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more promises may be enforced without resort to promissory estoppel.

(2) At common law an offer unsupported by consideration is revocable at any time prior to acceptance. Under the Louisiana Civil Code an offer is irrevocable for a period of time as expressed by the person making it, or for a reasonable period to be implied from the nature of the contract and the circumstances of the case. At common law promissory estoppel has been used to render an otherwise revocable offer irrevocable in the face of justifiable reliance. In Louisiana there is no need to resort to this doctrine, as an acceptance timely communicated will create a binding obligation despite an unlawful attempt at revocation.

(3) The Louisiana Civil Code provides no catalogue of torts but contains a general principle of delictual and quasi-delictual responsibility which is susceptible of expansion and which may even be applied to negligent actions or omissions of parties negotiating a contract. Such an application would result in liability for harm caused by actions or omissions where the risk of harm was reasonably foreseeable to the one acting or refraining.

Frederick H. Sutherland

CONTINENTAL SHELF LAW: OUTDISTANCED BY SCIENCE AND TECHNOLOGY

In contrast to the traditionally slow development of legal systems which evolve over many years, an entire legal regime dealing with the continental shelf has developed since 1945. This unique birth of the legal framework for exploiting the natural resources of the continental shelf was precipitated by technological advances which made the newly discovered wealth of these areas accessible to exploitation. Far from being complete, this legal regime remains one of the most dynamic areas of international law. Science and technology are moving ahead far more rapidly than is the law governing this area of the marine environment. Thus, a very new body of law has already become in large part inadequate to deal with problems of far reaching economic

and political significance. Specifically, the existing law does not provide a definite answer to the basic question concerning what rights are exercisable by coastal states on their continental shelf. Therefore, an examination of the nature of coastal states' rights on the shelf is appropriate to a determination of how existing law should be modified to meet present and future demands of advanced technological capability.

The Continental Shelf as a Geological Concept

Generally, the term "continental shelf" is used to describe the submerged extension of a continent into the sea. It is used in that sense here,¹ although geologically, the submarine section is but the outward portion of a shelving plain beginning at the foothills of the continental mountains and extending seaward until a marked break in slope occurs. From a geological standpoint, the continental shelf is as much a part of the continent as upland areas, and reference to it should be couched in terms of continuity rather than contiguity or nearness.² The width of the continental shelf varies considerably from state to state as does the depth at which the break in slope occurs.³ This area of steep descent into the abyssal plain seaward of this break is called the continental slope.⁴ At least partly because of the uncertainty of and the variation in the physical definition of the shelf, the legal definition is somewhat at variance with geological theory.⁵

1. The origins of the continental shelf are discussed by C. FRANKLIN, *INTERNATIONAL LAW STUDIES* 1959-1960 16 n. 33 (1961); see also F. SHEPARD, *THE EARTH BENEATH THE SEA* 83-93 (1967).

2. C. FRANKLIN, *INTERNATIONAL LAW STUDIES* 1959-1960 12-17 (1961).

3. For example, on the west coast of South America there is little continental shelf in the geological sense. In contrast, the shelf in the Bering Strait is up to 800 miles wide, the shelf off New England, about 250 miles wide, and in the Gulf of Mexico, over 100 miles wide. Browning, *Exploitation of Submarine Mineral Resources Beyond the Continental Shelf*, 4 *TEXAS INT'L L. F.* 1, 4-5 (1968). Furthermore, the depth at the edge of the shelf, while generally conforming to 130-140 meters (a figure often used in describing the location of the shelf's edge is the 200 meter isobath) actually varies from less than 100 meters to greater than 400 at the point where the drop to the deep ocean floor begins, and the unevenness in relief is generally not more than 100 meters except in glaciated areas. C. FRANKLIN, *INTERNATIONAL LAW STUDIES* 1959-1960 17 (1961). See M. MOUTON, *THE CONTINENTAL SHELF* 12-16, 22-32 (1952). This book contains a map which illustrates width variations throughout the world. See also F. SHEPARD, *THE EARTH BENEATH THE SEA* 61-81, 95-114 (1967).

