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Equity in Maritime Boundary Delimitations: The Gulf of Maine Case

By Ina Raileanu*

Member of the Class of 1991

I. INTRODUCTION

On December 12, 1984, an ad hoc chamber of the International Court of Justice (the Court) delivered its opinion in the Case Concerning the Delimitation of the Maritime Boundary in the Gulf of Maine Area.1 The decision had been anxiously awaited as the first attempt in the history of the Court to effect a line of delimitation for both the continental shelf and the exclusive economic zone.2 Previously, disputes among neighboring coastal states had involved delimitation of the continental shelf alone.3 However, after 1971 coastal states began extending their 200 mile exclusive fishery zones pursuant to the provisions of the Third United Nations Conference on the Law of the Sea.4 In many instances, such extensions gave rise to areas of significant overlap and, conse-

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2. The concept of exclusive economic zone was developed at the Third United Nations Conference on the Law of the Sea [UNCLOS III], U.N. Doc. A/CONF./62/Rev.1, Annex II (1971). Articles 55-75 of UNCLOS III establish a 200 mile zone in which a coastal state has sovereign rights for the purpose of exploring, exploiting, conserving, and managing all the living and non-living resources of the seabed, its subsoil, and superjacent waters. In addition, the coastal state has sovereign rights with respect to all other activities undertaken for the economic exploration and exploitation of the zone, such as the production of energy from the water, currents, and winds. Id. art. 56. The coastal state also has limited jurisdiction to establish artificial islands and structures, to perform marine scientific research, and to protect and preserve the marine environment. Id. arts. 56, para. 1(b), 60 & pts. XII, XIII.

All states may exercise the high seas freedoms of navigation and overflight within the exclusive economic zone. Id. art. 58, paras. 1-2. However, in exercising these freedoms, all states must give due regard to the rights and duties of the coastal state. Id. art. 58, para. 3.


4. See supra note 2.
quently, to disputes over the division of those areas. The *Gulf of Maine Case* was the first such dispute to be brought before the International Court of Justice.\(^5\)

The area of overlap between the fishery zones claimed by the United States and Canada included Georges Bank, considered the most important fishing bank off the east coast of the United States, as well as a rich source of mineral deposits. The average estimates of recoverable hydrocarbon deposits on Georges Bank are 0.9 billion barrels of oil and 4.4 trillion cubic feet of natural gas.\(^6\) The value of the fisheries of Georges Bank over the next 20 years is estimated at 3.34 billion dollars.\(^7\) Under the "equitable result" the Court purportedly reached in its four to one decision, the United States and Canada now share these mineral and living resources. For the United States, to whom Georges Bank was "as American as apple pie,"\(^8\) the acquisition of anything less than full jurisdiction over the Bank meant defeat.\(^9\) On the other hand, for Canada, "any boundary that put [Canada] palpably on the Bank" was a victory.\(^10\) Indeed, although Canada acquired jurisdiction only over approximately one-sixth of the Bank,\(^11\) it acquired substantial new ground and fish resources, while the majority of its existing scallop fishery remained protected.\(^12\)

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5. Since the *Gulf of Maine Case*, only one case involving delimitation of both continental shelf and exclusive economic zone has been decided. Delimitation of the Maritime Boundary Between Guinea and Guinea-Bissau (Guinea v. Guinea-Bissau), Court of Arbitration (Award of Feb. 1985), reprinted in 25 I.L.M. 252 (1986) [hereinafter Guinea/Guinea-Bissau Arbitration]. The Court of Arbitration was asked to delimit by means of a single line the territorial sea, exclusive economic zone, and continental shelf in the portion of the Atlantic Ocean between Guinea and Guinea-Bissau.


7. *Id.* at 606 n.37.


10. *Id.*

11. *Id.* at 539.

12. Previously, American and Canadian fishermen had enjoyed free access to all the areas of the Bank. Comment, *Maritime Delimitations, supra* note 6, at 635 n.248. However, as a result of the Court's decision, Canada acquired "as much as 9000 square nautical miles of the most lucrative part of Georges Bank." *Clain, supra* note 8, at 606. Thus, Canada gained an additional 30% of the haddock harvest, 25% of the pollack harvest, and 20% of the redfish
This Note will discuss the equity of this result by sketching the geography of the area in controversy, the history of the dispute, and the legal background of continental shelf delimitation. Next, the Note will trace the Chamber's process of delimiting the maritime boundary in the Gulf of Maine area. The discussion will then focus on the delimitation of the second segment of the boundary, with emphasis on the role played by the principle of proportionality. In particular, the Note will criticize the interpretation and application of that principle by the United States, the Chamber, and by Judge Schwebel's concurring opinion in terms of its consistency with previous decisions concerning maritime boundary delimitations. The Note will conclude by suggesting a proportionality formula the Chamber could have used in the *Gulf of Maine Case* to reach a more equitable result and that can guide the Court in future delimitations of deep coastal concavities similar to the Gulf of Maine.

II. BACKGROUND

A. Geography and Geomorphology of the Gulf of Maine Area

The Gulf of Maine encompasses an area of approximately 36,000 square miles roughly in the shape of an "elongated rectangle." It is bordered on three sides by land, primarily that of the United States. The western side of the rectangle is an imaginary line running from Nantucket Island past the contiguous bays of Cape Cod and Massachusetts to the tip of Cape Ann. The northern side of the rectangle—the first of its long sides—runs from Cape Elizabeth along the coast of Maine to the international boundary line between the United States and Canada, which terminates in the Grand Manan Channel. The Bay of Fundy lies at the northern tip of the Gulf, between the opposing coasts of New Brunswick and Nova Scotia. The eastern side of the rectangle links the Grand Manan Channel to Cape Sable at the southwestern extremity of Nova Scotia. On the fourth side, the gulf spills into the Atlantic Ocean. Thus, the second long side of the rectangle is an imaginary line running across the waters from Nantucket Island to Cape Sable. Georges Bank, and yellowtail flounder harvest, *id.*, as well as exclusive jurisdiction over the part of Georges Bank containing "the greatest concentrations of scallops." Collins & Rogoff, *The Gulf of Maine Case and the Future of Ocean Boundary Delimitation*, 38 MAINE L. REV. 1, 31 (1986).

13. The United States and Canada sharply disagreed as to the geographical and geomorphological features to be included in defining the Gulf of Maine area. Therefore, the following description of the area is based upon that of the Court.


15. *Id.* para. 30.
the core area of the dispute, lies seaward of the Gulf, outside its closing lines, but well within the delimitation area.

The continental shelf in the Gulf of Maine area is a part of the North American Atlantic continental margin, which extends from Newfoundland to Florida.\(^{16}\) It forms a single "continuous, uniform and uninterrupted" geological and geomorphological\(^{17}\) structure throughout its length.\(^{18}\) The great volume of water within the delimitation area possesses the same character of unity and uniformity as the continental shelf beneath it.\(^{19}\) (See Appendix 1.)

B. History of the Dispute

The dispute over the continental shelf in the Gulf of Maine area dates back to September 28, 1945, when President Harry S. Truman issued the Proclamation Relating to the Continental Shelf (the Truman Proclamation).\(^{20}\) The Truman Proclamation established exclusive U.S. jurisdiction over "the natural resources of the subsoil and seabed of the Continental Shelf beneath the high seas . . . contiguous" to its coasts.\(^{21}\) Pursuant to this proclamation, the United States established a 100-fathom depth line as the boundary of its continental shelf zone—a boundary which included Georges Bank.\(^{22}\)

\(\text{\(^{16}\) Id. para. 45; Memorial of the United States (Can. v. U.S.), 1982 I.C.J. Pleadings (Gulf of Maine) para. 30 (Sept. 27, 1982) [hereinafter U.S. Memorial].}\\)
\(\text{\(^{17}\) Geomorphology is the study of the shape of the sea floor. U.S. Memorial, supra note 16, para. 30.}\\)
\(\text{\(^{18}\) Gulf of Maine Case, supra note 1, para. 45. The Court thus specifically disallowed the U.S. contention that the Northeast Channel constitutes a significant break in the surface of the continental shelf capable of serving as the basis for drawing a single line of delimitation in the Gulf of Maine area. U.S. Memorial, supra note 16, para. 296. Rather, the Court held that it had "no choice but to proceed without reference to any real factor of natural separation of the continental shelf of the two countries, because no such factors are discernible." Gulf of Maine Case, supra note 1, para. 47.}\\)
\(\text{\(^{19}\) Gulf of Maine Case, supra note 1, para. 55.}\\)
\(\text{\(^{20}\) The Truman Proclamation, Proclamation No. 2667, Policy of the United States with Respect to the Natural Resources of the Subsoil and the Seabed of the Continental Shelf, Sept. 28, 1945, 10 Fed. Reg. 12,303 (1945), reprinted in 13 DEP'T ST. BULL. 485 (1945).}\\)
\(\text{\(^{21}\) U.S. Memorial, supra note 16, para. 134.}\\)
\(\text{\(^{22}\) Id. The United States later insisted that Canadian claims to part of Georges Bank were precluded by its acquiescence in the U.S. assertion of jurisdiction over the 100 fathom depth contour in the Gulf of Maine area. The United States maintained that consent could be implied from Canada's failure to react to the Truman proclamation and to the Department of State communique that accompanied the Proclamation, which clearly indicated that U.S. jurisdiction extended to the 100 fathom depth. Gulf of Maine Case, supra note 1, para. 153. The Court rejected the U.S. estoppel argument based on the principle established in the North Sea Continental Shelf Cases (W. Ger. v. Den.; W. Ger. v. Neth.), 1969 I.C.J. 1 (Judgment of Feb. 20), that delimitation must be effected by agreement. Gulf of Maine Case, supra note 1, paras.}\\)
The dispute began to take shape in 1964 when Canada granted permits for oil and gas exploration in the northeastern portion of Georges Bank.\textsuperscript{23} Canada's action prompted diplomatic consultations between the United States and Canada during which the two governments sought to agree on a continental shelf boundary in the Gulf of Maine area. On November 5, 1969, after unsuccessful attempts to reach an agreement, the U.S. Department of State requested a moratorium on mineral exploration and exploitation on Georges Bank.\textsuperscript{24} The Canadian Government rejected the U.S. request for a moratorium.\textsuperscript{25} On February 21, 1970, the United States officially condemned the issuance of Canadian permits authorizing the exploration and exploitation of the natural resources in the area of the Georges Bank.\textsuperscript{26}

In 1977 the dispute took on a new dimension as both nations extended their fisheries jurisdiction to 200 miles offshore based on the provisions of the Third United Nations Conference on the Law of the Seas.\textsuperscript{27} (See Appendix 1.) This concurrent expansion of fishery zones resulted in an area of overlap covering approximately 210 square nautical miles,\textsuperscript{28} including all of Georges Bank.\textsuperscript{29} Georges Bank is "one of the richest fishing grounds in the world,"\textsuperscript{30} producing about twice as much as the North Sea and five times as much as the northeast Arctic.\textsuperscript{31} Control over the living and the mineral resources of the Georges Bank was now at stake. The dispute, which had previously been confined to the continental shelf boundary issue, became magnified by the need to address the overlapping U.S. and Canadian claims to a 200-mile exclusive fishery zone.

