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S. Houston Lay
California Western University

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Cover Page Footnote

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AN ANALYSIS OF THE DEEP SEABED MINING PROVISIONS OF THE LAW OF THE SEA CONVENTION

*S. Houston Lay**

I. INTRODUCTION

The United States has been actively involved with the law of the sea and the United Nations for many years. The past administrations of Nixon, Ford, and Carter, actively participated and sought to mold an acceptable Law of the Sea Convention (LOS) for all nations.[1] In 1980, when the LOS was near completion, it appeared that the United States might sign the treaty.[2] The Reagan administration, however, took a different view.[3] President Reagan withdrew the United States delegation from negotiations upon the LOS and ordered a review of the entire draft convention.[4] President Reagan then sent the United States delegation back to the bargaining table, but this time with a tough stance toward certain provisions of the draft treaty that he believed required further negotiation.[5]

In a May 4, 1984 interview, President Reagan offered the following reflections on that decision:

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*Professor Emeritus, California Western School of Law. Special thanks to Michael Sharpe, senior class, California Western School of Law, who participated in every aspect of the research and drafting of this article.

1. Comment, *Protection of Investment in Deep Seabed Mining: Does the United States Have a Viable Alternative to Participation in UNCLOS?*, 2 B.U. INT'L L.J. 267, 275, 276 (1983). The United States helped to design the four conventions which were a product of the first United Nations Conference on the Law of the Sea. Convention on the High Seas, Apr. 29, 1958, 13 U.S.T. 2312, T.I.A.S. No. 5200, 450 U.N.T.S. 82 (entered into force for U.S., Sept. 30, 1962); Convention on the Continental Shelf, Apr. 29, 1958, 15 U.S.T. 471, T.I.A.S. No. 5578, 499 U.N.T.S. 311 (entered into force for U.S., June 10, 1964); Convention on the Territorial Sea and the Contiguous Zone, Apr. 29, 1958, 15 U.S.T. 1606, T.I.A.S. No. 5639, 516 U.N.T.S. 205 (entered into force for U.S., Sept. 10, 1964); Convention on Fishing and Conservation of the Living Resources of the High Seas, Apr. 29, 1958, 17 U.S.T. 138, T.I.A.S. No. 5269, 559 U.N.T.S. 285 (entered into force for U.S., Mar. 20, 1966). *See also* A. HOLLICK, U.S. FOREIGN POLICY AND THE LAW OF THE SEA at 355–77 (1981) (for a brief discussion of various administrations with regard to LOS).

2. Comment, *supra* note 1, at 276.

3. *Id.* at 276. *See* Larson, *The Reagan Administration and the Law of the Sea*, 11 OCEAN DEV. & INT'L L.J. 297 (1982); Note, *American Ocean Policy Adrift: An Exclusive Economic Zone as an Alternative to the Law of the Sea Treaty*, 35 U. FLA. L. REV. 492 (1983).

4. United Nations Convention on the Law of the Sea, *opened for signature* Dec. 10, 1982, 21 INT'L LEGAL MATERIALS 1261 (1982) [hereinafter cited as LOS Convention]. The convention requires 60 ratifications (or accessions) to enter into force. *Id.* art. 308, para. 1, at 1327.

5. *Id.*

> When we announced that the United States would not sign the convention, I stated that the deep seabed mining section did not meet U.S. objectives. Our problems with the deep seabed mining regime include:
> [*A*]—provisions that would actually deter future development of deep seabed resources, when such development should serve the interests of all countries;
> [*B*]—a decisionmaking process that would not give the United States or others a role that fairly reflects and protects their interests;
> [*C*]—provisions that would allow amendments without United States approval. This is incompatible with our approach to treaties;
> [*D*]—stipulations relating to mandatory transfer of private technology and the possibility of national liberation movements sharing in benefits; and
> [*E*]—the absence of assured access for future qualified deep seabed miners to promote the development of these resources.
>
> In spite of our well-known objections and renewed negotiating efforts in early 1982, the Law of the Sea Conference adopted the convention on April 30, 1982, although, after nearly 2 years, it has not yet come into force. I would also point out that many major industrialized nations share our concerns. As to amending the convention, at this point it would be most difficult, and we are not aware of any move to do so. Nevertheless, the convention contains many positive and significant accomplishments. *We are prepared to accept and act in accordance with international law as reflected in the Law of the Sea Convention that relates to traditional uses of the ocean.* We are *willing to respect the maritime claims of others, including economic zones,* that are consistent with international law as reflected in the convention, *so long as the international rights and freedoms of the United States and others in such areas are respected.*[6]

The preceding remarks of President Reagan are illustrative of the current administration's stance concerning the LOS.[7] Specifically, the Reagan administration finds unacceptable certain provisions of the LOS that deal with mining of the deep seabed in the Area,[8] as well as some other provisions relating to control of the high seabed and financing of the Authority to be established. This article charts a simple course. First, the import of deep seabed mining within the Area will be

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6. *Responses to Questions Submitted by Pacific Magazine,* 20 WEEKLY COMP. PRES. DOC. 647, 649–50 (May 4, 1984) (emphasis added) [hereinafter cited as *Responses*]; *see also* Breaux, *The Case against the Convention,* in THE 1982 CONVENTION ON THE LAW OF THE SEA 10 (A. Koers & B. Oxman ed. 1983); Larson, *supra* note 3, at 304–05.

7. A number of other industrialized nations have not signed the convention for primarily the same reasons as the United States. *See* Charney, *The Law of the Deep Seabed Post UNCLOS III,* 63 OR. L. REV. 19, 20 n.3 (1984).