4. F. SHEPARD, *THE EARTH BENEATH THE SEA* 61-62 (1961).

5. Browning, *Exploitation of Submarine Mineral Resources Beyond the Continental Shelf*, 4 *TEXAS INT'L L. F.* 1, 5 (1968). See C. FRANKLIN, *INTERNATIONAL LAW STUDIES* 1959-1960 12 (1961).

The Continental Shelf as a Legal Concept

Prior to World War II,⁶ there was little economic interest in marine resources beyond the territorial sea,⁷ with the exception of ancient uses of shelf resources such as pearl, coral, sponge, and chank fisheries.⁸

Clearly, there was no internationally recognized right of appropriation to submarine areas outside a nation's territorial sea,⁹ although some writers regarded the seabed and subsoil of the high seas as being susceptible of occupation as *res nullius*, so long as freedom of the high seas was not prejudiced.¹⁰ With the discovery of oil and gas on the shelf and development of technology making exploitation possible, the nature of the rights of coastal states on the shelf became an urgent matter. In 1945, The Truman Proclamation¹¹ introduced the continental shelf as a legal concept.¹² Through it, the United States unilaterally declared that, ". . . the exercise of jurisdiction over the natural resources of the subsoil and seabed of the continental shelf by the contiguous nation is reasonable and just . . ." and that ". . . the government of the United States regards the natural resources of the subsoil and seabed of the continental shelf beneath the high seas but contiguous to the coasts of the United States, as appertaining to the United States, subject to its jurisdiction and control."¹³ The proclamation was carefully worded to be limited to the resources of the land mass so that it would not be

6. For an excellent discussion of the legal history of the continental shelf before 1945, see Cosford, *The Continental Shelf 1910-1945*, 4 MCGILL L. J. 245 (1958).

7. Dean, *Geneva Convention on the Continental Shelf*, 41 TUL. L. REV. 419 (1967).

8. Grunawalt, *The Acquisition of the Resources of the Bottom of the Sea—A New Frontier in International Law*, 34 MIL. L. REV. 101, 103-04 (1966). See also, P. JESSUP, *THE LAW OF TERRITORIAL WATERS AND MARITIME JURISDICTIONS* 10 (1927).

9. Krueger, *The Convention on the Continental Shelf and the Need for its Revision*, 1 NAT. RES. LAW. #3, 1 (1968).

10. Gutteridge, *The 1958 Geneva Convention on the Continental Shelf*, 35 BRIT. Y. B. INT'L L. 102 (1969).

11. 10 Fed. Reg. 12303 (1945); 13 DEP'T STATE BULL. 484 (1945); 40 AM. J. INT'L L. 45 (Supp. 1946).

12. Gutteridge, *The 1958 Geneva Convention on the Continental Shelf*, 35 BRIT. Y. B. INT'L L. 102 (1960). See C. FRANKLIN, *INTERNATIONAL LAW STUDIES 1959-1960* 8 (1961); Cosford, *The Continental Shelf 1910-1945*, 4 MCGILL L. J. 245, 246 (1958).

13. See note 11 *supra*. See also P. ANNINOS, *THE CONTINENTAL SHELF AND PUBLIC INTERNATIONAL LAW* ch. 1, § 2 (1953); M. MOUTON, *THE CONTINENTAL SHELF* 63-73 (1952); 4 M. WHITEMAN, *DIGEST OF INTERNATIONAL LAW* ch. 11 (1965).

construed as a declaration of absolute sovereignty over the continental shelf; moreover, it stressed that the character of the superjacent water as high seas was in no way affected.¹⁴

Prompted by the Truman Proclamation, many coastal states made claims of differing dimension to their continental shelves.¹⁵ Despite the lack of uniformity in the claims, the frequency with which they were made and their acceptance by other states led some scholars in the mid-1950's to conclude that appropriation of adjacent submarine areas had become part of customary international law¹⁶ ". . . by unequivocal positive acts of some states, including the leading maritime powers and general acquiescence on the part of others."¹⁷

If, in fact, such a regime existed, it remained vague and indefinite until adoption of the Convention on the Continental Shelf¹⁸ ("Convention" hereinafter) by the 1958 United Nations Conference on the Law of the Sea. The Convention stands as the principal response to legal problems created since the time of the Truman Proclamation by the rapid development of technology for exploiting the natural resources of the shelf. Presently, many states are technologically capable of conducting a wide

14. The proclamation provided that:

The character as high seas of the waters above the continental shelf and the right to their free and unimpeded navigation are in no way thus affected.