Intensive negotiations, carried on by special negotiators appointed by the Prime Minister of Canada and the U.S. President, failed to produce an agreement on the maritime boundary in the Gulf of Maine area.\textsuperscript{32} Therefore, in 1979 Canada and the United States decided to seek adjudication of their dispute in a Chamber of the International Court of

\begin{footnotes}
\footnotetext{153-154. Hence, unilateral conduct by one of the parties could not estop the claim of the other.}

\footnotetext{23. \textit{Gulf of Maine Case, supra} note 1, para. 131.}
\footnotetext{24. \textit{Id.} paras. 64, 136.}
\footnotetext{25. \textit{Id.} para. 64.}
\footnotetext{26. \textit{Id.} para. 65.}
\footnotetext{27. \textit{See supra} note 4 and accompanying text.}
\footnotetext{28. U.S. Memorial, \textit{supra} note 16, para. 151.}
\footnotetext{29. \textit{Gulf of Maine Case, supra} note 1, para. 68.}
\footnotetext{31. Collins & Rogoff, \textit{supra} note 12, at 2.}
\footnotetext{32. Clain, \textit{supra} note 8, at 533.}
\end{footnotes}
C. Restrictions Placed on the Chamber

The United States and Canada brought their dispute before the Court by notification of a Special Agreement as provided in article 40, paragraph 1 of the Statute of the Court. The Special Agreement provided that the delimitation of a single boundary dividing the continental shelf and fisheries zones of Canada and the United States in the Gulf of Maine area should be determined by a Chamber of the Court (the Chamber). The parties expressly agreed that each would accept as final and binding the decision of the Chamber. The parties annexed the Special Agreement to the Treaty between Canada and the United States to Submit to Binding Dispute Settlement the Delimitation of the Maritime Boundary in the Gulf of Maine area.

The Special Agreement expressly established the basic parameters for the settlement and outlined the extent of the Court's jurisdiction. Therefore, the Court's decision had to conform to the following provisions of the Special Agreement. First, the starting point for the line of delimitation, called point A, had to be the first point south of the international boundary terminus at which the fishery limits claimed by the two nations in 1977 intersect. Second, the line of delimitation had to termi-

33. Treaty to Submit to Binding Dispute Settlement the Delimitation of the Maritime Boundary in the Gulf of Maine Area, Mar. 29, 1979, United States-Canada, T.I.A.S. No. 10204, at 2797 (entered into force Nov. 20, 1980). The Maritime Boundary Treaty was accompanied by the Agreement on East Coast Fishery Resources, S. Exec. Doc. No. V, 96th Cong., 1st Sess. (1979), that provided for the permanent sharing of fishing and management of Georges Bank by the United States and Canada. Claim, supra note 8, at 534. President Carter submitted both treaties to the Senate with his "strong endorsement." Id. However, President Reagan withdrew the Fisheries Agreement in March 1981 upon finding out that the Senate would only accept the Boundary Adjudication Treaty. Id. Canada agreed to let the Boundary Adjudication Treaty enter into force without the Fisheries Agreement. Collins & Rogoff, supra note 12, at 5 n.19.


35. U.S. Memorial, supra note 16, para. 3.

36. Id. para. 4.

37. Treaty to Submit to Binding Dispute Settlement the Delimitation of the Maritime Boundary in the Gulf of Maine Area, supra note 33.

38. Gulf of Maine Case, supra note 1, para. 20. The coordinates for point A are 44°11'12" north, 67°16'46" west. Id. Point A is thus situated about 40 nautical miles from the terminal point of the international boundary terminus in the Grand Manan Channel. Schneider, supra note 9, at 543. The reason advanced for choosing point A was the desire of the parties to reserve for themselves the possibility of a solution to the dispute as to the sovereignty over Machias Seal Island and North Rock, both of which lie landward of point A. U.S. Memorial, supra note 16, at 2 n.1.
nate within a specific area agreed upon by the parties and enclosed within a triangle. 39 (See Appendix 2.) The agreement authorized the Chamber to terminate its delimitation "at any point in the triangle." 40 Restricted only by these few limitations on its jurisdiction, the Chamber proceeded to comply with the request in the Special Agreement.

D. Legal History of Continental Shelf Delimitation

Although the request for the Court to delimit the 200 mile exclusive economic zone was unprecedented, delimitation of the continental shelf has its roots in the Court's decision in the North Sea Continental Shelf Cases. 41 The North Sea Continental Shelf Cases involved the delimitation of the continental shelf in the North Sea, where the coastlines of Denmark, the Netherlands, and the Federal Republic of Germany form a deep concavity. Denmark and the Netherlands contended that article 6 of the 1958 Geneva Convention on the Continental Shelf 42 had become customary international law and governed the dispute. They claimed that their boundaries with Germany were to be determined by the application of the equidistance method enunciated in article 6 of the Convention. 43 Application of that method would have resulted in cutting Germany off from the extension of its coastal front into the North Sea. Germany in turn contended that article 6 of the Continental Shelf Convention had not become customary international law, and that the delimitation should be made in accordance with the principle that each coastal state is entitled to a "just and equitable share." 44

The Court agreed with Germany that the principle of equidistance,

39. The geographic coordinates of the triangle are 40° north, 67° west; 40° north, 65° west; 42° north, 65° west. The triangle was established in order to avoid the possibility of the Chamber's decision in this case "prejudicing the determination of the outer edge of the continental margin or other questions arising in determining the outer limit of the 200-nautical-mile zone." U.S. Memorial, supra note 16, at 2 n.l.
40. Id. (emphasis added).
41. North Sea Continental Shelf Cases, supra note 22.
42. 1958 Geneva Convention on the Continental Shelf, supra note 3.
43. Article 6 states in relevant part that, in delimiting the boundaries of the continental shelf, "[i]n the absence of agreement, and unless another boundary line is justified by special circumstances, the boundary shall be determined by application of the principle of equidistance from the nearest points of the baselines from which the breadth of the territorial sea of each state is measured." Id. art. 6, 15 U.S.T. at 474, 499 U.N.T.S. at 316. Robert D. Hodgson, Director of the United States Office of the Geographer, explains an equidistant line as follows: "Geometrically, the line that is equidistant between any two points, A and B, in the same plane is the perpendicular bisector of the line joining the two points ...." Hodgson & Cooper, The Technical Delimitation of a Modern Equidistant Boundary, 3 Ocean Dev. & Int'l L.J. 361, 364 (1976).
44. North Sea Continental Shelf Cases, supra note 22, para. 15.
as codified by article 6 of the 1958 Continental Shelf Convention, did not represent a binding rule of customary international law. In addition, the Court held that the principle of equidistance is only one possible equitable criterion to be used in the delimitation of the continental shelf. When a case presents circumstances such that application of the equidistance principle would create an inequitable result, the Court held that "there is no legal limit to the considerations which States may take account of for the purpose of making sure that they apply equitable procedures." To achieve an equitable solution, the parties must balance a variety of considerations which "vary with the circumstances of each case." Applying its holding to the facts immediately before it, the Court adopted an equitable method of delimitation that gave due effect to Germany's natural prolongation from its land territory out into the open water of the North Sea, rather than the equidistance method articulated in the 1958 Continental Shelf Convention. Besides the principle of natural prolongation, the court identified a number of other criteria that states might take into consideration in reaching equitable solutions to future continental shelf delimitations. Such criteria included the geological and geographical aspects of a particular situation, the unity of deposits on the ocean floor, and the proportionality between the extent of the continental shelf appertaining to the states concerned and the length of their respective coastlines.

The application of these criteria was left open to the circumstances

45. The Court noted that in order for a particular provision of a convention to become a rule of customary international law, "the provision concerned should . . . be of a fundamentally norm-creating character such as could be regarded as forming the basis of a general rule of law." Id. para. 72. The Court announced four main reasons why the principle of equidistance did not meet this requirement.

First of all, article 6 requires that states first attempt to effect delimitation of the continental shelf by agreement. The principle of equidistance should be applied only in the absence of an agreement. Thus, the obligation to use the method of equidistance is of a secondary, rather than a primary, nature. Id. As such, it would constitute "an unusual preface to what is claimed to be a potential general rule of law." Id. Second, the effect of the notion of special circumstances on the principle of equidistance is too controverted to allow article 6 to become a "norm-creating" rule. Id. Third, the ability of states to make reservations to article 6 denies to the provisions of that article a norm-creating character. Id. Finally, the Court noted that states had not invoked article 6 extensively enough or "in such a way as to show a general recognition that a rule of law or legal obligation is involved." Id. paras. 74-75.

46. Id. para. 90.
47. Id. para. 93.
48. Id.
49. Natural prolongation "refers to the physical extension of the land territory of a State into and under the sea." U.S. Memorial, supra note 16, para. 245.
51. Id. paras. 94-98.
of each case. Disputing coastal states therefore disagreed as to their application and were unable to reach agreement without court adjudication. In the cases that followed the North Sea Continental Shelf Cases, namely the Anglo French Continental Shelf delimitation of 1977 and the Tunisia/Libya Continental Shelf Case of 1982, the Court made further efforts to elaborate on the application of the equitable criteria it had announced in the North Sea Continental Shelf Cases.

In 1975 the United Kingdom and France agreed to submit their dispute concerning the delimitation of their respective continental shelves in the English Channel and an area of the Atlantic Ocean immediately west of the Channel to an arbitral tribunal. The Court of Arbitration was asked to decide the controversy "in accordance with the rules of international law applicable in the matter as between the parties." In performing this task, the Court of Arbitration focused on "the link between proportionality and the principle that delimitation is to be effected in accordance with equitable principles, taking account of the relevant circumstances, to produce an equitable result."

The Court of Arbitration did not view proportionality as an independent source of a coastal state's right to the continental shelf in front of it. Rather, it considered proportionality as only one factor to be used in evaluating the equities of certain geographical aberrations. The Court of Arbitration noted the following geographical aberration in the area of delimitation: the island of Ushant forms part of the land mass of France and lies ten nautical miles from the French coast within the territorial sea of the French mainland. The Scilly Isles likewise form part of the land mass of England and lie twenty-one nautical miles from the British coast within the territorial sea of the British mainland. The distance that the Scilly Isles extend the coastline of the mainland of the United Kingdom westward onto the Atlantic continental shelf is thus slightly more than twice the distance that Ushant Island extends the coastline of the French mainland. Hence, giving full effect to the Scilly Isles as a

55. Id. at para. 1.
56. U.S. Memorial, supra note 16, para. 223.
57. Anglo/French Arbitration, supra note 52, para. 248.
58. Id.
59. Id. para. 251.
base-point for determining the course of the boundary would have had a disproportionate and therefore inequitable effect. To abate the potential inequity created by the Scilly Isles, the Court of Arbitration devised the equitable method of giving islands half-effect. That method operates as follows:

The method of giving half-effect consists in delimiting the line equidistant between the two coasts, first, without the use of the offshore island as a base-point and, secondly, with its use as a base-point; a boundary giving half-effect to the island is then the line drawn midway between those two equidistance lines.  

In drawing the delimitation line according to this method, the Court of Arbitration was not concerned with the resulting ratio of continental shelf to coastline. Rather, the Court was satisfied that by giving half-effect to the Scilly Isles, it had remedied the disproportionate effect of their exceptionally long protrusion.

The Tunisia/Libya Case was brought before the Court by means of a Special Agreement between Tunisia and Libya. The case concerned the delimitation of an area of the continental shelf beneath the Mediterranean Sea off the coasts of these states. The Court was asked to state "[w]hat principles and rules of international law may be applied for the delimitation of the area of the continental shelf" at issue and further to "clarify the practical method for the application of these principles and rules . . . ." The Court held that it was "bound to apply equitable principles as part of international law, and to balance up the various considerations which it regards as relevant to produce an equitable result." The Court's opinion focused on the equitable principles of natural prolongation and proportionality.

