Organisation for Economic Co-operation and Development, *Privatisation in the 21st Century: Recent Experiences of OECD Countries, Report on Good Practices*, 6 (Jan. 2009) (detailing results of privatizations in France, Italy, Germany, Japan, Turkey, Netherlands, Australia, etc.).

123. See Robert W. Poole, Jr., *Privatization*, The Concise Encyclopedia of Economics, The Library of Economics and Liberty (2008), <http://www.econlib.org/library/Enc/Privatization.html> ("China, India, and numerous other developing countries continue to prepare and sell [state-owned-enterprises] . . .") (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

124. See William L. Megginson & Jeffrey M. Netter, *From State to Market: A Survey of Empirical Studies on Privatization*, 39(2) Journal of Economic Literature, 321, 325–26 (2001) (discussing how privatization has fared in various Latin American countries).

125. See *id.* at 326 (stating that few countries in sub-Saharan Africa have embarked on privatization programs).

associated with former communist countries in Europe and former Soviet states.¹²⁶

Privatization was a part of large reform in post-communist countries like Russia and the Czech Republic.¹²⁷ For former communist countries, privatization was a significant stepping stone towards capitalism and democracy.¹²⁸ The main objectives of privatization in this area of the world were to create a private sector and to reduce the role of state in former command (*i.e.*, state-controlled) economies.¹²⁹ After the collapse of communism in 1989-1991, the former communist countries embarked on privatization that was mainly accomplished by three methods: mass privatization, management-employee buyout, and direct sale.¹³⁰

Mass privatization was the most popular method among former communist countries.¹³¹ It allocates vouchers to eligible citizens for free or at nominal cost so that people can use them for share acquisition of state-owned assets (e.g., factories, land).¹³² The first mass privatization began in former Czechoslovakia in 1992.¹³³ Other post-communist countries followed the Czech model of privatization with slight variations.¹³⁴ Management-employee buyout, also popular among the post-communist countries, gives employees of state-owned enterprise certain privileges in the share acquisition of state-owned enterprise (*i.e.*,

126. *See id.* (“The last major region to adopt privatization programs comprises the former Soviet-bloc countries of central and eastern Europe.”).

127. *See id.* at 345 (noting that Russia and the Czech Republic underwent privatization after the fall of communism).

128. *See id.* at 326 (discussing the implications of privatization in formerly communist countries).

129. *See id.* (“These countries began privatizing SOEs as part of a broader effort to transform themselves from command to market economies.”).

130. *See id.* at 380 (describing the three types of schemes that governments generally use to effect privatization).

131. *See id.* at 326 (noting that many countries preferred the mass privatization method).

132. *See id.* (explaining the mechanics of the mass privatization method).

133. *See id.* at 360 (commenting that Czech privatization began in 1992).

134. *See id.* at 327–28 (discussing the trend towards mass privatization in Europe).

exclusive buy-out rights or priority buy-out rights).¹³⁵ For example, in former Czechoslovakia privatization allowed all citizens to participate in the privatization of state-owned companies, while in Russia the government restricted privatization of state-owned enterprise only to managers and employees.¹³⁶

Privatization does not have to be the deliberate sale of public assets to private owners.¹³⁷ It can also consist of a free conversion of public to private property.¹³⁸ A free give-away of public property to people has become associated with populist policies in former communist countries like Ukraine and Poland.¹³⁹

Another example of free privatization is restitution. This is the process of returning public property to private ownership if the state-owned assets are acquired through expropriation of private property.¹⁴⁰ It allows only the original owners or their heirs to come to own state-owned property. Restitution, or reparations, is important for establishing essential governance norms such as government accountability, respect for the rule of law, trust in government, and protection of individual rights.¹⁴¹ Nonetheless, restitution is an inappropriate method of privatization in the case of Antarctica because the lands were never privately owned.¹⁴²

The empirical economic literature on the effect of privatization demonstrates that privately-owned enterprise performs better than government-owned enterprise (Megginson

135. See *id.* at 342–43 (explaining that direct asset sales may prefer certain investors to others).

136. See *id.* at 345 (providing an overview of the privatization programs in Czechoslovakia and Russia).

137. See *id.* at 339–40 (discussing various methods of privatization).

138. See *id.* at 339 (describing how voucher programs are used to distribute state owned assets at little or no cost to investors).

139. See *id.* at 345 (illustrating how voucher programs were used throughout Europe).

140. See *id.* at 339 (explaining how restitution operates).

141. See *id.* (implying that there are valuable policy reasons behind restitution).

142. See generally Walter Block, *On Reparations to Blacks for Slavery*, 3(4) *Human Rights Review*, 53 (2002); Wilton D. Alston & Walter E. Block, *Reparations, Once Again*, 9(3) *Human Rights Review*, 379 (2007).

and Netter, 2001).¹⁴³ One of these studies directly deals with the exploration of Arctic by using a sample of 35 government and 57 privately-funded expeditions to the Arctic from 1818 to 1901.¹⁴⁴ Karpoff (2001) finds that the privately-funded expeditions performed better.¹⁴⁵ They made a larger number of major discoveries and technological innovations.¹⁴⁶ In contrast, government-funded expeditions incurred the most major losses.¹⁴⁷ They lost more ships.¹⁴⁸ They had higher rates of scurvy and crew deaths.¹⁴⁹

The importance lies, however, on the final goal. An Antarctica that is free to develop its resources in conformity with the market and the needs of humanity would tend to lead to the development of better technologies in this regard.¹⁵⁰ Market forces will maximize the value of Antarctica and, hopefully, bring more resources to the people of the world.

V. Conclusion

We are not headed for a world without resources. That is far from the reality. If and when resources run low, their prices rise. This leads us to use our resources in smarter ways. We dig a little deeper. We make use of the resources we have and try to

143. See Megginson, *supra* note 124, at 380-81 (concluding that privatization generates a generally positive economic result).

144. See Jonathan M. Karpoff, *Public versus Private Initiative in Arctic Exploration: The Effects of Incentives and Organizational Structure*, 109(1) J. OF POL. ECON., 38 (2001) ("From 1818 to 1909, 35 government and 57 privately funded expeditions sought to locate and navigate a Northwest Passage, discover the North Pole, and make other significant discoveries in Arctic regions.").

145. See *id.* (summarizing that privately-funded expeditions tended to produce better results).

146. See *id.* at 40 (noting that privately-funded expeditions were generally more successful).

147. See *id.* at 38 ("Public expeditions were better funded than their private counterparts yet lost more ships, experienced poorer crew health, and had more men die.").

148. See *id.* (stating that publicly funded expeditions lost more ships than privately funded expeditions).

149. See *id.* ("They made fewer major discoveries, introduced fewer technological innovations, were subject to higher rates of scurvy, lost more ships, and had more explorers die.").

150. See Bonner, *supra* note 65, at 254 (implying that market forces are the most efficient driver of development in Antarctica).

maximize their productivity. We use less of them. We look harder for substitutes. When the time comes to tap into Antarctica's resources, the forces of supply and demand will decide how much oil is extracted, how effectively it will be used, and how pollution and research will be involved in the development of the territory.

The privatization of Antarctica is something that will bring about benefits for everyone across the board. How we can accomplish this, politically, is unclear. Political interests run high, focused not on using resources but preventing others from doing so. The governments of the world do not pursue the betterment of mankind, but the betterment of flags, governments, and specific parties selected as a result of personal preference. Until we can rid ourselves from these biases, until world leaders recognize that privatization is the most effective way to exploit the continent, the situation will continue as it is: stagnant. This is a call to action, and one that people, not the government, must make.