A White House press release accompanying the proclamation also noted that:

While asserting jurisdiction and control of the United States over the mineral resources of the continental shelf, the proclamation in no wise abridges the right of free and unimpeded navigation of waters of the character of high seas above the shelf, nor does it extend the present limits of the territorial waters of the United States. 13 DEP'T STATE BULL. 484 (1945).

See also Dean, *Geneva Convention on the Continental Shelf*, 41 TUL. L. REV. 417, 420 (1967).

15. Reference to such claims may be found in P. ANNINOS, *THE CONTINENTAL SHELF AND PUBLIC INTERNATIONAL LAW* 22-34 (1953); C. FRANKLIN, *INTERNATIONAL LAW STUDIES 1959-1960* 49-62 (1961); *THE LAW OF THE SEA* ch. 5 (L. Alexander ed. 1967); 4 M. WHITEMAN, *DIGEST OF INTERNATIONAL LAW* ch. 11, § 4 (1965); Krueger, *The Convention on the Continental Shelf and the Need for its Revision*, 1 NAT. RES. LAW, #3, 1, 2-3 (1968); Lehman, *The Legal Status of the Continental Shelf*, 20 LA. L. REV. 646 (1960). See also Garaloca, *The Continental Shelf and the Extension of the Territorial Sea*, 10 MIAMI L. Q. 490 (1956).

16. Krueger, *The Convention on the Continental Shelf and the Need for its Revision*, 1 NAT. RES. LAW, #3, 1, 3 (1968). See also M. MCDUGAL & W. BURKE, *THE PUBLIC ORDER OF THE OCEANS* 639 (1962).

17. Lauterpacht, *Sovereignty over Submarine Areas*, 27 BRIT. Y. B. INT'L L. 376-77 (1950).

18. Convention on the Continental Shelf, done, April 29, 1958, 1 U.S.T. 471-73; T.I.A.S. No. 5578; 499 U.N.T.S. 312-16 (effective June 10, 1964).

variety of activities on their continental shelves. However, the nature of their legal rights with respect to these newly developed activities is uncertain because the existing law is narrow in scope. In the Convention, the states' rights are dealt with only as they relate to natural resources.¹⁹ Ever more limiting than the Convention, the Outer Continental Shelf Lands Act,²⁰ which subjects most of the continental shelf²¹ offshore the United States to the jurisdiction, control and power of disposition of the United States, specifies only procedures for exploiting oil, gas, sulfur and other minerals.²²

Newly Developed and Emerging Uses of the Continental Shelf

The full range of uses to be made of the sea, and specifically of the continental shelf, is only beginning to be contemplated.²³ Fantastic technological feats have been and will be accomplished in the area covered by existing law—natural resources exploitation. The most immediate advances will be in the exploitation of oil and natural gas,²⁴ although recent advances in hard mineral mining techniques have made accessible a new world of wealth in marine metals,²⁵ and the living resources of the sea are increasingly being looked to as a source of food for the world's growing population.²⁶

Even more significant are activities now technologically possible and dealt with by neither the Convention nor United States municipal legislation. Shelf areas have and will be used

19. *Id.*

20. 43 U.S.C. §§ 1331-43 (1953). See Christopher, *The Outer Continental Shelf Lands Act: Key to a New Frontier*, 6 STAN. L. REV. 23 (1953); STUDY OF THE OUTER CONTINENTAL SHELF LANDS OF THE UNITED STATES (rev. ed. 1969), Clearinghouse for Federal Scientific and Technical Information (Nos. 188, 714).