The principle of natural prolongation constituted the crux of Libya's argument. Libya claimed that the Tripolitanian Furrow in the continental shelf of the delimitation area constituted a natural prolongation of the territory of both parties and interrupted the continuity of the continental shelf in the area of delimitation "so as to amount to a 'natural submarine frontier.'" Accordingly, Libya suggested that the line of delimitation follow the northward direction of that natural prolongation.

In addressing this argument, the Court held that the natural prolongation principle was relevant to maritime delimitations only in situations

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60. Id.
61. Tunisia/Libya Case, supra note 53, para. 4.
62. Id. para. 71.
63. Id. para. 80.
64. Id. para. 113.
where the prolongation creates "such a marked disruption or discontinuity of the sea-bed as to constitute an indisputable indication of the limits of two separate continental shelves." However, the Court qualified this seemingly rigid rule by adding that even if the natural prolongation "does not contain any element which interrupts the continuity of the continental shelf," it may still be considered as a relevant circumstance in determining an equitable solution. Turning to the situation at hand, the Court concluded that the Tripolitanian Furrow did not sufficiently disrupt the "essential unity of the continental shelf" as to merit "inclusion among the factors to be balanced up with a view to equitable delimitation."

The Court in the Tunisia/Libya Case made use of the principle of proportionality both as applied in the North Sea Continental Shelf Cases and in the Anglo/French Arbitration. Thus, the Court used the principle of proportionality both as a means of ensuring that the area of continental shelf allotted to each state was proportional to the length of that state's coastline, and as a means of giving islands half-effect.

In accordance with the North Sea Continental Shelf Cases, Libya and Tunisia agreed that the line of delimitation should take into account "a reasonable degree of proportionality... between the extent of the continental shelf areas appertaining to the coastal State and the length of its coast measured in the general direction of the coastline." The parties disagreed as to which coasts were to be taken into account.

In particular, the dispute concerned the inclusion of the coasts of the Gulf of Gabes for purposes of the proportionality test. The Gulf of Gabes is an indentation in the Tunisian coastline which creates a radical change in the direction of the coast. This circumstance would have necessitated adjusting the delimitation line in favor of Libya. Therefore, Tunisia reasoned that since the waters of the Gulf of Gabes were internal waters, the coasts and the waters of the gulf had to be excluded from any proportionality calculations. Libya, on the other hand, maintained

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65. Id. para. 66.
66. Id. para. 68.
67. Id. para. 80.
68. Id. para. 103 (citing North Sea Continental Shelf Cases, supra note 22, para. 101).
69. Id.
71. Tunisia/Libya Case, supra note 53, para. 102.
that the result of closing off the gulf would have been "inappropriate and inequitable." 72

The Court adopted Libya's position and refused to exclude the coasts of the Gulf of Gabes from its proportionality calculations. Instead, the Court gave due consideration to the special circumstance presented by the change of direction in the Gulf of Gabes by adjusting the delimitation line so that it would parallel the general direction of the Tunisian coast northwest of the Gulf of Gabes. 73

Finally, the Court took into consideration the position of the Kerkennah Islands. The Court considered that giving full effect to the Kerkennahs in drawing the delimitation line would have had the inequitable effect of cutting off Libya from a portion of the shelf lying in front of its coast. 74 Hence, the Court gave only half-effect to the Kerkennahs in determining the delimitation line northeast of the Gulf of Gabes.

The resulting ratio between the Libyan and the Tunisian coastlines was thirty-one to sixty-nine. 75 The resulting ratio between the area of continental shelf appertaining to each was approximately forty to sixty. 76 The Court was thus satisfied that its result had met "the requirements of the test of proportionality as an aspect of equity." 77

Despite these attempts by the Court to clarify and expand on the use of equitable criteria in maritime boundary delimitations, states remained incapable of solving their disputes. The pleadings submitted by the United States and Canada in the Gulf of Maine Case illustrate how the application of the principles enunciated and the factors indicated by the Court may lead to widely differing results depending on the way in which those principles are applied, and the relative weight given to each of those factors in determining the method of delimitation.

III. THE GULF OF MAINE CASE: A SINGLE SOLUTION TO A TWO-FOLD ISSUE

The only point of agreement between the United States and Canada in their dispute involved the existence of a "fundamental norm" of customary international law. 78 According to the United States, the funda-

72. Id. para. 101.
73. Id. paras. 127-128.
74. Id. para. 128; U.S. Memorial, supra note 16, para. 231.
75. Tunisia/Libya Case, supra note 53, para. 131.
76. Id.
77. Id.
mental norm of international law applicable to this case required that "the delimitation of a single maritime boundary shall be in accordance with equitable principles, taking account of the relevant circumstances in the area, to produce an equitable solution." Likewise, Canada claimed that, pursuant to the fundamental norm of international law applicable to this case, "the delimitation of the maritime boundary must be made according to equitable principles, taking account of all relevant circumstances, so as to reach an equitable solution." Naturally, each country's assessment and application of all the relevant circumstances differed greatly from those of the other.

A. United States Argument

The United States selected relevant circumstances to be taken into account when drawing the line of delimitation with a view to acquiring jurisdiction over the whole of Georges Bank. The relevant circumstances identified by the United States fell into three categories: the geographical and geomorphological features in the Gulf of Maine area; the characteristics of the marine environment; and the activities of the parties in the area.

The United States began by addressing the effect of the geographical and geomorphological features in the Gulf of Maine on the line of delimitation. The argument focused on three equitable criteria that had been previously applied in maritime delimitations to abate the effect of geographical and geomorphological irregularities: the principle of nonencroachment; the principle of proportionality; and the principle of natural prolongation.

The first geographic principle relied on by the United States, the principle of nonencroachment, demands that any method of delimitation avoid leaving one state with an area located off, or in front of, the coast of another. In applying the principle of nonencroachment to the present dispute, the United States pointed out that there is a single general southwest and northeast direction of the coast in the Gulf of Maine area which is in accord with the general direction of the east coast of the North American continent. Those coasts that follow the general direction of

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80. Canadian Memorial, supra note 78, para. 278.
81. U.S. Memorial, supra note 16, paras. 278-300.
82. Id. para. 240. The principle of nonencroachment was developed in the Grisbordana Case (Nor. v. Swe.), 1951 I.C.J. 133, a case involving the inshore area adjacent to both the coasts of Sweden and Norway.
83. Comment, supra note 30, at 271-72.
the eastern seaboard are primary coasts. The areas directly in front of, or perpendicular to, primary coasts, prima facie appertain to them. Those coasts that run contrary to the general direction of the eastern seaboard are secondary coasts. Secondary coasts "deviate[ ] from the broad geographical relationship of the parties," and should therefore "not be so used in the delimitation of [a] single maritime boundary as to deprive [a state] of the extension of its primary coastal front into the sea." 84

According to the primary-secondary coast argument, Canada's primary coastal front is the coastline between Cape Sable and Cape Canso facing the Atlantic Ocean. 85 The United States proposed to adjust the delimitation line it had originally suggested—a straight line perpendicular to the general direction of the Atlantic coast—so as not to encroach upon the extension of that front into the Atlantic. 86 However, the United States argued that the seaward extension of Canada's secondary coastal front overlapped with the seaward extension of the U.S. primary coastal front. Because secondary coasts are entitled to less consideration than primary coasts, the United States adjusted its perpendicular so as to leave the greater part of the area of overlap to the United States. 87

The U.S. primary coastal front is the coast of Maine abutting on the Gulf. Since the whole of Georges Bank lies in front of the coast of Maine, 88 it necessarily follows from the U.S. argument that Georges Bank would fall entirely within the jurisdiction of the United States. However, the line originally drawn by the United States in accordance with the primary coastal front criterion would have infringed the express clause of the Special Agreement, which provided for a starting point situated thirty-nine miles from the terminal point of the international boundary. Accordingly, the United States proposed adjusting the perpendicular so as to commence at point A, which still left Georges Bank entirely within its jurisdiction.

The second geographic principle invoked by the United States was the principle of proportionality. Like the Federal Republic of Germany in the North Sea Continental Shelf Cases, the United States claimed that there must be a strict correlation between the respective lengths of the coasts of the parties and the sea areas appertaining to them. 89 This argu-

84. U.S. Memorial, supra note 16, para. 309.
85. Id. para. 308.
86. Id.
87. Id. para. 309.
88. Id. para. 310.
89. Id. para. 242.
ment was particularly significant to the United States in view of Canada's possession of the Bay of Fundy.

The Bay of Fundy is a long, narrow indentation along the Canadian coast that encloses a very small amount of water. It is bordered on either side by the coasts of New Brunswick and Nova Scotia. It measures ninety nautical miles in length up to Cape Chignecto, at which point it divides into two arms: Chignecto Bay and Minas Basin. The total coastal length of the Bay of Fundy is approximately 180 nautical miles. By contrast, the bay is fifty-four nautical miles wide at its mouth between Cape St. Mary's and the coast of Maine, thirty-three nautical miles wide at St. John, and twenty-five miles wide in its upper reaches. The sea area enclosed by the bay is 3050 square nautical miles, only 11 percent of the total sea area enclosed by the Gulf of Maine. According to the United States, including the full length of the Bay of Fundy in calculating the relevant Canadian coastline would have increased the Canadian coastline by ninety-three percent, while increasing by just seven percent the sea area appertaining to Canada.

In order to abate this potential inequity, the United States argued that because the coasts of the Bay of Fundy face only each other, and do not face the Gulf of Maine area, the Bay should be closed off by a straight line and not be included in any proportionality test. The United States argued that the only relevant coastlines were those facing the Gulf of Maine and the Atlantic Ocean. Measured on this basis, the length of the U.S. line was 1063 nautical miles, while the Canadian coastline was only 692 nautical miles long. Thus, the proportion of the U.S. coastline to the Canadian coastline was sixty-three to thirty-nine. At the same time, the proportion between the maritime area allotted to the United States and that allotted to Canada by the adjusted perpendicular line was sixty-one to thirty-seven, respectively. Based on these calculations, the United States claimed that the adjusted perpendicular line it suggested "achieve[d] a reasonable degree of proportionality between the

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91. Id.
92. The total sea area enclosed by the Gulf of Maine measures 28,506 square nautical miles. For an explanation of the figures used for purposes of the calculations in this Note, see infra note 234.
94. U.S. Memorial, supra note 16, para. 313.
95. Id.
96. Id.
97. Id.
relevant coastlines and the maritime areas appertaining to each State."\(^9\) (See Appendix 3.)

Finally, the United States turned to the principle of natural prolongation, which is a principle traditionally associated with geomorphology. Based on the Court's decision in the *Tunisia/Libya Case*,\(^9\) the United States suggested that the Northeast Channel constituted a break so significant in the surface of the continental shelf along the east coast of North America as to divide the Gulf of Maine area into two separate continental shelves.\(^10\) The United States alternatively argued that even if the Court did not find evidence sufficient to show that the Northeast Channel constituted a marked disruption of the area's continental shelf, the Northeast Channel should at least be recognized as a natural boundary between the ecological regimes of Georges Bank and the Scotian Shelf.\(^11\) Accordingly, the United States offered to adjust the perpendicular delimitation line it had originally suggested so as to take into account the Northeast Channel. The United States proposed to establish a boundary parallel to the channel and perpendicular to the general direction of the coast.\(^12\) Again, the practical result of this adjustment was to bring Georges Bank entirely within the boundaries of the United States, while leaving the Scotian Shelf to Canada.