8. "The [Area] comprises the seabed and subsoil 'beyond the limits of national jurisdiction'—that is, beyond the limits of the continental shelf subject to coastal state jurisdiction." Oxman, *The New Law of the Sea,* 69 A.B.A. J. 156, 160 (1983).

addressed. Second, each of the specific objections that President Reagan articulated in his statement to the press will be analyzed in the order presented. Finally, a pragmatic forecast of the future policies of the Reagan administration and the United States with regard to the LOS will be discussed.[9]

II. DEEP SEABED MINING WITHIN THE AREA: THE ATTRACTION TO THE UNITED STATES

The United States is attracted to the deep seabed by the manganese nodules and other resources that lie scattered about on the seabed. As early as 1876, manganese nodules were retrieved from the ocean floor.[10] But it was not until the 1970's that substantial quantities of manganese nodules were removed.[11] "The extent of these seabed deposits is a matter of academic dispute."[12] However, it is abundantly clear that the industrial companies have done significantly more prospecting than the scientists. For the purposes of this article, therefore, the industrial figures will be used.[13]

Present estimates indicate that 1.5 trillion tons of manganese nodules lie on the seabed within the Area.[14] The manganese nodules of commercial interest consist of about 30% manganese, 1.4% nickel, 1.2% copper, and 0.25% to 0.3% cobalt.[15] These figures on their face are neither astounding nor startling, however, when "compared with mineral deposits on land, it is indeed a very rich ore."[16]

Basically, there are five factors which elevate the manganese nod-

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9. This article does not address the fact that the LOS supports the "New Economic Order" espoused by the third world countries which would require the United States to contribute funds for the purposes of the LOS in the same ratio as the United States has contributed to the United Nations. In addition, the United States would be expected to contribute the technology. The United States would have very little influence over the policies of the LOS and its administrative organizations.

10. Charney, *supra* note 7, at 22. *See also* Brewer, *Deep Seabed Mining: Can an Acceptable Regime Ever Be Found*, 11 OCEAN DEV. & INT'L L.J. 25, 26–27 (1982).

11. Brewer, *supra* note 10, at 26–27.

12. T. KRONMILLER, THE LAWFULNESS OF DEEP SEABED MINING II 245 (1980).

13. *Id.* at 246.

14. Comment, *The International Sea-Bed Authority Decision-Making Process: Does It Give a Proportionate Voice to the Participant's Interests in Deep Sea Mining?*, 20 SAN DIEGO L. REV. 659, 664 (1983). *See also* T. KRONMILLER, *supra* note 12, at 14.

15. T. KRONMILLER, *supra* note 12, at 246.

16. *Id.*

> Some industry statements have noted that the nickel contained in just two deposits could almost equal the total size of the world's land-based reserves of this metal. Second, large parts of the Indian Ocean, have been essentially unexplored, but nodules of good grade have been found in these areas and the probability is high that they will contain valuable deposits.

Id.

ules to a position of immense import to the United States.[17] These factors are (1) the manganese nodules contain raw materials that are critically important to the national economy; (2) the United States currently imports most of these minerals; (3) the importance of a stable supply of these minerals; (4) the continuing depletion of sources of land-based minerals, and; (5) the critical need for future alternative sources of these minerals.[18]

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17. *Id.* at 251–54. Congressional findings are also illustrative of the United States position: The Congress finds that—

(1) the United States' requirements for hard minerals to satisfy national industrial needs will continue to expand and the demand for such minerals will increasingly exceed the available domestic sources of supply;

(2) in the case of certain hard minerals, the United States is dependent upon foreign sources of supply and the acquisition of such minerals from foreign sources is a significant factor in the national balance-of-payments position;

(3) the present and future national interest of the United States requires the availability of hard mineral resources which is independent of the export policies of foreign nations;

(4) there is an alternate source of supply, which is significant in relation to national needs, of certain hard minerals, including nickel, copper, cobalt, and manganese, contained in the nodules existing in great abundance on the deep seabed;

(5) the nations of the world, including the United States, will benefit if the hard mineral resources of the deep seabed beyond limits of national jurisdiction can be developed and made available for their use;

(6) in particular, future access to the nickel, copper, cobalt, and manganese resources of the deep seabed will be important to the industrial needs of the nations of the world, both developed and developing;

. . . .

(11) development of technology required for the exploration and recovery of hard mineral resources of the deep seabed will require substantial investment for many years before commercial production can occur, and must proceed at this time if deep seabed minerals are to be available when needed;

(12) it is the legal opinion of the United States that exploration for and commercial recovery of hard mineral resources of the deep seabed are freedoms of the high seas subject to a duty of reasonable regard to the interests of other states in their exercise of those and other freedoms recognized by general principles of international law;

(13) pending a Law of the Sea Treaty, and in the absence of agreement among states on applicable principles of international law, the uncertainty among potential investors as to the future legal regime is likely to discourage or prevent the investments necessary to develop deep seabed mining technology;

(14) pending a Law of the Sea Treaty, the protection of the marine environment from damage caused by exploration or recovery of hard mineral resources of the deep seabed depends upon the enactment of suitable interim national legislation;

(15) a Law of the Sea Treaty is likely to establish financial arrangements which obligate the United States or United States citizens to make payments to an international organization with respect to exploration or recovery of the hard mineral resources of the deep seabed; and

(16) legislation is required to establish an interim legal regime under which technology can be developed and the exploration and recovery of the hard mineral resources of the deep seabed can take place until such time as the Law of the Sea Treaty enters into force with respect to the United States.