21. The Submerged Lands Act grants a portion of this submarine area to the states (U.S.) which border it. See 43 U.S.C. §§ 1301-03, 1311-15 (1953).

22. 43 U.S.C. § 1337 (1953).

23. See U. S. DEP'T OF COMMERCE, DEVELOPMENT POTENTIAL OF THE UNITED STATES CONTINENTAL SHELF § 3 (1966).

24. Offshore drilling rigs are now working in depths of 1000 feet; and, with some ship positioning systems, drilling has been conducted at 12,000 feet depths. THE LAW OF THE SEA 204 (L. Alexander ed. 1967). In 1970, the Glomar Challenger demonstrated capabilities to re-enter a previously drilled hole in water depths of over three miles. See Grunawalt, *The Acquisition of the Resources of the Bottom of the Sea—A New Frontier in International Law*, 34 MIL. L. REV. 101, 103-04 (1966) and Johnston, *Law, Technology and the Sea*, 55 CALIF. L. REV. 449, 453 (1967).

25. Johnston, *Law, Technology and the Sea*, 55 CALIF. L. REV. 449, 453 (1967). See also J. MERO, THE MINERAL RESOURCES OF THE SEA 2, 280 (1965).

26. Johnston, *Law, Technology and the Sea*, 55 CALIF. L. REV. 449, 452-53 (1967).

increasingly for transportation and military uses. Submarine buoys will mark routes for submersible freighters, and navigation will eventually become automated with traffic passing from buoy to buoy like guided missiles.²⁷ Among the vast investments made by the military in shelf areas by the United States are reported constructions of "electronic fences" to warn against surprise attacks,²⁸ and the conversion to military purposes of structures originally designed for mineral extraction.²⁹ However, the United States has also declared areas of her continental shelf to be national parks.³⁰ Other proposals being studied include using the shelf areas for anchoring floating jet ports,³¹ for mooring facilities, as vacation and commercial sites,³² for weather forecasting,³³ for storage and disposal, and for residential sites.³⁴ All these uses, as well as others certain to be developed, are jeopardized by the limited scope of the current law on the continental shelf.

Implications of United States v. Ray

An excellent illustration of the uncertainty of the nature of coastal states' rights in the shelf which has been created by the development of these new uses is *United States v. Ray*³⁵ which involved an unusual controversy decided by the United States Fifth Circuit Court of Appeals. Four and one half miles off the coast of Florida, the defendants were engaged in filling operations on coral reefs with the ultimate goal of creating an island nation to be called Grand Capri Republic. The United States sought to stop these activities by maintaining that the defendants'

27. *Id.* at 454.

28. *Id.* at 455.

29. M. McDOUGAL & W. BURKE, *THE PUBLIC ORDER OF THE OCEANS* 718-19 (1962). On the problem of military uses of the seabed, the United States and Russia are currently negotiating a treaty designed to prohibit the use of specified areas of the seabed for the installation of nuclear weapons and other weapons of mass destruction. See the Draft Treaty in 62 DEP'T STATE BULL. 665-67 (May 25, 1970).

30. In 1960, President Eisenhower created the Key Largo Coral Reef Preserve, 25 Fed. Reg. 2352 (1960). See also N.Y. Times, Aug. 25, 1965, § 1 at 59.

31. Among the cities considering this type of installation are New York, Los Angeles, Chicago, Cleveland, and New Orleans. See also N.Y. Times, Feb. 23, 1969, § 1 at 74.

32. M. McDOUGAL & W. BURKE, *THE PUBLIC ORDER OF THE OCEANS* 718-19 (1962).

33. Johnston, *Law, Technology and the Sea*, 55 CALIF. L. REV. 449, 455-56 (1967).

34. *Id.* at 456-58.