The United States next addressed the effect of the marine environment of the Gulf of Maine on the delimitation line. The United States identified three "separate and identifiable ecological regimes" in the Gulf of Maine area located, respectively, above the Gulf of Maine Basin, above Georges Bank, and above the Scotian Shelf.\(^13\) The United States argued that the unity of each of the three ecosystems had to be maintained.\(^14\) Preventing the division of state responsibility for identifiable stocks of fish within each separate ecosystem was crucial for two reasons: to avoid interference with effective resource conservation and management\(^15\) and to minimize the potential for international disputes.\(^16\)

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98. *Id.*
101. *Id.* para. 315.
102. *Id.*
103. *Id.* paras. 292-293.
104. *Id.* para. 294.
105. The United States argued that the fish stocks within each ecosystem were independent of the fish stocks in the other two ecosystems. Consequently, overfishing the stocks associated with the Scotian shelf would not deplete the stocks of the same species associated with Georges Bank. However, overfishing of a stock associated with the Georges Bank anywhere on the Bank would "affect the abundance and even the continued existence of fish of the same stock throughout its range over Georges Bank." *Id.*
In order to avoid dividing the Scotian Shelf and the ecological regime associated with it, the United States proposed to adjust the single maritime boundary it had originally suggested. The United States proposed that the two fishing banks on the Scotian Shelf, Browns Bank, and German Bank be left in their entirety to Canada to avoid inequity. The unarticulated effect of this adjusted perpendicular was to leave Georges Bank wholly within the jurisdiction of the United States.

The final U.S. argument in its attempt to gain jurisdiction over the whole of Georges Bank dealt with the activities of the parties in the Gulf of Maine area. The United States presented extensive documentation in its brief concerning the supremacy of its claim over Georges Bank. The United States maintained that, "[e]xcept for occasional foreign vessels, only the United States fished Georges Bank from colonial days until the later years of the [International Commission for the Northwest Atlantic Fisheries] regime." The United States provided evidence establishing the following: it alone had charted and surveyed Browns Bank and Georges Bank from colonial times until the present; it first provided and continued to provide aid to navigation; it regularly patrolled Georges Bank; and it assumed exclusive operational responsibility for the defense of Georges Bank during World War II. The United States enumerated these activities in an attempt to establish its predominant interest in Georges Bank and the Gulf of Maine, and asserted that this interest had to be taken into account when delimiting the maritime boundary.

Finally, the United States argued that article 6 of the 1958 Continental Shelf Convention was not binding treaty law, even though both parties had ratified it. The United States reasoned that the Convention did not apply to the present dispute because it dealt only with delimitation of the continental shelf and not with delimitation of the 200-mile fishing or other maritime zones.

B. The Canadian Argument

Canada, on the other hand, maintained that the law applicable in this case was article 6 of the 1958 Continental Shelf Convention to which both states were parties. Canada viewed this provision as "the only ex-
licit source of positive law . . . available in this case . . . .”

Canada argued that article 6 was a direct source of law for the continental shelf delimitation and an indirect source of law, by way of analogy, for determining the 200 mile fishery zone delimitation. Accordingly, the line of delimitation suggested by Canada was an equidistance line, adjusted so as to take into account the special circumstances of the area.

The circumstances identified by Canada as relevant to the drawing of the delimitation line were selected with a view to acquiring jurisdiction over the eastern portion of Georges Bank. Thus, Canada emphasized the economic rather than the physical characteristics of the Gulf of Maine area. The only physical circumstance that Canada viewed as sufficiently irregular to warrant adjustment of the equidistance line was the exceptional protrusion of Cape Cod and Nantucket Island.

Canada took the position that neither geomorphology nor ecology presented special circumstances worth considering in reaching an equitable result. Canada viewed the continental shelf in the area as a “single, continuous, uninterrupted feature, without discontinuities that might identify separate natural prolongations.” Thus, Canada disagreed with the U.S. contention that the Northeast Channel constituted a natural boundary in the continental shelf of the area of delimitation. More importantly, Canada rejected the notion that three separate and distinct ecological regimes were present in the Gulf of Maine area. Rather, Canada considered Georges Bank as “part of the oceanic continuum,” an “integral part of a single, uninterrupted continental shelf.” Canada thus implicitly rejected the U.S. argument that division of state responsibility for Georges Bank should be prevented.

Canada also refused to adjust the equidistance line in order to abate the potential inequity created by the length of its coast along the Bay of Fundy. Canada admitted that the Bay of Fundy attracts a disproportionate “offshore area because of its markedly concave configuration.” However, Canada maintained that the overall balance between the Canadian and the U.S. coasts in the Gulf of Maine area “as a whole . . .

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113. Canadian Counter-Memorial, supra note 90, para. 548.
114. Id. para. 549.
115. Id. para. 131.
116. Id. para. 168.
117. See supra text accompanying notes 99-101.
118. See supra text accompanying note 103.
119. Canadian Counter-Memorial, supra note 90, para. 182.
120. Id. para. 175.
121. See supra text accompanying notes 104-108.
122. Canadian Counter-Memorial, supra note 90, para. 118.
render[ed] such an abatement unnecessary.”

Finally, Canada disagreed with the U.S. contention that state activities in the region constituted a relevant circumstance in effecting the line of delimitation. Canada regarded state activities as possibly “relevant to a determination of sovereignty in the territorial sea,” but “extraneous to either the continental shelf or the regime of the exclusive economic zone . . . ”

Instead, Canada claimed that the major relevant circumstance in the delimitation area was the “economic and human environment” produced by the gulf’s physical characteristics. In this context, Canada pointed out that its fishery on Georges Bank was a “direct consequence” of its “physical proximity to the resource and lack of alternative employment opportunities.” This circumstance gave rise to a greater economic dependency on the resources of Georges Bank on the part of Canada than on the part of the United States. Thus, the loss of Georges Bank would have caused “extensive hardship and dislocation” for the people inhabiting southwest Nova Scotia. Canada therefore argued that “[c]ommon sense, within the law requires appropriate consideration of the economic impact on the lives of the people who inhabit the relevant coasts and whose dependence on the resources of Georges Bank is an established fact.”

In line with this reasoning, the only physical characteristic of the Gulf of Maine area that Canada considered to be relevant in adjusting its equidistance line was the protrusion of Cape Cod and Nantucket Island seaward from the general direction of the North American coast. Canada proposed to adjust its otherwise purely equidistant delimitation line by giving half-effect to the exceptionally long peninsula of Cape Cod and the islands of Nantucket and Martha’s Vineyard, pursuant to the method set forth in the Anglo/French Arbitration. According to Canada, discounting Cape Cod and Nantucket as incidental special features

123. Id. para. 119. Canada came to this conclusion by employing the system of straight baselines to measure the coasts of the parties. Using this method, the Canadian coastline measured 298 nautical miles, while the United States coast measured 275 nautical miles, a ratio of 52 to 48. Id. para. 140.
124. Canadian Counter-Memorial, supra note 90, para. 590.
125. Id.
126. Id. para. 264.
127. Id. para. 270.
128. Id. para. 13.
129. Id. para. 307.
130. Id. para. 304.
131. Id. para. 131.
132. See supra text accompanying note 60.
was essential because a strict application of the equidistance method, giving the islands full effect, would have allocated to the United States a sea area eight times larger than the land territory comprised by those islands.\textsuperscript{133} Canada's main concern was that "the area that would be so allocated to the United States comprise[d] the rich fishing grounds of eastern Georges Bank."\textsuperscript{134} The obvious result of adjusting the equidistance line by giving half-effect to Cape Cod and Nantucket was to leave eastern Georges Bank to Canada. (See Appendix 3.)

C. The Chamber's Position

In setting the ground for its own approach to the delimitation, the Chamber rejected virtually every positive argument made by either party. The Chamber embraced the U.S. argument in only one respect: that article 6 of the 1958 Geneva Convention on the Continental Shelf, the only treaty rule in force between the parties, was inapplicable to the delimitation of a single maritime boundary.\textsuperscript{135} The Chamber noted that had the parties sought a delimitation of the continental shelf alone, application of article 6 would have been mandatory.\textsuperscript{136} However, the Chamber was requested to draw a single delimitation line for both the continental shelf and the superjacent fishery zone. The provisions of article 6 were therefore powerless "as regards a maritime boundary concerning a much wider subject matter than the continental shelf alone."\textsuperscript{137}

The Chamber subsequently attempted to articulate a general rule of customary international law on continental shelf delimitation as emerging from previous decisions in the \textit{North Sea Continental Shelf Cases}, the \textit{Anglo/French Arbitration}, and the \textit{Tunisia/Libya Case}. The Chamber summarized that rule in one simple sentence: "[F]ailing agreement, the boundary between States abutting on the same continental shelf is to be determined on equitable principles."\textsuperscript{138}

Since the delimitation of the exclusive economic zone, unlike the delimitation of the continental shelf, had no case precedent at the time, the Chamber referred to the Convention adopted at the end of the Third

\textsuperscript{133} Canadian Counter-Memorial, \textit{supra} note 90, paras. 131-137; \textit{see also} Comment, \textit{Maritime Delimitation}, \textit{supra} note 6, at 617. According to Canada's calculations, Cape Cod and Nantucket comprise a total land area of only 346 square nautical miles, while they would attract a marine area of 2906 square nautical miles in favor of the United States. Canadian Counter-Memorial, \textit{supra} note 90, para. 137.

\textsuperscript{134} Canadian Counter-Memorial, \textit{supra} note 90, para. 137.

\textsuperscript{135} \textit{Gulf of Maine Case}, \textit{supra} note 1, para. 125.

\textsuperscript{136} \textit{Id.} para. 118.

\textsuperscript{137} \textit{Id.} para. 124.

\textsuperscript{138} \textit{Id.} para. 92.
United Nations Conference on the Law of the Sea. Article 74, paragraph 1, provides that "[t]he delimitation of the exclusive economic zone between states with opposite or adjacent coasts shall be effected by agreement on the basis of international law... in order to achieve an equitable solution." The Convention has not been ratified either by the United States or Canada; thus, article 74 did not bind either party. The Chamber nevertheless viewed article 74 as relevant in pointing out the similarities between continental shelf and exclusive economic zone delimitation, providing legal support for the feasibility of a single maritime delimitation. In essence, the Chamber suggested that in the absence of any applicable treaty law, customary international law could only be expected to provide "a few legal principles" in the still "new and... unconsolidated field" of maritime delimitation.

The Chamber distinguished between principles and rules of general customary international law, equitable criteria, and particular methods of delimitation. The Chamber's criticisms of the two parties' arguments can thus be classified into two identifiable types. First, the Chamber believed that the parties had been mistaken in seeking to elevate mere equitable criteria to the status of principles and rules of general customary international law. The Chamber therefore rejected Canada's claim that article 6 of the 1958 Geneva Convention on the Continental Shelf and the equidistance method were binding rules of international law. The Chamber also classified the U.S. use of the principles of nonencroachment, natural prolongation, and proportionality as attempts to turn mere equitable criteria into rules of general international law.

