ples regarding liability for harmful acts to one's neighbours from legal systems so varied as the Civil Law with its multifarious European, Latin American and other variants, the Common Law and the Islamic Law, with their variants, Hindu Law, Chinese Law, Japanese Law, African Law in its varied forms and Soviet Law? Do the major legal systems of Europe, America, Asia and Africa recognise a general obligation not to inflict unlawful harm on one's neighbour? All the major legal systems of the world have been profoundly influenced during the past three centuries by either the Civil Law of Europe or the Common Law of England. Latin American Law, for instance, is essentially a projection of the Civil Law of Spain and Portugal.[31] Traditional Islamic Law survives, without substantial civil law influence, only in Yemen and Saudi Arabia.[32] In Turkey, the Islamic and Ottomon Law[33] have been profoundly modified by the adoption of the *Swiss Civil Code*, the *Neuchatel Civil Procedure Code* and the *Italian Penal Code*.[34] In the United Arab Republic, Egyptian law has been greatly influenced by the French Codes, and Syrian law has been recast on the basis of the *Egyptian Civil Code*,[35] while in Lebanon, Morocco, Tunisia and Algeria French law has exercised wide influence. In Iraq, Islamic law and Ottoman law have been modified by English Commercial Law and in Iran the *Civil Code* of 1928, *Criminal Code* of 1926 and the *Commercial Code of* 1925 represent a compromise between Islamic law and western models. In Indonesia and Malaya, Islamic law, modified by the influence of western legal systems has been superimposed upon earlier systems of indigenous law such as the 'adat law' of Malayasia and in India, while matters of personal status, marriage, family relations, succession and inheritance are determined by indigenous Hindu and Muhamedan law, all other branches of law are in effect statutory re-statements of English Common Law adapted to Indian conditions, e.g. *Indian Contract Act, Indian Sale of Goods Act, Indian Partnership Act, Indian Evidence Act, Indian Penal Code, Indian Codes of Civil*

31. Refer P.J. Edor, *A Comparative Study of Anglo-American and Latin American Law.*

32. Louis Milliot, 'Introduction a l' etude du droit musulman (1953), Ch. VII, 'Le droit musulman et les influences occidentales' pp. 770-783.

33. Refer Young, Corpns du droit Ottoman (1907).

34. For an analysis of this reception and its consequences, refer "*The Reception of Foreign Law in Turkey*" T.B. Balta, C.J. Hamson, K. Lipstein and others, 9 *International Social Science Bulletin* (1957) pp. 7-81.

35. Refer F.P. Walton, *The Egyptian Law of Obligations* (2nd Ed.), 2 Vols.

and Criminal Procedure.[36] During the twentieth century, Japanese law has been widely influenced by western legal systems, and in the comprehensive legislative changes introduced before the last World War Japan based her reforms to a large extent on the constitutional and legal system of Germany and to a lesser extent, as regarding the civil law in particular, on France.[37] Since 1945 American influence is evident, particularly with regard to commercial law, criminal practice and constitutional law. In the continent of Africa, English, French, Belgian, Portuguese and Roman-Dutch Law have had a far-reaching impact on African customary law.[38]

It is clear that there has been a considerable process of mutual interaction of the different legal systems of the world, and it may therefore be possible to deduce certain general principles of law which are recognised by all civilised nations. The alignment of the major legal systems of the world will now be examined in order to determine whether any universally accepted principle of liability for harmful acts can be elucidated.

The Western law of liability for harmful acts, in civil law and common law countries alike, recognises a general obligation not to inflict unlawful harm on one's neighbour. The obligation is based partly on liability for fault, including negligence, and partly on an absolute liability for dangerous things. Sir Frederick Pollock, in his treatise on *The Law of Torts*, observes that the principle accepted by Anglo-American common law is that "it is a wrong to do wilful harm to one's neighbour without lawful justification or excuse."[39] This position was reached in the common law after a long process of development which is analysed by Winfield in his jurisprudential study on *The Province of the Law of Tort*.[40] The principle of general responsibility for unlawful harm to one's neighbour is also recognised by France in Article 1382 of the *Code Napolean* and by Italy in Article 2043 of the *Italian Civil Code*. The same principle is adopted in Germany in Sections 823 and 826 of the *German Civil*

36. Refer Gledhill, *Reception of English Law in India*, (1950).

37. Refer J.E. de Becker, *Elements of Japanese Law* (1916).

38. Refer T.O. Elias *The Nature of African Customary Law*, (1956), especially Ch. XIII, 'The Impact of English Law on African Law', pp. 273-292. Refer also Julius Lewin, *Studies in African Native Law* (1946) & T.O. Elias, *Ground-work of Nigerian Law* (1954).