30 U.S.C. § 1401(a) (1982).

18. T. KRONMILLER, *supra* note 12, at 251–54.

There are currently five international consortia which make up the deep seabed mining industry.[19] None of these companies are actively mining the deep seabed.[20] However, they have all engaged in test mining with some success.[21] Aside from the five major consortia, a number of corporations are currently investing vast sums of money in research and development. In this regard, over $200 million dollars has been spent on research and development alone.[22]

The primary economic obstacle to active mining is the estimated start-up cost in excess of $1 billion dollars coupled with the fact that the world metal markets have been severely depressed.[23] The leviathan obstacle, however, is that the current political and legal framework within which mining companies must operate is not secure.[24] It is, therefore, small wonder that these companies are cautious in their mining operations. "The legal regime under which billions of dollars need to be invested is thus in dispute."[25]

Moreover, these major consortia, with millions of dollars invested in research and development in order to develop the requisite technology for successful mining, are fearful that provisions within the LOS would not protect their interests.[26] Specifically, the fear is that certain transfer of technology provisions within the LOS might force the consortia to provide their expensive technology to other countries.[27] The existing transfer of technology provisions in the LOS quell the impetus of private industry to invest their hard-earned dollars into research and development of seabed mining.[28]

The United States has both the technology to mine the deep seabed and a critical need for the minerals within the manganese nodules that lay upon the deep seabed floor. The ensuing discussion will analyze some of the United States' reasons for not signing the LOS which purports to provide for access to mining of the deep seabed within the Area.

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19. *Id.* at 248. American, Belgian, British, Canadian, Dutch, French, German, and Japanese companies are presently organized into five international consortia, although numerous other mining companies are following the development of ocean mining technology with intense interest. For the compositions of the consortia see *id.* at 248.

20. T. KRONMILLER, *supra* note 12, at 248.

21. *Id.* at 249.

22. *Id.* at 247, 250; Comment, *supra* note 1, at 279–80.

23. T. KRONMILLER, *supra* note 12, at 249–50.

24. *Id.*

25. *Id.* at 254.

26. *See generally* Comment, *supra* note 1, at 279–80.

27. Marsteller & Tucker, *Problems of the Technology Transfer Provisions in the Law of the Sea Treaty*, 24 IDEA 167, 169 (1983).

28. *Id.*

III. UNITED STATES PROBLEMS WITH THE DEEP SEABED MINING REGIME

A. "Provisions that would actually deter future development of deep seabed resources, when such development should serve the interests of all countries."[29]

The LOS, signed in December of 1982, was not successful in molding the requisite machinery necessary to instill confidence in those interested in seabed mining.[30] President Reagan referred to portions of the deep seabed mining regime as discouraging investment in mining, and as having a deleterious affect upon free-market economics.[31] President Reagan perceived the International Seabed Authority (ISA) "as an international cartel that would monopolize deep seabed mining.[32]

The position of the Reagan administration was summarized as follows:

> We believe the seabed mining provisions would deter the development of deep seabed mineral resources. Economic development of these resources is in the interest of all countries. In a world in which rational economic development is so critical, particularly for developing countries, the treaty would create yet another barrier to such development. *It would deny the play of basic economic forces in the market place.*[33]

As the pertinent articles of the LOS indicate, the Authority is provided broad discretionary powers that amount to the establishment of an economic cartel.[34] The Reagan administration views such limitations

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29. *Responses, supra* note 6, at 649–50.

30. Van Dyke & Teichmann, *Transfer of Seabed Mining Technology: A Stumbling Block to U.S. Ratification of the Law of the Sea Convention?*, 13 OCEAN DEV. & INT'L L.J. 427, 429 (1984).

31. A deep seabed mining regime is established under the LOS. *See generally* LOS Convention, *supra* note 4. Specifically, the articles that are intended to do this are: "The Area" articles 133–55; "The Authority" articles 156–58; "The Assembly" articles 159–60; "The Council" articles 161–65; "The Enterprise" article 170; "Financial Arrangements of the Authority" articles 171–91; "Development and Transfer of Marine Technology" articles 266–77, and Annexes III and IV. *Id.*

32. Larson, *supra* note 3, at 317.

33. United States statement made in Plenary by Ambassador James Malone (April 30, 1982) (emphasis added), *reprinted in* THE LAW OF THE SEA INST., REPORTS OF THE UNITED STATES DELEGATION TO THE THIRD CONFERENCE OF THE LOS 594 (M. Nordquist ed.) [hereinafter cited as Malone].

34. Part XI (articles 156–88) of the LOS establishes the International Sea-Bed Authority as "the organization through which States Parties shall, in accordance with this Part organize and control activities in the Area, particularly with a view to administering the resources of the Area." LOS Convention, *supra* note 4, art. 157, at 1298. The Area is defined as "the sea-bed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction." *Id.* art. 1, at 1271. Under the heading "Development of Resources of the Area," in Part XI of the LOS, specific policies governing activities in the Area are enunciated:

upon production of metals so as to protect economies and especially

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Activities in the Area shall . . . be carried out in such a manner as to foster healthy development of the world economy and balanced growth of international trade, and to promote international co-operation for the over-all development of all countries, especially developing States, and with a view to ensuring:

(a) the developing of the resources of the Area;

(b) orderly, safe and rational management of the resources of the Area, including the efficient conduct of activities in the Area and, in accordance with sound principles of conservation, the avoidance of unnecessary waste;

(c) the expansion of opportunities for participation in such activities consistent in particular with articles 144 and 148; [Articles 144 and 148 relate to giving special treatment to developing nations with regard to their participation and activities in the Area and with regard to transfer of technology.]