140. The parties had not pointed to any rule of international law prescribing or authorizing the use of a single line to delimit both the continental shelf and the fisheries zone. Rather, they had "simply taken it for granted" that it would be possible "both legally and materially" to draw a single maritime boundary. Gulf of Maine Case, supra note 1, paras. 26-27; see also Comment, supra note 30, at 273.
141. Gulf of Maine Case, supra note 1, para. 81.
142. Id. paras. 150-152.
143. Comment, supra note 30, at 278-79. Neither equitable criteria, nor particular methods of delimitation have the status of principles or rules of international law. Rather, their application varies from case to case. Id. To illustrate, article 6 of the 1958 Convention on the Continental Shelf "consists of a 'principle' (that boundaries are to be effected by agreement) and a 'practical method' (equidistance), whose application will depend upon 'equitable criteria.'" Id. at 279.
144. In this respect, the Chamber considered the Canadian position no different from the unsuccessful Danish argument in the North Sea Continental Shelf Cases. However, the Chamber noted that had the dispute centered only on the continental shelf delimitation, article 6 would have been binding as treaty international law, since both parties had ratified the Convention. Gulf of Maine Case, supra note 1, para. 118.
Second, the Chamber rejected any attempt by either party to apply any criterion that was exclusively concerned with only one of the "two natural realities," the continental shelf and the exclusive economic zone, since both had to be delimited together. Thus, Canada's claim that article 6 applied to the dispute was castigated a second time as applicable only to the continental shelf. Likewise, the Chamber discarded the U.S. geomorphological/ecological argument, including the view of the Northeast Channel as a natural prolongation dividing the gulf into separate ecologic zones. The Chamber labeled this argument "a criterion and a method" applicable only to the delimitation of exclusive fishery zones, and not to the delimitation of the continental shelf.

The Chamber rejected the U.S. use of a perpendicular to the general direction of the coastline on the separate ground that the perpendicular constituted a highly inappropriate method of maritime delimitation in this particular case. According to the Chamber, the ideal case for the use of the perpendicular method would be one where the "course of the line would leave an angle of ninety degrees on either side." The fact that the starting point of the line to be drawn was located in one of the corners of the rectangle in which the delimitation was to be effected rendered the Gulf of Maine an especially inappropriate case for the application of the perpendicular method. The Chamber concluded that rather than surmount the difficulties of applying the perpendicular method, the numerous adjustments suggested by the United States only served to highlight the inadequacy of that method in the case at hand.

Against this background, the Chamber formulated its own version of the fundamental norm of general international law governing the issues in this case:

(1) No maritime delimitation between states with opposite or adjacent coasts may be effected unilaterally by one of those states. Such delimitation must be sought and effected by means of an agreement, following negotiations conducted in good faith and with the genuine intention of achieving a positive result. Where, however, such agreement cannot be achieved, delimitation should be effected by recourse to a third party possessing the necessary competence. (2) In either case, delimitation is to be effected by the application of equitable criteria and by the use of practical methods capable of ensuring, with regard to the geographic configuration of the area and other relevant
This fundamental norm appears to aptly synthesize the dual principle of general international law announced in the *North Sea Continental Shelf Cases*, which applied only to continental shelf delimitation, and article 74 of the Third United Nations Conference on the Law of the Sea, which pertains only to exclusive economic zone delimitation. With a growing number of coastal states extending their exclusive fishery zones pursuant to the provisions of the Third United Nations Conference on the Law of the Sea, disputes among coastal states are no longer confined to continental shelf delimitation. Rather, states are increasingly seeking delimitation of both their exclusive fisheries zone and the continental shelf by means of a single line. The principles of international law enunciated in the *Gulf of Maine Case* were therefore expected to provide the guidance necessary in such delimitations. Instead, the Chamber's application of the fundamental norm "was disappointing to the international lawyer who hoped to get judicial guidelines of practical significance."

D. Applying the Fundamental Norm

The Chamber stressed that although no particular equitable criteria or methods were a priori applicable or preferable, preference would "henceforth inevitably be given to criteria that, because of their ... neutral character, are best suited for use in a multi-purpose delimitation." The only neutral criterion recognized by the Chamber was geography, considered primarily in its physical aspects. The Chamber thus directly rejected Canada's argument that the socioeconomic consequences of the physical characteristics of the area of delimitation were relevant geographic circumstances. Within the framework of geography, the Chamber concluded that it would inevitably favor an equal division of areas that converged and overlapped. However, since the Gulf of Maine area did not present ideal conditions for the application of equal division, the Chamber found that the following auxiliary criteria should be taken into account when delimiting the maritime boundary: the comparative lengths of the coastlines of the countries concerned; the avoid-

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148. Id. para. 112.
149. See supra text accompanying notes 138, 139.
150. See, e.g., *Guinea/Guinea-Bissau Arbitration*, supra note 5.
151. Clain, supra note 8, at 525.
152. *Gulf of Maine Case*, supra note 1, para. 194.
153. Id. para. 195.
154. See supra text accompanying note 126-30.
ance of cut off; and the need to give some effect to nearby islands.\textsuperscript{156} The Chamber then proceeded to divide the Gulf of Maine area into three sectors and to draw a line correspondingly divided into three segments.

In the first sector identified by the Chamber, the northeastern section of the gulf, the Chamber found that the prevailing relationship of the coasts of Maine and Nova Scotia was that of lateral adjacency. Hence, in the absence of any special circumstances, the Chamber considered this to be the "most appropriate location for effecting as far as possible . . . an equal division"\textsuperscript{157} of the area of overlap.

However, the Chamber did not view equal division as synonymous with the equidistance method. An equidistance line, even if drawn from undisputed base-points, would have conflicted with the parties' stipulation in the Special Agreement that point A was to be the obligatory point of departure for the delimitation line. Since point A was not derived from two base-points of which one was in the unchallenged possession of the United States and the other in that of Canada, it could not be the point of departure for an equidistance line. Accordingly, the Chamber drew a line from point A that bisected the angle formed by lines perpendicular to the line from Cape Elizabeth to the international boundary terminus, and to the line from Cape Sable to the international boundary terminus. (See Appendix 4.) The Chamber concluded that this practical method had the advantage of producing "a result which is probably as close as possible to an equal division of the first area to be delimited."\textsuperscript{158}

The Chamber's opinion on the method's other two advantages, namely its simplicity and its clarity,\textsuperscript{159} remains doubtful, since the Chamber did not establish whether equal division should be effected by use of an equidistance line in cases where the parties have not agreed in advance on a point of departure.

The second sector in the gulf was characterized by the opposite coasts of Nova Scotia and Massachusetts, in a relationship referred to by the Chamber as one of "quasi-parallelism."\textsuperscript{160} The criterion of equal division in the case of opposite coasts is normally served by the use of a median line constructed at the midpoint between the opposite coasts and parallel to their mean direction. However, the Chamber found that the second sector of the gulf was complicated by the presence of two special circumstances: the much greater length of the U.S. coastline in the area

\textsuperscript{156} Comment, supra note 30, at 282.
\textsuperscript{157} Gulf of Maine Case, supra note 1, para. 209.
\textsuperscript{158} Id. para. 213.
\textsuperscript{159} Id.
\textsuperscript{160} Id. para. 216.
Maritime Boundary Delimitations

of delimitation and the presence of Seal Island seaward of the coast of Nova Scotia.

The second segment of the line was accordingly drawn in two stages. The first stage entailed the adoption of a provisional line located midway between the opposite and practically parallel coasts of Massachusetts and Nova Scotia. The second stage in constructing the line consisted of making adjustments to accommodate the special circumstances and proved a considerably more complex task than the first segment.

First, the Chamber noted that it was "impossible to disregard the circumstance" that the relevant coastline of the United States in the delimitation area was considerably longer than that of Canada. The Chamber therefore turned to the auxiliary criterion of proportionality to determine the ratio of the lengths of the U.S. and Canadian coasts, measured according to simplified coastal lines and not following coastal sinuositites. In measuring the length of the Canadian coastline, the Chamber included the coasts of the Bay of Fundy to the point where "there cease to be any waters in the bay more distant than twelve miles from a low water line." The relevant Canadian coastline was then found to be approximately 206 nautical miles long. The length of the U.S. relevant coastline was found to measure approximately 284 nautical miles. Hence, the ratio of the lengths of the U.S. and Canadian coasts was 1.38 to 1. In order to give appropriate weight to the longer U.S. coastline, the Chamber moved the provisionally adopted median line toward Nova Scotia to the point on a line drawn across the gulf that reflected the 1.38 to 1 ratio.

The second special circumstance identified by the Chamber in this sector was the presence of Seal Island. The Chamber considered that totally disregarding Seal Island in the delimitation would create an inequitable result, since the island is inhabited year-round, measures some two and a half miles in length, and is situated only nine miles inside the closing line of the Gulf of Maine. However, giving the island full effect would also have created an inequitable result, since that would have

161. Id. paras. 216-217.
162. Id. para. 218.
163. Id. para. 221.
164. Id.
165. Id.
166. Id. para. 222.
167. Id. The line was drawn across the gulf from Chebogue Point, Nova Scotia, to the northeastern tip of Cape Cod, the place where the coasts of Massachusetts and Nova Scotia are nearest each other.
168. Id.
required treating the coast of Nova Scotia as extending out to, and across, Seal Island. The Chamber therefore made a third adjustment of the median line to reflect the fact that the nearest point of land on the Nova Scotia coast was Seal Island, not Chebogie point, by giving Seal Island half-effect.\textsuperscript{169} This was accomplished by reducing the ratio to be applied for the purposes of determining the location of the corrected median line from 1.38 to 1 to 1.32 to 1.\textsuperscript{170} Having so determined the placement of this second segment of the boundary, the Chamber then extended it in two directions, back until it intersected the first segment, point B, and forward until it intersected the agreed closing line of the gulf, point C.

The third sector identified by the Chamber concerned the "area which lies outside and over against the Gulf of Maine."\textsuperscript{171} Since, from the geographic point of view, there was no point of reference that could serve as a basis for delimiting the final segment, the Chamber determined that construction of the third segment should be effected by reference to the segments of the line already drawn. The Chamber consequently concluded that the most appropriate method for delimiting the final segment was the drawing of a perpendicular.\textsuperscript{172} The third segment would be perpendicular to both the general direction of the coastline at the back of the gulf, as the United States had proposed, and to the closing line, as Canada had suggested.\textsuperscript{173} Thus, the orientation of the last segment would agree with the orientation both parties had given to the final portion of the boundary.\textsuperscript{174}

Finally, in determining the point of connection between the perpendicular and the closing line of the Gulf, the Chamber "considered [it] necessary to remain guided by geography."\textsuperscript{175} Hence, the perpendicular was to be drawn from point C, the point of intersection of the second segment and the closing line of the gulf.\textsuperscript{176} The line was continued until it intersected with the outer limit of the 200-mile fishing zone of the United States within the triangle described in the Special Agreement.\textsuperscript{177} The third segment, as delimited by the Chamber, divided Georges Bank so as to give approximately one-sixth of the Bank to Canada, and the rest

\textsuperscript{169} Id.
\textsuperscript{170} Id.
\textsuperscript{171} Id. para. 224.
\textsuperscript{172} Id.
\textsuperscript{173} Id. para. 225.
\textsuperscript{174} Id.
\textsuperscript{175} Id. para. 226.
\textsuperscript{176} Id. paras. 226, 229.
\textsuperscript{177} Id. para. 228.
to the United States. (See Appendix 4.)

E. The Chamber's Assessment of Its Result

In verifying the equitableness of its result, the Chamber focused on the third segment of the line, since it was that segment that ultimately divided Georges Bank, the "real subject of the dispute." The Chamber considered only whether the line produced a result that was inequitable in light of the socioeconomic factors presented by the parties. The Chamber determined that the line as constructed passed this test because it left to Canada the part of Georges Bank containing the greatest concentrations of scallops, "the fishery considered by Canada to be of particular importance to the Nova Scotian community," as well as the areas where most of its lobster and scallop fishing activities had taken place. At the same time, the line left to the United States the location of its principal lobster and scallop fishing activities. The Chamber also noted that each side retained access to "broad expanses" for hydrocarbon exploration. The Chamber concluded that "nothing less than a decision which would have assigned the whole of Georges Bank to one of the parties might possibly have entailed serious economic repercussions for the other."