35. 423 F.2d 16 (5th Cir. 1970).

activity was a trespass since the dredging and construction were causing irreparable injury to the reefs subject to the jurisdiction and control of the United States and by further alleging that the defendants' actions were unlawful since they had not procured the required authorization from the Secretary of the Army. The district court found that the reefs, part of the seabed and subsoil of the outer continental shelf, were natural resources within the Outer Continental Shelf Lands Act and the Convention on the Continental Shelf. The court therefore granted the injunction sought by the United States because it deemed the defendants' activity unlawful, the required permit not having been procured. However even though they recognized the sovereign rights of the United States, the court considered those rights to be limited (i.e. neither ownership nor possession) and, therefore, insufficient to support a common law trespass action.³⁶

On appeal, the rights of the United States on the continental shelf were stated more broadly and the denial of the trespass claim was reversed in an interesting decision.³⁷ Both national³⁸ and international³⁹ laws recognize that the United States possesses certain rights in its continental shelf. The authority to control these rights is implicit in the Convention⁴⁰ and explicit in the national legislation.⁴¹ Moreover, the Convention states these rights ". . . are exclusive in the sense that if the coastal state does not explore the continental shelf or exploit its natural resources no one may undertake these activities, or make a claim to the continental shelf without the express consent of the Coastal State."⁴² Finding the trespass allegation "inaccurately framed," the Court stated that the Government was, in fact, seeking "restraint from interference with rights to an area which appertains to the United States and which under national and international law is subject not only to its jurisdiction but its control as well."⁴³ According to the court, those rights, and the vital in-

36. *United States v. Ray*, 294 F. Supp. 532 (S.D. Fla. 1969). *See also* 43 U.S.C. § 1333(f) (1953).

37. 423 F.2d 16 (5th Cir. 1970).

38. 43 U.S.C. §§ 1301, 1302, 1332(a) (1953).

39. Convention on the Continental Shelf, *done*, April 29, 1958, art. 2, para. 1, 2, 3 [1964], 1 U.S.T. 471, 473; T.I.A.S. No. 5578; 499 U.N.T.S. 312, 313 (effective June 10, 1964).

40. *Id.*

41. 43 U.S.C. §§ 1301, 1302 (1953).

42. Convention on the Continental Shelf, *done*, April 29, 1958, art. 2, para. 2 [1964], 1 U.S.T. 471, 473; T.I.A.S. No. 5578; 499 U.N.T.S. 312, 313 (effective June 10, 1964).

43. *United States v. Ray*, 423 F.2d 16, 22 (5th Cir. 1970).

terest in preventing interference with those rights, were held to require that injunctive relief be granted on the trespass claim. In doing so, the court set forth a new variety of property right, certainly less than full ownership (or sovereignty in the international sense), but sufficient in scope to support the remedy given. It is submitted this result is justified as a new method to deal with the new problems created in attempting to define exactly what rights each state possesses in its continental shelf.

However, since the subject matter of this case, a natural resource, fell directly within the scope of present laws, this approach is of little assistance in understanding the state's right with respect to the many other newly available uses of the shelf. In a similar situation, the Department of the Interior in 1967 asserted jurisdiction over an area off the coast of California in which a group planned to build their own island country by filling operations.⁴⁴ In contrast to the shelf area considered in the *Ray* case, the California area is located some 120 miles from shore and is separated from the coast by very deep water, some up to 6000 feet, facts which will undoubtedly create additional legal problems not dealt with in *Ray* if this dispute is litigated. Another example of the restrictive effects of the laws currently in force is the denial by the Department of the Interior of requests by industry to make use of fresh water available under the continental shelf off the coast of Florida on the grounds that the Department does not consider water to be a mineral within the meaning of the Outer Continental Shelf Lands Act.⁴⁵

Coastal States' Rights Under Existing Law

The Convention on the Continental Shelf, adopted at Geneva on April 26, 1958, by the United Nations Conference on the Law of the Sea, is the first effort at the international level to define the legal regime of the continental shelf.⁴⁶ The Convention deals with limited subjects and generally reflects a moderate approach.⁴⁷ To fully understand the nature of the coastal state's

44. Krueger, *The Convention on the Continental Shelf and the Need for its Revision*, 1 NAT. RES. LAW #3, 1, 6 (1968); Stang, *Wet Land: The Unavailable Resource of the Outer Continental Shelf*, 2 J. LAW & ECON. DEV. 153 (1967).