(d) participation in revenues by the Authority and the transfer of technology to the Enterprise and developing States as provided for in this Convention;

(e) increased availability of the minerals derived from the Area as needed in conjunction with minerals derived from other sources, to ensure supplies to consumers of such minerals;

(f) the protection of just and stable prices remunerative to producers and fair to consumers for minerals derived both from the Area and from other sources, and the promotion of long-term equilibrium between supply and demand;

. . . .

(h) the protection of developing countries from adverse effects on their economies or on their export earnings resulting from a reduction in the price of an affected mineral, or in the volume of exports of that mineral, to the extent that such reduction is caused by activities in the Area, as provided in article 151;

. . . .

(j) conditions of access to markets for the imports of minerals produced from the resources of the Area and for imports of commodities produced from such minerals shall not be more favorable than the most favourable applied to imports from other sources.

Id. art. 150, at 1295.

1. (a) Without prejudice to the objectives set forth in article 150 and for the purpose of implementing subparagraph (h) of that article, the Authority, acting through existing forums or such new arrangements or agreements as may be appropriate, in which all interested parties, including both producers and consumers, participate, shall take measures necessary to promote the growth, efficiency and stability of markets for those commodities produced from the minerals derived from the Area, at prices remunerative to producers and fair to consumers. All States Parties shall co-operate to this end.

(b) The Authority shall have the right to participate in any commodity conference dealing with those commodities and in which all interested parties including both producers and consumers participate. The Authority shall have the right to become a party to any arrangement or agreement resulting from such conferences. Participation of the Authority in any organs established under those arrangements or agreements shall be in respect of production in the Area and in accordance with the relevant rules of those organs.

. . . .

(d) The Authority shall issue a production authorization for the level of production applied for unless the sum of that level and the levels already authorized exceeds the nickel production ceiling, as calculated pursuant to paragraph 4 in the year of issuance of the authorization, during any year of planned production falling within the interim period.

(e) When issued, the production authorization and approved application shall become a part of the approved plan of work.

6. (a) An operator may in any year produce less than or up to 8 per cent more than the level of annual production of minerals from polymetallic nodules specified in his produc-

favor developing nations as an actual deterrence to "future development of deep seabed resources, when such resources would serve the interests of all countries."[35] From the United States viewpoint, policies that are geared toward controlling production,[36] not guaranteeing contracts to qualified participants,[37] creating a system of compensation for detrimentally affected land-based producers of minerals,[38] and mandating the transfer of technology,[39] are not economically sound. There are

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tion authorization, provided that the over-all amount of production shall not exceed that specified in the authorization. Any excess over 8 per cent and up to 20 per cent in any year, or any excess in the first and subsequent years following two consecutive years in which excesses occur, shall be negotiated with the Authority, which may require the operator to obtain a supplementary production authorization to cover additional production.

(b) Applications for such supplementary production authorizations shall be considered by the Authority only after all pending applications by operators who have not yet received production authorizations have been acted upon and due account has been taken of other likely applicants. The Authority shall be guided by the principle of not exceeding the total production allowed under the production ceiling in any year of the interim period. It shall not authorize the production under any plan of work of a quantity in excess of 46,500 metric tonnes of nickel per year.

7. The levels of production of other metals such as copper, cobalt and manganese extracted from the polymetallic nodules that are recovered pursuant to a production authorization should not be higher than those which would have been produced had the operator produced the maximum level of nickel from those nodules pursuant to this article. The Authority shall establish rules, regulations and procedures pursuant to Annex III, article 17, to implement this paragraph.

. . . .

9. The Authority shall have the power to limit the level of production of minerals from the Area, other than minerals from polymetallic nodules, under such conditions and applying such methods as may be appropriate by adopting regulations in accordance with article 161, paragraph 8.

10. Upon the recommendation of the Council on the basis of advice from the Economic Planning Commission, the Assembly shall establish a system of compensation or take other measures of economic adjustment assistance including co-operation with specialized agencies and other international organizations to assist developing countries which suffer serious adverse effects on their export earnings or economies resulting from a reduction in the price of an affected mineral or in the volume of exports of that mineral, to the extent that such reduction is caused by activities in the Area. The Authority on request shall initiate studies on the problems of those States which are likely to be most seriously affected with a view to minimizing their difficulties and assisting them in their economic adjustment.

Id. art. 151, at 1296–97.

1. The Authority shall avoid discrimination in the exercise of its powers and functions, including the granting of opportunities for activities in the Area.

2. Nevertheless, special consideration for developing States, including particular consideration for the land-locked and geographically disadvantaged among them, specifically provided for in this Part shall be permitted.

Id. art. 152, at 1297.

35. *Responses, supra* note 6, at 650.

36. *See, e.g.* LOS Convention, *supra* note 4, arts. 150–52, at 1295–97.

37. *Id.* art. 152, at 1297.

38. *Id.* arts. 150–52, at 1295–97.

39. *Id.* art. 148, at 1295.

too many variables involved. In all, they are a "barrier which the convention would set up in the development of seabed resources by denying the play of basic economic forces in the market place."[40]

Production limitations, in the case of an unexpectedly large number of seabed mine producers, could cause companies to operate at a loss. Moreover, if available production had to be allocated to certain producers, the Authority has the power to make such a selection, whereby if controlled by developing nations the selection could be biased.[41]

John Breaux, in *The Case against the Convention,* made the Reagan administration's viewpoint abundantly clear.