The Chamber did not assess the equity of the line as a whole in light of each particular segment. However, the second segment of the delimitation line was, in the Chamber's own words, "the central and most decisive segment for the whole of the delimitation line." The Chamber failed to consider that its ultimate apportionment of Georges Bank could have been influenced by its use of individual equitable criteria in delimiting the second segment of the boundary, and more particularly, by its use of the auxiliary criterion of proportionality.

IV. ANALYSIS

A. Segment 2—An Equitable Result?

The Chamber's delimitation of the second segment (line B-C) was based on the ratio between coastal lengths. This equitable criterion of

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178. Id. para. 229.
179. Id. para. 168.
180. Id. para. 232.
182. Id.
183. Gulf of Maine Case, supra note 1, para. 239.
184. Id. para. 238.
185. Id. para. 214.
proportionality "that in certain circumstances, the appropriate consequences may be drawn from any inequalities in the extent of the coasts of two states in the same area of delimitation" played a "fundamental role in the Gulf of Maine decision."\(^{186}\) Although the principle of proportionality had previously been applied in the *North Sea Continental Shelf Cases*, the *Tunisia/Libya Case*, and the *Anglo/French Arbitration*, it was applied here in a novel way.

**B. Previous Applications of the Principle of Proportionality**

The principle of proportionality as envisaged by the Court in the *North Sea Continental Shelf Cases* focused on the "reasonable degree of proportionality . . . between the extent of the continental shelf appertaining to the states concerned and the length of their respective coastlines."\(^{187}\) The Court applied the principle of proportionality to establish "the necessary balance between states with straight, and those with markedly concave or convex coasts, or to reduce very irregular coastlines to their truer proportions."\(^{188}\) This application, however, was fairly narrow and was therefore of no apparent value to the *Gulf of Maine Case*. However, the Court in the *North Sea Continental Shelf Cases* also pointed out that its statement of the proportionality principle could be more generally applied so as to "reduce very irregular coasts to their truer proportions."\(^{189}\) It was with an eye to this particular statement that the United States adopted the proportionality principle in its argument before the Court.

This position was further supported by the fact that in the *Tunisia/Libya Case*, the Court used the *North Sea Continental Shelf Cases* approach to proportionality.\(^{190}\) The Court in the *Tunisia/Libya Case* viewed the proportionality principle as the most important "aspect of equity."\(^{191}\) The Court accordingly used proportionality as a test to assess the equity of the line it had drawn in the Mediterranean Sea between Tunisia and Libya. The Court compared the coastline length ratio to the ratio between the areas of continental shelf apportioned to the parties by the delimitation line, and was satisfied that the thirty-one to sixty-nine coastline ratio closely reflected the forty to sixty continental shelf ra-

\(^{186}\) Comment, *supra* note 30, at 286.
\(^{187}\) *North Sea Continental Shelf Cases*, *supra* note 22, para. 98.
\(^{188}\) *Id*.
\(^{189}\) *Id*.
\(^{190}\) Collins & Rogoff, *supra* note 12, at 33 n.158.
\(^{191}\) *Tunisia/Libya Case*, *supra* note 53, para. 131.
The Court thus affirmed the principle announced in the *North Sea Continental Shelf Cases* that equity requires a "reasonable degree of proportionality" between the respective continental shelf areas and the length of the respective coasts measured by the general direction of the coastlines.

The principle of proportionality was given a different twist in the *Anglo/French Arbitration*. The Court of Arbitration explained its view of the function of proportionality in the following terms:

The equitable delimitation of the continental shelf is not . . . a question of apportioning—sharing out—the continental shelf amongst the States abutting upon it. Nor is it a question of simply assigning to them areas of the shelf in proportion to the length of their coastlines; for to do this would be to substitute for the delimitation of boundaries a distributive apportionment of shares . . . . [T]here can never be a question of completely refashioning nature . . . ; it is rather a question of remedying the disproportionality and inequitable effects produced by particular geographical configurations or features in situations where otherwise the appurtenance of roughly comparable attributions of continental shelf to each State would be indicated by the geographical facts.

The Court of Arbitration thus emphasized the necessity to abate disparities between coastal configurations, not lengths. Accordingly, the Court of Arbitration made no attempt to measure the lengths of the British and French coasts that bordered on the delimitation area in order to determine their relationship to the open-ended area of continental shelf to be divided. Instead, the Court of Arbitration applied the proportionality concept to assess "whether the geographical situation of the Scilly Isles in relation to the French coast ha[d] a distorting effect and [wa]s a cause of inequity as between the United Kingdom and the French Republic." The principle of proportionality was used to give the Scilly Isles only half-effect, and thus to abate "the disproportionate effects of a considerable projection on to the Atlantic continental shelf of a somewhat attenuated portion of the coast of the United Kingdom."

C. The Chamber’s Novel Use of the Principle of Proportionality

The Chamber in the *Gulf of Maine Case* did not use the principle of

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192. See supra text accompanying notes 75-77.
194. Id. para. 250.
195. See supra text accompanying notes 59-60.
proportionality in either of the ways it had previously been applied. The Chamber failed to identify the Bay of Fundy as an unusual geographic feature capable of producing a distorting effect on the line the Chamber had drawn, as had been accomplished in the Anglo/French Arbitration. The Chamber also failed to compare the ratios of coastline lengths to the ratios of the maritime areas appertaining to the two states. Instead, the Chamber simply noted the substantial difference in the lengths of the relevant coastlines of the parties, determined the ratio of those lengths, and then moved the median line provisionally established for the crucial second segment of the boundary line to bring it in accord with that ratio.197 Thus, the Chamber did not use the proportionality principle in order to test the equitableness of its result, as the Court had done in the Tunisia/Libya Case. The Chamber thereby implicitly demoted the proportionality principle from its previous position as “touchstone of equitableness”198 to one of mere auxiliary criterion. The Chamber’s errors in departing from past uses of the principle of proportionality are reflected in its treatment of and solution to the Bay of Fundy issue.

V. THE BAY OF FUNDY

A. The United States Application of the Principle of Proportionality

The U.S. interpretation of the proportionality principle took into account both of its previous uses. As in the North Sea Continental Shelf Cases and the Tunisia/Libya Case, the United States argued that the proportionality principle required “that a delimitation take account of the relationship between the extent of the maritime area appertaining to the States concerned and the lengths of their respective coastlines.”199 In the Anglo/French Arbitration, the United States also regarded proportionality as “the criterion by which it may be determined whether individual geographic features so distort the course of a boundary as to result in a delimitation that is not in consonance with the cardinal principle that a boundary be delimited in accordance with equitable principles.”200 Both of these views were correctly identified by the United States in its discussion on the use of proportionality as an equitable principle. However, the United States failed to bring in those views in support of the specific issue concerning whether or not the coasts of the Bay of Fundy should be included in any proportionality test. The United States simply argued

197. Id.
198. Tunisia/Libya Case, supra note 53, para. 108.
200. Id. para. 244.
that since the "coastlines of the Bay of Fundy face each other and not the area being delimited... it is not appropriate to include the length of the coastline within the Bay of Fundy in a coastline calculation for purposes of the proportionality test."\textsuperscript{201} The United States consequently suggested that the Bay of Fundy be closed, with the length of the closing line across the mouth of the Bay of Fundy included in the calculation of the length of the relevant Canadian coastline.\textsuperscript{202}

The reasoning behind the U.S. position on the proportionality test follows most logically from its earlier argument in favor of the principle of nonencroachment. The United States had suggested that there was a "single general direction of the coast in the Gulf of Maine area."\textsuperscript{203} Coasts that followed this general direction were primary coasts and were consequently entitled to the areas in front of them.\textsuperscript{204} Coasts that ran contrary to the general direction were secondary coasts and were therefore entitled to less consideration.\textsuperscript{205} As a natural extension of this argument, the United States claimed that coasts not facing the Gulf of Maine at all, such as those of the Bay of Fundy, were entitled to no consideration at all.

Whatever the legal value of the primary-secondary coasts argument to the principle of nonencroachment, the extension of the argument to the principle of proportionality was inappropriate. Each equitable principle must have a separate justification in law. That the United States needed to use the reasoning behind one principle to support another unmasks the void behind its argument: that no justification existed under international law for the proposition that where two coastal fronts only face each other, and not the area of delimitation, they should be excluded from any calculation for purposes of the proportionality test. The United States could have attempted to rebut this accusation by pointing out that no case before the \textit{Gulf of Maine Case} had presented a feature similar to the Bay of Fundy, namely a bay within a larger gulf. However, the Gulf of Gabes in the \textit{Tunisia/Libya Case} was precisely a bay within a larger gulf. Yet, neither party in that case claimed that the Gulf of Gabes should be sealed off because its coasts faced only each other and not the rest of the area to be delimited. The lack of such an argument in that case should have indicated to the United States that the fact that the coasts of a bay face only each other does not of itself constitute a distor-

\textsuperscript{201} U.S. Counter-Memorial, \textit{supra} note 93, para. 307.
\textsuperscript{202} \textit{Id.}
\textsuperscript{203} Comment, \textit{supra} note 30, at 271.
\textsuperscript{204} \textit{Id.} at 271-272.
\textsuperscript{205} \textit{Id.;} see also \textit{supra} text accompanying note 84.
tion of the entire coast of a state. That claim was simply a conclusion, not supported by law. Disguised as reasoning, it was offered as justification for the only valid U.S. conclusion concerning the Bay of Fundy, namely that the Bay of Fundy was a geographical aberration in the area of the Gulf of Maine.

B. The United States Solution

In light of its erroneous argument, the suggested U.S. solution, namely complete exclusion of the Bay of Fundy coastline from its calculation of proportionality, was unacceptable. First, sealing off the Bay of Fundy was inconsistent with the U.S. position regarding the full area of delimitation. As the Canadian briefs astutely pointed out, the United States used the change in direction of the Canadian coast at the head of the Bay of Fundy as the rationale for determining the limits of the area in which the proportionality test would be used.\(^{206}\) However, “the very coasts which comprise[d] this geographical feature [we]re excluded from the test.”\(^{207}\)

In addition, closing off the Bay of Fundy for purposes of the proportionality test was as inequitable as the Chamber’s taking into account almost all of the bay’s coastline. The U.S. solution essentially ignored the bay’s existence, and thus ignored geographic reality. The Court in the North Sea Continental Shelf Cases and the Court of Arbitration in the Anglo/French Arbitration both stressed that “[j]ust as it is not the function of equity . . . completely to refashion geography, so it is also not the function of equity to create a situation of complete equity where nature and geography have established an inequity.”\(^{208}\) The solutions adopted by the courts in the two cases did not purport to ignore or exclude geographical aberrations, but to “reduce very irregular coasts to their truer proportions,”\(^{209}\) or to abate the disproportionate effects of aberrational features.\(^{210}\)

C. The Chamber’s View

The Chamber interpreted the U.S. argument to mean that where the opposite coasts of a bay belong to the same state, they should not be regarded as part of the larger gulf onto which they open.\(^{211}\) The Cham-

\(^{206}\) Canadian Counter-Memorial, supra note 90, para. 670.
\(^{207}\) Id.
\(^{208}\) Anglo/French Arbitration, supra note 52, para. 249.
\(^{209}\) North Sea Continental Shelf Cases, supra note 22, para. 98.
\(^{210}\) Anglo/French Arbitration, supra note 52, para. 249.
\(^{211}\) Gulf of Maine Case, supra note 1, para. 221.
ber considered and dismissed as a possible justification for this position an analogy between the Bay of Fundy and the Gulf of Gabes in the *Tunisia/Libya Case*. Specifically, the Chamber noted that in the *Tunisia/Libya Case* the Court included the Gulf of Gabes in its calculation of the length of the Tunisian coast despite the fact that the gulf’s coasts were wholly Tunisian.212

The Chamber erred in its assessment of the U.S. argument as well as its reasoning. First, the United States did not explicitly argue that the coasts of the Bay of Fundy should be excluded because they both belong to Canada. Although an equation can certainly be made in this particular case between the coasts of the bay facing each other and the coasts belonging to the same state, the United States did not seek to make that equation. The United States stressed the fact that the coasts of the Bay of Fundy oppose each other in order to highlight the fact that they do not face the rest of the gulf, and thus are an aberration from the general configuration of the area.