39. F. Pollock., *The Law of Torts* (1926), p. 20.

40. P.H. Winfield; *The Province of the Law of Torts* (1931).

Code,[41] and the *Swiss Code des Obligations* incorporates the same principle in Article 41.[42] This principle also appears to be fully accepted in the Soviet Union in Article 403 of the *Soviet Code*.[43] It may be said, therefore, that the major legal systems of Europe recognise a general obligation not to inflict unlawful harm on one's neighbour. In general, the law of liability for unlawful harm, in the countries of Europe, is based on the principle of fault, which is inherited from the conception of *dolus* and *culpa* in Roman Law, but the principle of fault has in recent times been qualified in some form by giving the principle of absolute liability in respect of dangers created by the respondent a substantially wider application than was known to Roman law.[44] Thus in English law there is the rule in *Rylands v. Fletcher* which lays down that :

> The person who for his own purposes brings on his land and collects and keeps there anything likely to do mischief if it escapes must keep it in at his peril, and, if he does not do so, is *prima facie* answerable for all the damage which is the natural consequence of its escape.[45]

In American law, there is the principle of liability for ultra-hazardous activities, which has been stated thus:

> One who carried on an ultra-hazardous activity is liable to another whose person, land or chattels the actor should recognise as likely to be harmed by the unpreventable miscarriage of the activity for harm resulting thereto from that which makes the activity ultra-hazardous, although the utmost care is exercised to prevent the harm.[46]

In French law, there is the *theorie du risque cree*[74] and in German

41. Refer *Manual of German Law* (1950), United Kingdom Foreign Office Vol. I, pp. 100-108

42. Refer Recueil Systematique des Lois et Ordonnances; 1847-1947, p. 41.

43. Refer Gsovski, *Soviet Civil Code* (1948), Vol. 1, pp. 488-90.

44. For an analysis of the development of the theory of absolute liability in the common law, refer Buckland & Mc Nair, *Roman Law & Common Law* (1936), particularly pp. 313-14; with regard to the civil law refer: F.H. Lawson, *Negligence in the Civil Law* (1950).

45. L.R. 3 H.L. 330; refer Winfield, *Law of Torts* (1954) pp. 584-614.

46. American Law Institute, *Restatement of the Law of Torts* (1938), Vol. 3, pp. 41-53.

47. For an analysis of the *theorie du risque cree* refer Planiol, Traite elementaire du droit civil, 3rd ed. by Ripert, 1949, Vol. 2. pp. 315-17.

law, there is the principle of responsibility for risks.[48] The principle of absolute liability for dangerous things has therefore been accepted by the major legal systems of Europe and America.

Let us now turn to the legal systems of Asia and Africa. With the exception of the legal systems which, like Hindu law and Mohammedan law as applied in India, now operate only as personal laws and have no contemporary application to matters of tort, all the major legal systems of these two continents, such as Islamic law, traditional Chinese law, Japanese law and African customary law, are confronted with the problems of the relationship of fault, negligence and absolute liability which are among the most difficult and rapidly developing branches of law in these regions. In traditional Islamic law, there does not appear to be a clear distinction between tort and crime as understood in western legal systems. The Syrian jurist, Riyad Maydani, has observed that "no other parts of the *Sharia* are as inadequately worked out by Muslim jurists as the law of *uqubat*, which covers both tort and crime as understood in the common law.[49] On this question, Riyad Maydani draws the following distinction:

> The term *uqubat* (singular, *uquba*) covers the two kinds of wrongs, namely torts and crimes. But the line dividing the two is sometimes very narrow since the rights of the public and of individuals are often combined. One of the tests is to determine to whom the law grants the remedy, to the public or to the individual. In the latter case, the wrong would be a tort, in the former case, a crime.[50]