45. 1 STUDY OF THE OUTER CONTINENTAL SHELF LANDS OF THE UNITED STATES § 4.60 at 243 (1968).

46. See note 18 *supra*.

47. Young, *The Geneva Convention on the Continental Shelf: A First Impression*, 52 AM. J. INT'L L. 733 (1958).

rights in the continental shelf, it is necessary to examine briefly what is meant by the Convention's term, "continental shelf." The Convention defines it as "the seabed and subsoil of submarine areas adjacent to the coast but outside the area of the territorial sea to a depth of 200 meters or, beyond that limit, to where the depth of the superjacent waters admit of exploitation of the natural resources of said areas."⁴⁸ This definition is troublesome for it does not provide the coastal states with a precise seaward limit beyond which the coastal states' rights cease.⁴⁹ With technology advancing at such a rapid rate, the entire Convention is in danger of becoming meaningless because it does not adequately cover many uses that can now be made of the shelf or set forth spatial boundaries on the exercise of these uses.

In defining the nature of the coastal states' rights on their continental shelves, both the Convention and the Outer Continental Shelf Lands Act are limited to activities necessary for the exploration and exploitation of the natural resources.⁵⁰ Clearly, coastal states do not possess unlimited sovereignty—the Convention specifically limits the coastal states to the exercise of "sovereign rights."⁵¹ The term "sovereign rights" is an unusual one devised to meet a new problem. To appreciate the ramifications of it, one must look to the history of the Convention.⁵² Of prime concern to many of the delegates to the 1958 Conference was the selection of a term which would avoid interpretations tending to counter maintenance of full freedom of the high seas and the air space above it, since it was well known that some states wanted rights in the continental shelf that would affect both.⁵³ The United States, in seeking to remove all doubt, wished to avoid any use of the term sovereignty and proposed that the

48. Convention on the Continental Shelf, *done*, April 29, 1958, art. 1 [1964], 1 U.S.T. 471, 473; T.I.A.S. No. 5578; 499 U.N.T.S. 312 (effective June 10, 1964).

49. It is beyond the scope of this paper to examine the problems in the seaward limit question.

50. See text and notes 19, 20, and 22 *supra*.

51. Convention on the Continental Shelf, *done*, April 29, 1958, art. 2, para. 1 [1964], 1 U.S.T. 471, 473; T.I.A.S. No. 5578; 499 U.N.T.S. 312, 314 (effective June 10, 1964).

52. See Whiteman, *Conference on the Law of the Sea: Continental Shelf*, 52 AM. J. INT'L L. 629 (1958) for an excellent survey of the discussions and proposals given in approving the final form of the Convention.

53. *Id.* at 636. When this article was being considered it was impossible to predict the fate of draft article 69, which dealt with the status of superjacent water and air, since the articles were considered in order with article 2 being draft article 68.

article read: "The coastal state exercises over the continental shelf *exclusive rights* for the purpose of exploring and exploiting its natural resources."⁵⁴ (Emphasis added). This proposal passed by a narrow margin. When, later in the proceedings, it became apparent that the free legal status of the water and airspace above the continental shelf would be unaffected, the United States withdrew the term "exclusive rights" to support "sovereign rights" because this term was more widely accepted.⁵⁵ The delegates to the conference intended that the coastal states possess something less than ownership in the traditional sense and the term "sovereign rights" was selected because most members felt it carried that connotation. Specific limitations, in addition to maintenance of free legal status of high seas and superjacent air space,⁵⁶ are placed on states in the exercise of their rights. The laying or maintenance of submarine cables or pipelines may not be impeded by a coastal state.⁵⁷ Exploitation of the natural resources by a coastal state "must not result in any unjustifiable interference with navigation, fishing or the conservation of the living resources of the sea nor result in any interference with fundamental oceanographic or other scientific research. . ." intended for publication.⁵⁸ Yet, the text leaves no doubt that the state's rights include all those necessary for making use of its natural resources.⁵⁹ The rights expressly given, limited though they may be, are exclusive in that no one else may undertake them without the express consent of the coastal state and they are not dependent upon the state's making overt acts to assert its authority over the area.⁶⁰ Coastal states have

54. A/CONF. 13/C.4/L.31. For other proposals considered see Whiteman, *Conference on the Law of the Sea: Continental Shelf*, 52 AM. J. INT'L L. 629 (1958).