The Chamber misconceived the U.S. argument by overinterpreting its first premise that the coasts face each other, and by overlooking its second, that they do not face the area to be delimited. These two premises are not simply restatements of the same idea. They each have individual importance in leading to the U.S. conclusion that the coasts should be excluded. The Chamber interpreted the U.S. argument that “[t]he coasts of the Bay of Fundy face each other and not the area to be delimited, therefore they should be excluded as a geographical aberration,” to mean that “[t]he coasts of the Bay of Fundy both belong to Canada, therefore they should be excluded.”

The Chamber’s assessment of the possible U.S. reasoning was also faulty in two respects. In drawing an analogy between the Bay of Fundy and the Gulf of Gabes in the *Tunisia/Libya Case*, the Chamber ignored the differences in both the legal issues and the geographical configurations involved in the two cases. The only point shared by the two situations was the desire on the part of the United States and Tunisia to have the Bay of Fundy and the Gulf of Gabes, respectively, closed off by a straight line from the broader gulf into which they open. Neither bay was to be included in any proportionality test. Tunisia, however, claimed that the Gulf of Gabes should not be part of the area of delimitation because it was an historic bay and thus was entirely within its jurisdiction. The Court held that the “legal status of the waters off the coast in question is not a relevant factor when deciding whether these coasts

212. *Id.*
should be included . . . for the purpose of the proportionality test." The Court did not address either the issue of whether coasts of a bay belonging to a single state, or whether coasts facing each other and not the area to be delimited, should be included for the purpose of the proportionality test.

Had the same legal arguments been involved in both cases, the analogy would still have been imperfect for geographic reasons. (See Appendix 5.) The Bay of Fundy is long and narrow. It extends ninety nautical miles inland and measures as little as twenty-five nautical miles in its upper reaches. Its coastline changes direction three times: twice at its northern end and once at its mouth. The Gulf of Gabes measures forty nautical miles across its mouth and extends only forty-nine nautical miles inland. It changes direction only once, at its most westerly point. The ratio of the very long coasts of the Bay of Fundy to the relatively small water area enclosed would have substantially affected the ratio of coast to water in the entire Gulf of Maine area. In the Gulf of Gabes, on the other hand, the extent of the gulf’s coastline and sea area enclosed are in relative equilibrium. Therefore, it would not have mattered much whether the Gulf of Gabes was included or excluded from any proportionality test. The Court’s refusal in the Tunisia/Libya Case to close off the Gulf of Gabes gives little support to the Chamber’s refusal in this case to close off the Bay of Fundy. Any implication by the Chamber that the U.S. reasoning was based on similar reasoning by Tunisia in the Tunisia/Libya Case was simply unfounded. Tunisia made

214. Canadian Counter-Memorial, supra note 90, para. 129.
216. Memorial of Libya (Tun. v. Lib. Arab. Jamahiriya), 1979 I.C.J. Pleadings (Case Concerning the Continental Shelf) para. 137. The closing line of the gulf is 46 miles in length. One mile measures 5280 feet, while one nautical mile measures 6076 feet. Therefore, 46 miles equals 39.97 (40) nautical miles.
217. Memorial of Tunisia (Tun. v. Lib. Arab. Jamahiriya), 1979 I.C.J. Pleadings (Case Concerning the Continental Shelf) para. 3.14. The gulf extends 90 kilometers inland. One kilometer equals 0.61237 miles. Therefore, 90 kilometers equal 56.25 miles, or 48.88 (49) nautical miles.
218. Tunisia/Libya Case, supra note 53, para. 128.
220. The United States noted that it had “always reserved its position” with respect to Canada’s “inchoate claim that the Bay of Fundy constitutes historic or internal waters.” Reply of the United States (Can. v. U.S.), 1983 I.C.J. Pleadings (Gulf of Maine) 154 n.4 (Dec. 12, 1983) [hereinafter U.S. Reply]. However, Tunisia had argued that the Gulf of Gabes be closed off by a straight line precisely because the waters enclosed by the gulf were “internal waters.” See supra notes 211-12 and accompanying text.
neither of the U.S. claims; it did not argue that the Gulf of Gabes should be excluded from the proportionality test because all of its coastline belonged to it, or that the Gulf of Gabes constituted a geographical aberration.

D. The Chamber's Solution

The Chamber's solution to the Bay of Fundy issue was to hold that the coasts of the Bay of Fundy should be included up to the point where the bay so narrows that it contains "only maritime areas lying no further than twelve miles from the low water mark." The Chamber offered no reasoning for this decision. Purportedly, the twelve mile limit that the Chamber set for purposes of calculating the coastal length of the Bay of Fundy was the Canadian twelve mile territorial sea limit. The coasts of the Bay of Fundy were consequently to be calculated from the starting point of the high seas within the bay. In this respect, the Chamber's holding can be defeated by the very tool it used to dismiss the U.S. argument: the decision of the Court in the Tunisia/Libya Case that "the legal status of the waters off the coast in question is not a relevant factor when deciding whether or not these coasts should be included in the calculation of coast-ratios for the purpose of the proportionality test." More important, calculation of the coastal length of the Bay of Fundy up to twelve miles from the low water mark gave the bay almost full effect. In view of the disproportionate effect of the ratio of coast to water in the Bay of Fundy on the ratio of coast to water in the entire Gulf of Maine area, the Chamber counted so much of the bay's coastline as to create an inequity.

221. Gulf of Maine Case, supra note 1, para. 31.
222. Separate Opinion of Judge Schwobel, supra note 213, at 354.
223. According to this method, the Canadian coastline along the Bay of Fundy was found to measure 143 nautical miles. See Case Concerning the Delimitation of the Maritime Boundary in the Gulf of Maine Area (Can. v. U.S.), 1984 I.C.J. 348, para. 6 (Technical Report) [hereinafter Technical Report].
225. The ratio is 1 to 14.6, with the length of the Bay of Fundy coastline measuring 209 nautical miles and the sea area enclosed by the bay measuring 3050 square nautical miles. For an explanation of how these figures were obtained, see infra note 234.
226. The ratio is 1 to 323.4, with the length of the Canadian coastline in the Gulf of Maine area as a whole measuring 341 nautical miles, and the total sea area in the Gulf of Maine area as a whole measuring 110,278 square nautical miles. These figures are derived from Figure 51A of the Canadian Memorial. For further explanation on the figures used for purposes of this Note, see infra note 234.
E. Judge Schwebel's Solution

In a concurring opinion to the Gulf of Maine Case, Judge Schwebel reached a position midway between that of the United States and that of the Chamber. Judge Schwebel attempted to correct the disproportionate ratio of coast to water in the Bay of Fundy in light of the notion of "abatement" as expressed in the Anglo/French Arbitration. In fact, Judge Schwebel used language borrowed from the Anglo/French Arbitration to make his point. "[T]he Fundy coasts should, in a calculation of proportionality, be abated . . . . [T]o do otherwise and to give full weight to a feature which in this case is so distorting in a calculation of proportionality would be inequitable." The judge accordingly suggested that Canada be credited in a calculation of proportionality with the coastlines of the Bay of Fundy up to Saint John, that is, up to "the farthest reach of the Fundy coast facing the Gulf of Maine." By taking into account only half the coast of the Bay of Fundy, the judge attempted to cancel the doubling effect created by the fact that the bay's coasts face each other and to balance the ratio of coast to water in the bay. This restricted measurement of the coastlines of the Bay of Fundy would have resulted in moving the delimitation line a distance of ten nautical miles to the northeast, in favor of the United States. (See Appendix 6.)

Judge Schwebel's solution is inadequate for several reasons. First, the solution is somewhat arbitrary. Although it is certainly true that reducing the coastline of the Bay of Fundy by half diminishes the disproportionate coast to water ratio in the bay, there is no indication that it reduces the ratio to its true proportions. Second, like the U.S. argument, the Judge's suggestion ignores geographic reality. One cannot simply overlook the fact that just as the coast of the Bay of Fundy extends as far as Saint John to the northeast, it also descends back down on the other side. Again, the principle enunciated by the Court in previous cases applies: that the function of equity is not to refashion geography but to abate the inequities created by it. Finally, it should be noted that the method of giving half-effect to islands is not to be taken literally. The measure by which the position of the Scilly Isles increased the length of the British coastline by projecting it onto the Atlantic continental shelf was not simply halved by the Court, but was reduced according to a more complex formula.

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228. Id. at 355.
229. Clain, supra note 8, at 584.
230. See supra text accompanying note 60.
VI. PROPOSAL

The author of this Note agrees with the U.S. and Judge Schwebel's position that the Bay of Fundy constitutes an aberrational geographic feature in the Gulf of Maine whose effect on the calculation of the Canadian coastline for purposes of the proportionality test should have been abated. However, because the U.S. nonencroachment argument failed to adequately support its position, the Chamber entirely dismissed the U.S. argument with respect to the Bay of Fundy. In order to have made a more effective and convincing argument, the United States should have specifically applied to its calculation of the Bay of Fundy coastline the principles of proportionality it had identified in its general discussion of the use of proportionality. The United States would then have had the support of two powerful lines of reasoning that the Chamber could not lightly have disregarded: that of the North Sea Continental Shelf Cases and the Tunisia/Libya Case on the one hand, and that of the Anglo/French Arbitration on the other.

The United States began to make what seemed like a proportionality argument by noting that the length of the coasts of the Bay of Fundy is greatly disproportionate to the area of water they comprehend. Indeed, while the coastline of the Bay of Fundy measures approximately 209 nautical miles (38 percent of the total coastal length in the Gulf of Maine), the area of water it encloses is only 3050 square nautical miles (only 11 percent of the sea area inside the gulf). Thus, the United

231. See supra text accompanying notes 202-06.
232. See supra text accompanying notes 199-201.
234. All the calculations made for purposes of this Note are based on the figures in Figure 51A of the Canadian Counter-Memorial, supra note 90, at pages 158 and 161 of the Reply of Canada (Can. v. U.S.), 1983 I.C.J. Pleadings (Gulf of Maine) (Dec. 12, 1983) [hereinafter Canadian Reply], and at page 155 of the U.S. Reply, supra note 220, all of which are consistent with each other.

The figure for the area of water enclosed by the Bay of Fundy was calculated as follows. The United States claimed that the sea area of the Bay of Fundy increases by only seven percent the sea area appertaining to Canada in Figure 51A of the Canadian Counter-Memorial. U.S. Reply, supra note 220, para. 267. Assuming that the figure to which the United States alluded was the figure reflecting the total sea area appertaining to Canada, namely 46,621 square nautical miles, the area of water in the Bay of Fundy is found to measure 3050 square nautical miles.