Louis Milliot, in his *Introduction al etude du droit musulman* expresses the view that the elements of the common law distinction between tort and crime exist in Islamic law in distinctions between rights of action vested in men, rights of action vested in Allah and mixed rights of action, but all of these rights operate within the framework of a general law of transgressions in which religious

48. Refer U.K. Foreign Office, *Manual of German Law*, (1950), Vol. I, pp. 108-110.

49. For an exposition of the general principles of the Law of 'uqubat' refer Riyad Maydani, "*Uqubat Penal Law*", *Law in the Middle East* (1955), pp. 223-35.

50. *Ibid.*, p. 223.

offences, civil liability and criminal responsibility are intermingled." [51] The nearest approach in Islamic law to a law of tort is to be found in the *Majalla*, the Ottoman codification of the *Sharia* law of the *Hanafi* school, which although superseded in Turkey in 1926 by the Swiss Codes, is still in force to varying extents in some of the successor States of the Ottoman Empire. [52] Although the *Majalla* was a product of the Ottoman reform movement of the latter half of the nineteenth century, it was based on the *Hanafi* school of law and was one of the important means of preserving Islamic institutions while the Ottoman Empire was changing from an Islamic to Western society. It did not introduce new principles of law but codified the Islamic principles which had served as the civil law of the Ottoman Empire. Its very name indicates this fact, for the word *Majalla* means a digest of legal rules and principles. The full name of the code is *Majallat-i-Ahkami Adliye*, the Book of the Rules of Justice. [53] The various parts of the *Majalla* were published and put into effect over a period of several years; the first part was published in 1870 and the sixteenth and last in 1877. The *Majalla* had the force of law and was applied as the civil code of the Ottoman Empire. It consisted of an introductory section and sixteen books, each treating a different subject.

The theory of objective responsibility or risk is set forth in several of the preliminary articles "Disadvantage is an obligation accompanying enjoyment" (Article 87), and "the burden is in proportion to the benefit, and the benefit to the burden" (Article 88). It follows that if a situation creates a benefit for a person, that person should also be responsible for the risk involved, i.e. a businessman or factory owner should be responsible for the harm he causes to other persons even if he is not at fault. In European law, responsibility is based largely on the principle of negligence, which has been so striking a feature of the development of both the common law and the civil law. If damage is not due to a person's negligence, he is generally not liable for compensation; objective responsibility is only applied in exceptional cases where there is an absolute liability

51. Refer Louis Milliot, '*Introduction al' etude du droit Musulman*' (1953) pp. 207-212 and 744-750. This book is an excellent introduction to the principles of Islamic law.

52. For an account of the organisation and basic principles of the *Majalla* refer S.S. Onar "*The Majalla*", *Law in the Middle East* (1955) pp. 292-308.

53. For an English translation of the *Majalla*, refer C.A. Hooper, *Civil Law of Palestine and Transjordan*, (1953), Vol. I.

in respect of dangers created by the respondent. In the *Majalla*, by contrast, objective responsibility is an essential principle. [54] Where destruction of property is concerned, the *Majalla* makes the destroyer responsible for the damage, irrespective of intention or negligence (Article 912). Consequently, a person who destroys another's property by accident is held liable to pay compensation (Article 916). Intent or negligence is not considered and the liability is based exclusively upon the result of the action. It is a fundamental legal principle of Islamic law that when a person exercises a right which belongs to him, he exercises a right which has been permitted to him by law. Therefore, when a person exercises his right within its legal bounds, this permission releases him in principle from all consequences with regard to others that may arise thereon. This is the meaning of the rule adopted in Article 91 of the *Majalla*, "legal permissibility negates liability". Thus it is a basic principle that the exercise of a right does not in itself entail liability. However, if the exercise of a right causes injury to others, it can give rise to liability. In the opinion of the *Hanafi* jurists, the exercise of a right is to be prohibited if it should cause serious injury. This principle was adopted in Article 1197 of the *Majalla* which provides that :

> No person may be prevented from doing as he wishes with his peoperty unless in so doing he should cause grave damage to other persons.