> Production limitations are something we consider unprecedented in any international commodity arrangements. We feel that they are inappropriate. It is not sufficient to say that the US should not worry about production ceilings . . . [t]he fact that they exist will cause market distortions and affect investment patterns, and they discriminate against developed countries in the area of sea-bed mining.[42]

The United States opposes any production ceilings that would restrict the availability of minerals for global consumption or the ability of American mining firms to produce at profit maximizing levels.[43]

B. "A decisionmaking process that would not give the United States or others a role that fairly reflects and protects their interests."[44]

Under the auspices of The International Seabed Authority (ISA), general policy-making is carried out through a one nation, one vote, system.[45] Thus, the United States and other industrialized nations face the constant threat of being outvoted by the far more numerous developing nations and blocs representing other interests.[46] In order to understand the United States' problems with regard to the ISA it is necessary to examine the composition, functions, and voting procedures set out in the LOS. Part XI (articles 156—58) of the LOS establishes the ISA as "the organization through which States Parties shall . . . organize and control activities in the Area, particularly with a view to administering the resources of the Area . . . ."[47] "All States Parties are

40. 19 UN MONTHLY CHRON., June 1982, at 16.
41. Brewer, *supra* note 10, at 49.
42. Breaux, *supra* note 6, at 12–13.
43. Comment, *supra* note 1, at 282.
44. *Responses, supra* note 6, at 650.
45. Comment, *supra* note 1, at 282.
46. *Id.*
47. LOS Convention, *supra* note 4, art. 157, para. 1, at 1298.

ipso facto members of the Authority (ISA)."[48] The principal organs of the ISA are "an Assembly, a Council, and a Secretariat."[49]

The assembly consists of all members of the ISA.[50] Each member of the assembly shall have one vote.[51] Thus, the assembly is based on the principal of the sovereign equality of nations.[52] As the sole organ of the ISA, with membership of all states parties, the assembly is the supreme body of the ISA,[53] and elects members of the council in accordance with article 161.[54] The assembly coupled with the recommendation of the council, also elects members of the governing board of the enterprise and the director-general of the Enterprise. In addition, the assembly has the authority to consider and approve rules, regulations, and procedures of the council and the ISA.[55] In order to prevent the assembly from usurping the power of other organs with the ISA, the LOS provides generally that "in exercising such powers and functions each organ shall avoid making any action which may derogate from or impede the exercise of special powers and functions conferred upon another organ."[56]

The greatest concern of the United States is with regard to the council.[57] The council is the executive organ of the ISA.[58] It will consist of the thirty-six members of the Authority elected by the assembly.[59] What the United States finds specifically unacceptable is the manner in which members of the council are to be selected, coupled with their voting rights.[60] Under the LOS, the council is comprised of thirty-six members from five different groups.[61] The categories consist of (1) four members from among eight state parties which have the greatest investments in the Area, including at least one state from the Eastern (Socialist) European region;[62] (2) four members from among those state parties who are the largest consumers or net importers of the manganese nodule minerals, including at least one state from the

48. *Id.* art. 156, para. 2, at 1298.
49. *Id.* art. 158, para. 1, at 1298.
50. *Id.* art. 159, para. 1, at 1299.
51. *Id.* art. 159, para. 6, at 1299.
52. *Id.* art. 157, para. 3, at 1298.
53. Comment, *supra* note 14, at 670.
54. LOS Convention, *supra* note 4, art. 160, para. 2(a), at 1299.
55. *Id.*
56. *Id.* art. 16, para. 2(f)(i),(ii), at 1299. *See also* Comment, *supra* note 14, at 671.
57. LOS Convention, *supra* note 4, art. 158, para. 4, at 1299.
58. *See generally* Comment, *supra* note 14, at 672–74.
59. Larson, *supra* note 3, at 310.
60. LOS Convention, *supra* note 4, art. 161, para. 1, at 1300.
61. Charney, *supra* note 7, at 31.
62. LOS Convention, *supra* note 4, art. 161, para. 1(a)–(e), at 1300.

Eastern (Socialist) European region;[63] (3) four members from among countries who are major net exporters of the categories of minerals to be derived from the Area including at least two developing countries;[64] (4) six members from developing states with special interests,[65] and; (5) eighteen members elected according to geographic location.[66]

The United States is not guaranteed a seat on the council. Of course, the United States would currently qualify as the largest mineral consumer. However, this does not guarantee the United States a seat on the council in the future.[67] "As the Convention now stands, Council composition would probably include three Soviet states, nine industrialized nations (including the United States), and twenty-four developing states."[68]

The United States protests this arrangement because the Soviet states are guaranteed seats in the investor[69] and consumer[70] categories.[71] In all, the Soviet Union and its allied nations are guaranteed at least three seats on the council.[72] The council would probably also have twenty-four developing states as members.[73] The United States finds fault with this because it is guaranteed no seats, and even more begrudgingly, it must compete with its allies for representation.[74]

Theoretically, the developed nations "could be outnumbered by as much a nine to one, enabling the developing nations to dominate the Council by their numerical majority, even though the success of this entire regime depends upon the private capital and technology that only the developed nations can provide."[75] This so-called notion of "sovereign equality" assures the developing states, coupled with the Soviet Bloc states, continuing control over the council and its omnipotent functions.[76] The omnipotent functions of the council include: (1) supervising and coordinating the implementation of the provisions on all

63. *Id.* art. 161, para. 1(a), at 1300.
64. *Id.* art. 161, para. 1(b), at 1300.
65. *Id.* art. 161, para. 1(c), at 1300.
66. *Id.* art. 161, para. 1(d), at 1300.
67. *Id.* art. 161, para. 1(e), at 1300.
68. Comment, *supra* note 14, at 673 n.131 (citing Oxman, *The Third United Nations Conference on the Law of the Sea: The Ninth Session* (1980), 75 AM. J. INT'L L. 211, 218–19 (1981)).
69. LOS Convention, *supra* note 4, art. 161, para. (1) (a), at 1300.
70. *Id.* art. 161, para. (1)(b), at 1300.
71. Comment, *supra* note 14, at 672.
72. *Id.*
73. *Id.* at 673.
74. *Id.* at 672.
75. Charney, *supra* note 7, at 31.
76. Wilson, *Mining the Deep Seabed: Domestic Regulation, International Law, and UNCLOS III*, 18 Tulsa L.J. 207, 254 (1982).