55. Whiteman, *Conference on the Law of the Sea: Continental Shelf*, 52 AM. J. INT'L L. 629 (1958).

56. Convention on the Continental Shelf, *done*, April 29, 1958, art. 3 [1964], 1 U.S.T. 471, 473; T.I.A.S. No. 5578; 499 U.N.T.S. 312, 316 (effective June 10, 1964).

57. *Id.* art. 4 [1964], 1 U.S.T. 471, 473; T.I.A.S. No. 5578; 499 U.N.T.S. 312, 315 (effective June 10, 1964). This limitation is subject to a state's right to take reasonable measures for exploration and exploitation of natural resources.

58. Convention on the Continental Shelf, *done*, April 29, 1958, art. 5, para. 1, 8 [1964], 1 U.S.T. 471, 473-74; T.I.A.S. No. 5578; 499 U.N.T.S. 312, 315-16 (effective June 10, 1964).

59. See note 18 *supra* and 4 M. WHITEMAN, DIGEST OF INTERNATIONAL LAW ch. 11, § 6 at 843-44 (1965).

60. Convention on the Continental Shelf, *done*, April 29, 1958, art. 2, para. 2 [1964], 1 U.S.T. 471, 473; T.I.A.S. No. 5578; 499 U.N.T.S. 312, 313 (effective June 10, 1964).

the right to construct installations on the shelf for the purpose of exploiting natural resources,⁶¹ although many installations are currently being used for purposes unrelated to the exploration for and the exploitation of natural resources,⁶² and others are likely to be in the future. The Convention's limited scope, in the face of new technology, leaves vital issues unanswered as to permissible uses of its shelf by the coastal state.

Conclusion

The current legal status of the continental shelf illustrates that almost every prize of nature can be won by science and lost by lawyers. The legal profession, both national and international, has been challenged to insure that laws aid rather than impede uses of the continental shelf.⁶³ An indication that this challenge is being met was the adoption by the American Bar Association House of Delegates of a resolution calling for clarification of the boundary between the continental shelf and the deep ocean floor through consultation with parties to the convention.⁶⁴ Even more important, many members of the United Nations, in response to a resolution passed by the General Assembly,⁶⁵ have indicated their desire to convene a conference to revise the Convention.⁶⁶ Any improvements and revisions made at that conference should be made in an effort to reach and maintain this standard:

The final test of the success of the convention is whether it serves the purpose of achieving the *maximum utilization* of the continental shelf with the *minimum of friction between the states* of the world and with adequate provision for the maximum utilization of all other resources of the high seas, including: navigation, fishing, communications, transportation, scientific investigation, weapons testing, security, and a host of other new emerging uses.⁶⁷ (Emphasis added.)

61. *Id.* art. 5 [1964], 1 U.S.T. 471, 473-74; T.I.A.S. No. 5578; 499 U.N.T.S. 312, 315-16 (effective June 10, 1964).

62. See text at notes 27, 28, 29 *supra*.

63. Barry, *The Administration of the O.C.S.L.A.*, 1 NAT. RES. LAW. #3, 38 (1968).

64. 2 NAT. RES. LAW NEWSL. #1, 1-3 (1968).

65. G.A. Res. 2574A (1969).

66. Replies received as of July 17, 1970 are published in U.N. Doc. A/7925 (1970).

67. C. FRANKLIN, INTERNATIONAL LAW STUDIES 1959-1960 12 (1961).

The present Convention and the Outer Continental Shelf Lands Act both fail to meet this test. With the law lagging behind technical capabilities, there is a need, both nationally and internationally, to revise and devise laws which will insure that the coastal states possess adequate rights to encourage and pursue the development of valuable activities not now expressly covered by the law.