The length of the coastline of the Bay of Fundy to Cape St. Mary's was calculated as follows. According to Figure 51A, the total Canadian coastal length inside the Gulf of Maine, i.e. to Cape Sable, measures 258 nautical miles. The distance between Cape St. Mary's and Cape Sable measures 49 nautical miles. Canadian Counter-Memorial, supra note 90, at 58 n.86. The length of the Bay of Fundy's coastline to St. Mary's is thus 258 nautical miles minus 49 nautical miles, or 209 nautical miles.
States accurately concluded that the bay's "long coasts and relatively small water area . . . affect[ed] materially the ratio of coast-to-water in the area." Specifically, inclusion of the Bay of Fundy's full coastline for purposes of the proportionality test increases the Canadian coast by up to three times its length, but increases the total sea area appertaining to Canada by as much as fifteen times. In light of these findings, the United States should have followed its argument through by invoking the principle of proportionality as enunciated in the North Sea Continental Shelf Cases and in the Tunisia/Libya Case: equity requires that there be a "reasonable degree of proportionality . . . between the extent of the continental shelf appertaining to the States concerned and the length of their respective coastlines." The United States could then have concluded that in order to comply with that principle, the "exaggeration of the consequences" of the Bay of Fundy had to be "remedied or compensated for as far as possible, being itself creative of inequity." Instead, the United States sought to exclude the bay's coastline from the proportionality test based on the wholly unrelated principle of nonencroachment.

The United States should also have relied on the principle enunciated in the Anglo/French Arbitration that proportionality expresses the "criterion or factor by which it may be determined" whether "particular configurations of the coast . . . may, under certain conditions, distort the course of the boundary" and thus result "in an inequitable delimitation of the continental shelf as between the coastal States concerned." As discussed earlier, the Court of Arbitration identified the position of the Scilly Isles twenty-one miles off the coast of Britain as an aberrational configuration capable, absent correction by the Court, of distorting the line of delimitation and of creating an inequitable result. The Bay of Fundy was comparable to the Scilly Isles. Although different geographical configurations, the first being a bay and the second being a group of islands, both were attenuated features that had the potential of increasing the coastline of the state to which they appertained by a disproportionate amount. The mere position of the Scilly Isles could potentially increase the length of the British coastline between the British mainland and the Atlantic to twice the length of the French coastline between the French

236. See id.
237. See Canadian Counter-Memorial, supra note 90, Figure 51A.
238. North Sea Continental Shelf Cases, supra note 22, para. 98.
239. Id. at 49.
240. See supra text accompanying notes 202-03.
241. Anglo/French Arbitration, supra note 52, para. 100.
mainland and the Atlantic to the island of Ushant. Similarly, the Bay of Fundy, which comprises only seven percent of the area of water of the Gulf of Maine, could potentially increase the Canadian coastline length by ninety-three percent. The United States should have argued that giving full weight to the Bay of Fundy would, as in the Anglo/French Arbitration, so distort any calculation of proportionality that the resulting line of delimitation would be inequitable.

Although the United States failed to make these arguments in its pleading, the Chamber could and should have made those arguments on its own. Instead, in rejecting the U.S. arguments with respect to excluding the coasts of the Bay of Fundy from the proportionality test, the Chamber rejected altogether the position that the Bay of Fundy constitutes an aberrational feature in the Gulf of Maine area. Consequently, the Chamber refused to suggest a formula or a method by means of which the coasts on the Bay of Fundy could have been reduced so as to abate their exaggerated effect on calculating the total Canadian coastline for the proportionality test.

In view of the proportionality principles announced in the North Sea Continental Shelf Cases, the Anglo/French Arbitration, and the Tunisia/Libya Case, the United States or, alternatively, the Chamber should have suggested the following method of delimiting the length of the coasts of the Bay of Fundy in order to remedy their disproportionate effect: the length of the coast of the Bay of Fundy should be multiplied by a median between the ratio of the sea area in the Bay of Fundy to the sea area in the inner area of the Gulf of Maine and the ratio of the Bay of Fundy's coastal length to the total length of the coastline in the inner area of the gulf. Translated into numerical terms, the resulting formula would be:

$$209\text{NM} \times \frac{\left( \frac{3050\text{SNM}}{28506\text{SNM}} + \frac{209\text{NM}}{544\text{NM}} \right)}{2} = 51\text{NM}^{243}$$

The length of the coast of the Bay of Fundy obtained by this means coincides with the length of the closing line that the United States suggested drawing across the mouth of the bay from the international boundary terminus to Cape St. Mary's. Substituting this adjusted


243. NM stands for nautical miles. SNM stands for square nautical miles. All the figures used in this calculation reflect the length of the coastlines and the area of water in what Canada designated as the "inner area" of the Gulf of Maine. Canadian Counter-Memorial, supra note 90, Figure 51A.

244. Canadian Reply, supra note 234, para. 363. However, this does not mean that the
length of the Bay of Fundy for the length Canada had originally calculated, the full Canadian coastline in the inner area of the Gulf of Maine area measures one hundred miles. The ratio between the Canadian and the U.S. coastlines in the inner area of the gulf thus increases from forty-seven to fifty-three respectively, to twenty-six to seventy-four. Substituting the fifty-one nautical miles for the one hundred forty-five nautical miles in the Chamber’s calculations, the full Canadian coastline in the inner area of the Gulf of Maine measures 111.9 (112) nautical miles. The ratio between the Canadian and the U.S. coastlines in the inner area of the gulf accordingly changes from 1 to 1.38 to 1 to 2.54. Since the 1 to 1.38 ratio, even after being adjusted to 1 to 1.32, resulted in awarding Canada one-sixth of Georges Bank, the 1 to 2.54 ratio would have necessitated adjusting the Chamber’s delimitation line so as to include all of Georges Bank within the jurisdiction of the United States. However, although the method of delimitation put forth by this Note accomplishes the same effect as the method of closing off the Bay of Fundy by a straight line, the method suggested here conforms to the principles of proportionality announced in previous international maritime boundary adjudications. At the same time, the formula is free from the inconsistencies of the U.S. suggestion.

First, the method of delimitation proposed here balances the ratio between the coastal length of the aberrational configuration and the total length of the coast in the area of delimitation, and the ratio between the sea area appertaining to the aberrational configuration and the total sea area in the area of delimitation. The formula therefore respects the principle announced in the North Sea Continental Shelf Cases that equity requires a “reasonable degree of proportionality” between coastline length and the sea area appertaining to it.

In addition, the formula suggested here constitutes an abatement of the exaggerated effect created by the disproportionate ratio of coast to water in the Bay of Fundy on the calculation of the Canadian coastline. It does so by emphasizing the insignificance of the area of water enclosed by the Bay of Fundy relative to the water area of the rest of the Gulf.

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245. The coastline from Cape St. Mary’s to Cape Sable measures 49 nautical miles.
246. See Technical Report, supra note 223, at 348, para. 6. The distance from Brier Island to Cape Sable was found to measure 60.9 nautical miles. Id.
247. See supra note 11 and accompanying text.
The formula thus respects the holding of the Court of Arbitration in the *Anglo/French Arbitration*.

Unlike the solutions proposed by the United States and by Judge Schwebel, the formula suggested here does not ignore geographic reality. The formula neither pretends that the Bay of Fundy does not exist, nor that it extends only half way. Rather, the formula takes into account the full coastline of the Bay of Fundy and abates its effect by bringing the bay to its true proportion in relation to the Gulf of Maine, instead of refashioning its geographical configuration. Had the United States proposed this formula, it could have avoided the use of inconsistent arguments, alternatively including the coasts of the Bay of Fundy for the sake of some arguments, and excluding them for the sake of others.

Finally, the formula proposed here has universal application. It can be applied as a proportionality criterion in any situation that presents a configuration similar to that of the Gulf of Maine.

**VII. CONCLUSION**

In delimiting the maritime boundary between the United States and Canada in the Gulf of Maine area, the Chamber purported to use equitable criteria and "practical methods capable of ensuring, with regard to the geographic configuration of the area . . . an equitable result." For the United States, the Chamber's equitable result meant "losing 'the best 50 miles of Georges Bank.'" For the development of international law in the area of equity and maritime boundary delimitations, the Chamber's result meant a radical departure from previous uses of equitable criteria with potential negative repercussions for future disputes.

The only geographic circumstance that the Chamber found impossible to disregard was that the relevant coastline of the United States in the delimitation area was considerably longer than that of Canada. The Chamber then used the principle of proportionality only to determine the ratio of the lengths of the United States and Canadian coasts, ignoring the geographical aberration presented by the disproportionate ratio of coast to water in the Bay of Fundy.

The Chamber also ignored the classic use of proportionality as a test of equity, to maintain equilibrium between the coastlines of states and the sea areas appertaining to them. Instead, the only factor the Chamber

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248. *Gulf of Maine Case, supra* note 1, para. 112.
250. *Gulf of Maine Case, supra* note 1, para. 184.
considered in assessing the equitableness of its result was economics. The Chamber thus refused to give effect to the distortion created by the disproportionate ratio of coast to water in the Bay of Fundy in the Chamber's calculation of the relevant Canadian coastline. The Chamber's construction of the second segment gave almost full weight to the coasts of the Bay of Fundy and consequently gave Canada a larger area of water and of continental shelf than was equitable.

The danger of the Chamber's departure from the use of proportionality as a test of equitableness has already been abated. In the Guinea/Guinea-Bissau Arbitration, the only case concerning simultaneous delimitation of the continental shelf and exclusive economic zone since the Gulf of Maine Case, the Court of Arbitration refused to consider the effect of economic factors on its final delimitation line. The Tribunal specifically dismissed the Chamber's socioeconomic test by noting that:

The fact is that the Tribunal does not have the power to compensate for the economic inequalities of the States concerned by modifying a delimitation which it considers is called for by objective and certain considerations. Neither can it take into consideration the fact that economic circumstances may lead to one of the Parties being favored to the detriment of the other where this delimitation is concerned.

The main objective and certain consideration that the Tribunal took into account was the "proportionality ... between the length of the coastline and the surface area of the zone to be attributed to each state." Thus, the development of equity in the area of international maritime adjudications already evidences a rejection of the equitable criteria used in the Gulf of Maine Case and a return to the principles announced in the North Sea Continental Shelf Cases and in the Tunisia/Libya Case.

However, the Chamber's refusal to treat the Bay of Fundy as a geographic aberration for purposes of the proportionality test has not yet been addressed. The Chamber's failure to deal with this important issue could be interpreted as signifying that arguments such as the one advanced by the United States will automatically fail in future negotiations. The Chamber's treatment of what seems to have been a justified claim is certain to become a source of future inequitable results. By offering states an alternative line of reasoning for such claims, the formula proposed here may avoid such an outcome.

251. Guinea/Guinea-Bissau Arbitration, supra note 5, para. 123.
252. Id.
253. Id. para. 120.
Appendix 1


LIMITS OF FISHERY ZONES AND CONTINENTAL SHELF CLAIMED BY THE PARTIES IN MARCH 1977

United States line

Canadian line

The Starting Point for the Delimitation Line and the Area for Its Termination

**Adjusted Delimitation Lines Proposed by the Parties Before the Chamber**

- United States line
- Canadian line
Appendix 4


**Delimitation Line Drawn by the Chamber**
Appendix 5

Appendix 5 (cont.)

REFERRED TO IN THE SEPARATE OPINION OF JUDGE SCHWEBEL

Chamber's line

Judge Schwebel's line