This approach, therefore, focuses upon the result rather than upon the intention of the person exercising the right. If the result is fraught with grave danger, the exercise of the right is prohibited regardless of the intention. [55] It may be said, therefore, that Islamic law, as codified in the *Majalla*, recognises a general obligation not to inflict harm on one's neighbour and imposes an absolute liability in cases of damage done directly to the person or property of another. The principle, that injurious exercise of rights is prohibited, enunciated in Article 1197 of the *Majalla*, is very similar to the modern principle of the prohibition of the abuse of rights. Article 226 of the *German Civil Code*, for instance, provides that :

> The exercise of a right is forbidden if it can have no other purpose than to harm some other person.

54. S.S. Onar, 'The Majalla', *Law in the Middle East* (1955), p. 297.

55. Subhi Mahmasani, 'Transactions in the *Sharia*', *Law in the Middle East* (1955), pp. 186-87: Exercise of Rights.

Similarly, Article 2 of the *Swiss Civil Code* provides that :

> Every person is bound to exercise his rights and to fulfil his obligations according to the principles of good faith. The law does not protect the manifest abuse of a right.

The *French Civil Code* also provides in Article 544 that :

> Ownership is the right of enjoying and disposing of a thing in the most unlimited manner provided that it is not utilised in a manner forbidden by law.[56]

The basis of liability in African customary law appears to be causation rather than culpability, but modern writers on African law, such as T.O. Elias, argue that "fault, negligence and absolute liability are all elements in a concept of liability in African customary law which is perhaps not fully self-conscious of all its constituent elements but does not diverge widely in its essentials from the accepted concepts of the common law."[57]. The concept of responsibility in traditional Chinese law appears to be based on the principle of "what has happened" rather than "who has done something" [58], but there appears to be absolute liability in such cases.[59] Japanese Civil Law, which is based to a large extent on the *German Civil Code*, accepts the principle of liability for fault, including negligence and the principle of absolute liability for dangerous things.[60] The Indian law also accepts these principles as it is based largely on English common law. The principle of absolute liability has, however, been rather sparingly accepted in Roman-Dutch law as applied in Ceylon, because the principle did not form part of the traditional Roman-Dutch law, which is based on Roman, but was subsequently infused into Roman-Dutch law as applied in Ceylon through the influence of English law.[61]

It may be said, therefore, that in respect of the fundamentals of the law of tortious liability there is a substantial body of agreed principles common to all the major legal systems of the world

56. For a comparative study of the application of the theory of the abuse of rights in French, German, and Swiss laws refer H.C. Gutteridge, 'Abuse of Rights' 5 *Cambridge Law Journal* 22 (1933), pp. 32-39.
57. T.O. Elias, *The Nature of African Customary Law*, (1956), pp. 155-61; refer also Julius Lewin, *Studies in African Native Law*, (1947).
58. Owen Latimore, *Manchuria, Cradle of Conflict* (1932), p. 80.
59. Refer Jean Escarra, Le droit chinois (1936), pp. 77-78.
60. J.E. de Becker *Elements of Japanese Law* (1916). p. 245.
61. Refer R.W. Lee, *Introduction to Roman-Dutch Law*, (1931), pp, 333-34.