questions and matters within the competence of the Authority;[77] (2) proposing candidates for election to the secretary general;[78] (3) proposing candidates for election as members of the governing board of the Enterprise as well as the director-general of the Enterprise;[79] (4) establishing subsidiary organs as necessary;[80] (5) entering into agreements with the United Nations or other international organization on behalf of the Authority,[81] and; (6) generally exercising control over activities in the Area.[82]

Taking into consideration the voting procedures within the council, the membership of the council, and the omnipotent functions of the council, the Reagan administration concluded that it was not in the best interest of the United States to approve such measures. John Breaux, speaking for the Reagan administration, stated that "I do not think by any accepted standards we would be assured a seat on the Council, and that gives the Congress and the Administration some very legitimate concerns. The present convention is defective and deficient in this respect."[83]

To conclude this section, it is clear that the United States and other industrialized nations are fearful that they may always be outvoted by the council. The United States is not guaranteed a seat on the council. The council is the omnipotent executive organ of the ISA and controls all aspects of deep seabed mining. Therefore, considering the United States' need for these minerals in the future, without some guaranteed voting power within the council, the United States cannot ensure that council policies will adequately protect American mining interests.[84]

C. *"Provisions that would allow amendments without United States approval. This is incompatible with our approach to treaties."*[85]

Under the LOS "[a] State Party may, by written communication addressed to the Secretary-General of the Authority, propose an amendment to the provisions of this Convention relating exclusively to activities in the Area, including Annex VI, section 4.[86] Such communi-

77. LOS Convention, *supra* note 4, art. 162, para. 2(a), at 1301.
78. *Id.* art. 162, para. 2(b), at 1301.
79. *Id.* art. 162, para. 2(c), at 1301.
80. *Id.* art. 162, para. 2(d), at 1301.
81. *Id.* art. 162, para. 2(f), at 1301.
82. *Id.* art. 153, 162, para. 2(k), at 1297, 1301.
83. Breaux, *supra* note 6, at 12.
84. Comment, *supra* note 1, at 282.
85. *Responses*, *supra* note 6, at 650.
86. LOS Convention, *supra* note 4, art. 314, para. 1, at 1328.

cation is to be distributed to all States Parties.[87] A proposed amendment must be approved by the assembly following its approval by the council.[88] Thereafter, for the amendment to enter into force, it must be ratified or acceded to "by two thirds of the States Parties or by 60 States Parties, whichever is greater."[89]

Thus, an amendment could come into force against the United States without the advice and consent of the Senate as required by the Constitution.[90] This is not compatible with the United States political system. "Moreover, after having made substantial investments in deep seabed mining, the choice of either accepting an amendment at some future time or being forced to withdraw from the treaty entirely is not acceptable [to the Reagan administration]."[91]

D. "Stipulations relating to mandatory transfer of private technology and the possibility of national liberation movements sharing in benefits."[92]

The Reagan administration feels that since United States industry has invested millions of dollars[93] in research and development of seabed mining technology, that interest should be afforded protection. However, under Resolution III of the Final Act of the United Nations Conference on the Law of the Sea, national liberation movements may have access to technology and other benefits derived from deep seabed mining.[94] The Reagan administration, therefore, cannot support the provisions of the LOS which deal with the transfer of technology.[95] Secondly, since Resolution III[96] would potentially allow national liberation movements to share in the resources and benefits of mining in the Area under the protection of the LOS, it conflicts with the political interests of the United States.

The articles make it abundantly clear that in applying to the Authority for a mining site the applicant must provide "a general description of the equipment and methods to be used in carrying out activities in the Area, and other relevant non-proprietary information about the

87. *Id.*
88. *Id.*
89. *Id.* art. 316, para. 1, at 1328.
90. U.S. CONST. art. II, § 2, cl. 2.
91. Malone, *supra* note 33, at 596.
92. *Responses, supra* note 6, at 650.
93. T. KRONMILLER, *supra* note 12, at 279.
94. Final Act of the Third United Nations Conference on the Law of the Sea Annex I, Resolution III, *reprinted in* THE LAW OF THE SEA 183 (1983) [hereinafter cited as Final Act].
95. LOS Convention, *supra* note 4, Annex II, art. 4, 5; Final Act, *supra* note 94, Annex I, Resolution III, at 183.
96. Final Act, *supra* note 94, Annex I, Resolution III, at 183.

characteristics of such technology, and information as to where such technology is available."[97] Moreover, in the event the application is approved, the applicant must update the description of technology, if "a substantial technological change or innovation"[98] has occurred. The Reagan administration and United States industry view such provisions that force the release of technological information prior to contracting as inappropriate. In the United States, clearly, all such technological property has its price.[99] If, pursuant to the LOS, United States mining companies must transfer to the Enterprise all the company's technology covering operations from mining to marketing, such companies will lose all incentive for research and development.[100]

The entire premise behind research and development is to find innovative means to produce a product. In the United States a company is afforded protection, usually in the form of a patent, for an innovative concept.[101] It is essentially a reward incentive device. That is, "the pub-

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97. LOS Convention, *supra* note 4, Annex III, art. 5, para. 1–3(b), at 1331. Article 4 states that "every applicant, without exception, shall as part of its application undertake . . . to comply with the provisions on the transfer of technology set forth in Articles 5 of this Annex. *Id.* Annex III, art. 4, para. 6(d), at 1331.