A liberal reading of the Convention renders permissible activities not seemingly covered by the language. This approach enabled some writers to view the installation of military structures by coastal states as approved by the delegates to the Conference.⁶⁸ Also, the Netherlands has sought to solve its problems through unilateral action prompted by the construction on her shelf of pirate radio and television stations which transmitted programs into the country in violation of municipal law. Through the North Sea Installations Act, the government has provided itself authority for regulating all installations on its shelf no matter who builds them and whatever their purpose.⁶⁹

By interpreting the Convention as regulating specific activities while not excluding others, it is submitted that the United States can, without violating its obligations under the Convention, immediately amend the Outer Continental Shelf Lands Act to allow any reasonable use to be made of the shelf.⁷⁰ Unilateral action by a state has in the past proved to be the foundation for establishing an international practice which has developed into custom⁷¹ and such action by the United States will hopefully

68. During the course of the debates, the Bulgarian delegation proposed an amendment to make illegal any installations on the shelf for military purposes. The defeat of this amendment has been interpreted as a clear indication that the delegates did not intend to deny the right of coastal states to build defense installations. M. McDUGAL & W. BURKE, *THE PUBLIC ORDER OF THE OCEANS* 718-19 (1962); Gutteridge, *The 1958 Geneva Convention on the Continental Shelf*, 35 *BRIT. Y.B. INT'L L.* 102 (1960).

69. *THE LAW OF THE SEA* 209-12 (L. Alexander ed. 1967); see Van Punhuys & Van Emde Boas, *Legal Aspects of Pirate Broadcasting: A Dutch Approach*, 60 *AM. J. INT'L L.* 303 (1966).

70. See CALIF. PUB. RES. CODE § 6501.1 (1951). That statute provides for leases in California's waters for any purpose deemed advisable by the Commission.

71. Vallet, *The Continental Shelf*, 23 *BRIT. Y.B. INT'L L.* 333, 337 (1946): "While the unilateral declaration of the United States cannot in itself create any new rights or any new rules of international law, it may be regarded as providing the seed from which such rights and rules may grow. It is submitted that general recognition and acceptance by states may perfect the rights claimed by the United States and establish new rules of international law based on the doctrine of the continental shelf." This statement was made in relation to the Truman Proclamation but the same result would

lead the way for expanded international use of the continental shelf. Such an amendment should be constructed to meet the test of maximum utilization of presently available uses and those to come with a minimum of friction between states. In keeping with present practice, the Secretary of the Interior should continue to be authorized to grant leases for oil, gas and sulfur production on the basis of competitive bidding. The enumeration of additional uses and the methods for administering them would be unwise as it is impossible to foresee all the projects which will be proposed for the shelf area, and such a list would unnecessarily limit the scope of the amendment. The Secretary should be authorized to grant permits for any reasonable uses which are within the national interest, but only after the developer has submitted his plans, public notice of the proposal has been made, and a public hearing has been held to consider the project and hear objections to it. In deciding what is reasonable and within the national interest, the Secretary should consider each of the following: net economic return to society, effect on the environment, proximity to and possible interference with other uses, effect on foreign relations, effect on national defense, and the financial responsibility of the promoter.

Such an amendment would make mandatory a clarification of the nature of the coastal states' rights under the Convention. That revision should itself make clear that the coastal states may make any reasonable use of the shelf with the stipulation that limitations in the Convention must be strictly adhered to.

Jean Talley Drew

THE RIGHT TO RESIST AN UNLAWFUL ARREST

Louisiana, like most of the states in this country, recognizes the right to resist an unlawful arrest.¹ The Louisiana rule is codified in both the Louisiana Criminal Code and the Louisiana

be possible by amending the OCSLA. *See also* Z. SLOUKA, *INTERNATIONAL CUSTOM AND THE CONTINENTAL SHELF* (1968).

1. *City of Monroe v. Ducas*, 203 La. 971, 979, 14 So.2d 781, 784 (1943). "The right of personal liberty is one of the fundamental rights guaranteed to every citizen, and any unlawful interference with it may be resisted. Every person has a right to resist an unlawful arrest; and, in preventing such illegal restraint of his liberty, he may use such force as may be necessary."