98. *Id.* Annex III, art. 5, para. 2, at 1331. Article 5 states in pertinent part that:

1. When submitting a plan of work, every applicant shall make available to the Authority a general description of the equipment and methods to be used in carrying out activities in the Area, and other relevant non-proprietary information about the characteristics of such technology and information as to where such technology is available.

2. Every operator shall inform the Authority of revisions in the description and information made available pursuant to paragraph 1 whenever a substantial technological change or innovation is introduced.

3. Every contract for carrying out activities in the Area shall contain the following undertakings by the contractor:

(a) to make available to the Enterprise on fair and reasonable commercial terms and conditions, whenever the Authority so requests, the technology which he uses in carrying out activities in the Area under the contract, which the contractor is legally entitled to transfer. This shall be done by means of licenses or other appropriate arrangements which the contractor shall negotiate with the Enterprise and which shall be set forth in a specific agreement supplementary to the contract. This undertaking may be invoked only if the Enterprise finds that it is unable to obtain the same or equally efficient and useful technology on the open market on fair and reasonable commercial terms and conditions;

(b) to obtain a written assurance from the owner of any technology used in carrying out activities in the Area under the contract, which is not generally available on the open market and which is not covered by subparagraph (a), that the owner will, whenever the Authority so requests, make that technology available to the Enterprise under license or other appropriate arrangements and on fair and reasonable commercial terms and conditions, to the same extent as made available to the contractor. If this assurance is not obtained, the technology in question shall not be used by the contractor in carrying out activities in the Area;

Id. Annex III, art. 5, para. 1–3(b), at 1331.

99. Marsteller & Tucker, *supra* note 27, at 168.

100. *Id.* at 169.

101. *Id.*

lic is enriched technologically in return for a grant to the inventor of a 17 year monopoly on the use of particular technology."[102] Thus, according to the law in the United States, certain technological property may be protected under the guise of patents, trade secrets, proprietary information, and copyrighted works.[103]

Protection of technology is, in a very real sense, a formidable bargaining devise—if it is kept secret. Several United States companies have indicated that under the transfer of technology provisions of LOS they cannot afford to do business. As stated by Richard A. Legatski before the subcommittee on oceanography, industry objects in the following respects:

> Technology is defined much more broadly than in commercial practice, to include the very essence of the engineering skill which permits owners of an advanced technology to maintain a competitive advantage in the marketplace; employees of the "Enterprise" who misuse confidential or proprietary information after a transfer are subject to only token penalties, so the risk of commercial or military espionage is quite real; since U. S. patent law is not extraterritorial in effect, there is no equivalent to "patent" protection on the high seas; should a loss of proprietary information occur, the Treaty text provides no compensation for the owner of the affected technology; any technology not made available to the Enterprise must also be withheld from the resource company which is seeking the right to mine in the first instance. Therefore, for want of needed equipment, the resource may not be able to conduct operations, and the technology supplier will lose a market. The burdens imposed on technology suppliers would create a disincentive to innovation, thereby damaging the economies of all nations at least indirectly.[104]

Furthermore, not only must a company provide its own technology to the Enterprise, it must also provide any technology which it may have obtained from a third party as the result of a licensing agreement.[105] Applicants that fail to negotiate permission to transfer licensed technology to the Enterprise will be precluded from mining the seabed.[106] Thus, the transfer of technology provisions are far-reaching.

With regard to the possibility of national liberation movements gaining access to the technological information and benefits derived from mining in the deep seabed, the LOS provides that developing

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102. *Id.*

103. *Id.* at 168.

104. *Law of the Sea-10th Session: Hearings Before the Subcommittee on Oceanography of the Committee on Merchant Marine and Fisheries*, 97th Cong., 1st Sess. 633, 634 (1981) (statement of Richard A. Legatski) (citations omitted).

105. LOS Convention, *supra* note 4, Annex III, art. 5, para. 3(b), at 1331.

106. *Id.*

states that apply for a mining contract on a reserved site shall be entitled to the benefits of the transfer of technology to which the Enterprise is entitled.[107] In all, there is no guarantee that such delicate technological information will not be divulged to respective nationals or third parties, such as national liberation movements.[108]

For developing and noncapitalist states, the LOS provides attractive transfer of technology provisions. The transfer of technology provisions are a thorn in the side of United States industry. Considering that a mining site might require a capital outlay of approximately 1.8 billion dollars, if a United States company is forced to divulge all of its technology it will have no means to recover its investment.[109]

The United States cannot sign a treaty that would force private companies to give away one of their most valuable assets, especially when such assets may eventually end up with national liberation movements.[110] Most importantly, without the LOS, United States companies can mine the seabed in accordance with customary international law, protect their technology, recoup their investment, and preclude national liberation movements from sharing the benefits of seabed mining.

E. "The absence of assured access for future qualified deep seabed miners to promote the development of these resources."[111]

Pursuant to the LOS, the Authority has carte blanche to accept or deny applications for seabed mining.[112] If an application is rejected, the

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107. *Id.* Annex III, art. 5, para. 3(e).

108. Van Dyke & Teichmann, *supra* note 30, at 440. Under Resolution III:

> In the case of a territory whose people have not attained full independence or other self-governing status recognized by the United Nations, or a territory under colonial domination, provisions concerning rights and interests under the Convention shall be implemented for the benefit of the people of the territory with a view to promoting their well-being and development.

Final Act, *supra* note 94, Annex I, Resolution III, at 183.

Thus, under the auspices of the quoted paragraph, should the PLO, for example, obtain a portion of territory to which the United Nations might attach self-governing status—they would be entitled to all the benefits of the LOS. *See* Marsteller & Tucker, *supra* note 27, at 178 n.26.

109. Wash. Post, July 18, 1982, at L1.

110. Marsteller & Tucker, *supra* note 27, at 176.

111. Responses, *supra* note 6, at 650.

112. LOS Convention, *supra* note 4, Annex III, art. 6, 7, at 1332–33. The following articles apply specifically to the access of qualified seabed mining companies to mining in the area:

Article 6

Approval of plans of work

. . . .

3. All proposed plans of work shall be taken up in the order in which they are received. The proposed plans of work shall comply with and be governed by the relevant provisions of this Convention and the rules, regulations and procedures of the Authority, including those on operational requirements, financial contributions and the undertakings

applicant may appeal to the council for a redetermination. However,

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concerning the transfer of technology. If the proposed plans of work conform to these requirements, the Authority shall approve them provided that they are in accordance with the uniform and non-discriminatory requirements set forth in the rules, regulations and procedures of the Authority . . . .

4. . . . The Authority may approve plans of work . . . if it determines that such approval would not permit State Party or entities sponsored by it to monopolize the conduct of activities in the Area or to preclude other States Parties from activities in the Area.

5. Notwithstanding paragraph 3(a), after the end of the interim period specified in article 151, paragraph 3, the Authority may adopt by means of rules, regulations and procedures other procedures and criteria consistent with this Convention for deciding which applicants shall have plans of work approved in cases of selection among applicants for a proposed area. These procedures and criteria shall ensure approval of plans of work on an equitable and non-discriminatory basis.

Article 7

Selection among applicants for production authorizations

1. Six months after the entry into force of this Convention, and thereafter each fourth month, the Authority shall take up for consideration applications for production authorizations submitted during the immediately preceding period. The Authority shall issue the authorizations applied for if all such applications can be approved without exceeding the production limitation or contravening the obligations of the Authority under a commodity agreement or arrangement to which it has become a party, as provided in article 151.

2. When a selection must be made among applicants for production authorizations because of the production limitation set forth in article 151, paragraphs 2 to 7, or because of the obligations of the Authority under a commodity agreement or arrangement to which it has become a party, as provided for in article 151, paragraph 1, the Authority shall make the selection on the basis of objective and non-discriminatory standards set forth in its rules, regulations and procedures.

. . . .

Article 9

Activities in reserved areas

1. The Enterprise shall be given an opportunity to decide whether it intends to carry out activities in each reserved area. This decision may be taken at any time, unless a notification pursuant to paragraph 4 is received by the Authority, in which event the Enterprise shall take its decision within a reasonable time. The Enterprise may decide to exploit such area in joint ventures with the interested State or entity.

. . . .

Article 13

Financial terms of contracts

. . . .

2. A fee shall be levied for the administrative cost of processing an application for approval of a plan of work in the form of a contract and shall be fixed at an amount of $US 500,000 per application. The amount of the fee shall be reviewed from time to time by the Council in order to ensure that it covers the administrative cost incurred. If such administrative cost incurred by the Authority in processing an application is less than the fixed amount, the Authority shall refund the difference to the applicant.

3. A contractor shall pay an annual fixed fee of $1 million from the date of entry into force of the contract. If the approved date of commencement of commercial production is postponed because of a delay in issuing the production authorization, in accordance with article 151, the annual fixed fee shall be waived for the period of postponement. From

the council is controlled by the developing states, therefore, it is unlikely that a decision will be reversed.[113]

Furthermore, considering the fact that developing nations will control the voting power within the ISA, it is understandable that United States companies would be concerned with provisions requiring the Authority to make decisions about whom will be approved to mine a site on the "basis of objective and non-discriminatory standards."[114] The United States, if a signatory to the LOS, would theoretically have a majority of the mining contracts. But the LOS has antimonoply provisions, whereby a qualified United States mining company might be excluded in order to permit a developing nation's less-qualified company to mine that site.[115]

In all, obstacles to assured access by United States companies to mining sites "include heavy front-end fees and costs; production limitations; 'anti-density' rules which will limit the number of mining operations in a specific area; 'anti-monopoly' rules which will limit the number of mine sites available to a mining company; technology transfer provisions which may be commercially impractical; and major tax advantages given the enterprise."[116] The Reagan administration is firmly committed to a competitive economy. An agreement that may preclude a United States company from participating in a commercial venture, where such company has invested millions of dollars toward that end, is not acceptable to the United States or to the Reagan administration.

IV. CONCLUSION

At this time it is impossible to assess whether or not the LOS as it exists will benefit those who are present signatories. However, the Reagan administration has made the United States position on the LOS abundantly clear. The United States will not accede to a treaty that: (1) deters the future development of seabed resources; (2) incorporates a decision-making process that will not protect United States' interests; (3) has provisions that would allow the treaty to be amended in violation of the United States Constitution; (4) requires the mandatory transfer of technology to the detriment of United States industry and the United States; (5) does not guarantee access by qualified United States mining companies to mining sites in the Area; and, (6) has pro-

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the date of commencement of commercial production, the contractor shall pay either the production charge or the annual fixed fee, whichever is greater.

Id. Annex III, arts. 6–13, at 1332–34.

113. *See supra* text accompanying notes 44–84.

114. LOS Convention, *supra* note 4, Annex III, art. 6, 7, at 1332–33.

115. *Id. See also* Malone, *supra* note 33, at 596.

116. Larson, *supra* note 3, at 310.

visions that might require substantial payments to the Enterprise and Authority by the United States without the approval of Congress.