on which a universal system of international law can draw in developing and elaborating its own rules and principles with regard to international torts and tortious liability. The major legal systems of Europe, America, Asia and Africa recognise in some form a general obligation not to inflict unlawful harm on one's neighbour. This principle is recognised by the legal systems of Europe and America and is also recognised by the legal systems of Asia and Africa which have been profoundly influenced in matters of tort by the common law and the civil law. The principle that one must not do unlawful harm to one's neighbours is also recognised by Islamic law as codified in the *Majalla*. The principle of absolute liability for dangerous substances or things is recognised in some form by all the legal systems of the world. In English law, there is the rule in *Rylands* v *Fletcher*; in American law, there is the principle of liability for ultra-hazardous activities; in French law, there is the *theorie du risque cree*; and in German law, there is the principle of responsibility for risks. The theory of objective responsibility or risk is recognised by Islamic law as codified in the *Majalla* and the principle of absolute liability for dangerous things also forms part of the civil law of India and Japan. It may be said, therefore, that the major legal systems of the world recognise a general obligation not to inflict unlawful harm on one's neighbour and base this obligation partly on liability for fault and partly on absolute liability for dangerous things. These principles of law recognised by all civilised nations may therefore be regarded as a source of international law and have an important bearing on the future development of international law in the field of international torts and tortious liability. The general principle of law recognised by all nations that 'one must not do unlawful harm to one's neighbours' should be applicable in international law if a universal system of international law is to continue to develop in accordance with modern scientific developments, particularly in the field of nuclear weapons. All systems of municipal law prevent an owner of property from doing acts on his property and dealing with it in a manner dangerous to neighbouring owners. A similar doctrine, based on this universally accepted principle of absolute liability for dangerous things, should be applicable in international law, and a State harbouring dangerous things on its territory or carrying out dangerous experiments within its territory should be liable for damage caused to neighbouring States. A State has no doubt sovereign authority over its own

territory, but it is submitted that in exercising its sovereign rights a State is under an obligation not to perform any acts on its territory which will have harmful effects on neighbouring States. On the basis of the general principle of law recognised by all civilised nations that "all members of a civilised commonwealth are under a general duty towards their neighbours to do them no hurt without lawful cause or excuse," it is submitted that no State should be permitted to use its territory in a manner harmful to neighbouring States. A State, which harbours dangerous things on its territory or carries out dangerous experiments on its territory, which cause damage to neighbouring States, should therefore incur legal responsibility to the other States. It is submitted that this responsibility should extend to every kind of damage whatsoever-biological, metereological economic and otherwise. Such acts would be international torts. The legality of carrying on of nuclear tests in one's own territory, if such tests cause harm outside the territory, will therefore depend on the application of this general principle of law recognised by all nations that "one must not do unlawful harm to one's neighbours." If the rule applies and damage has been caused, the testing State would have committed an international tort and will be responsible to the neighbouring States for the consequences of its illegal action.

The application of the principles of State responsibility and tortious liability to the problem of nuclear tests

The nuclear tests carried out by the United States in the Pacific Ocean and the nuclear tests carried out by the Soviet Union in Central Asia and the Arctic appear to have had harmful effects on neighbouring States. It is for consideration, therefore, whether an international tort was committed by the testing States as a result of the thermo-nuclear experiments and whether there is State responsibility for the damage caused by these tests. It is also for consideration whether the tests carried out by France in the Sahara raise issues of State responsibility as these tests appear to have had harmful effects on the territories of Ghana and the United Arab Republic. Finally, it is for consideration whether the resumption and continuation of nuclear tests by the Soviet Union, the United States, the United Kingdom and France would raise issues of joint liability in tort and whether the States which carry out these tests would be liable as joint tortfeasors in international law.

At the commencement of this Chapter the principles of State

responsibility were examined, and it was shown that for State responsibility to arise there must be an act or omission in violation of international law, that the act or omission must be imputable to a State and result in injury to another State, and that the State which has committed the wrongful act or omission has a duty to make reparation for the injury caused. State responsibility may therefore arise as the result of the commission of an international tort. The breach of any international obligation, whether it rests on *lex inter partes* of a treaty, a rule of international customary law or a general principle of law recognised by civilised nations, constitutes an international tort, which has been defined as "an unjustified, unpardoned, imputable and voluntary breach of an international obligation."[62] The principles of State responsibility and tortious liability may now be applied to determine whether an international tort was committed by the testing States as a result of the nuclear tests carried out in the Pacific Ocean and in Soviet Asia.

It is for consideration, therefore, whether there was an act in violation of international law and whether this act was directly responsible for the damage caused. It is submitted that the nuclear tests carried out in the Pacific Ocean violated international law because the tests interfered with the freedom of the seas. It is a universally accepted rule of international law that no State has the right to interfere with any of the four freedoms of the high seas, namely, freedom of navigation, freedom of fishing, freedom to lay submarine cables and pipelines, and freedom to fly over the high seas. The evidence collected in Chapter I has shown that the nuclear tests interfered with freedom of navigation, freedom of fishing and freedom of flying and thus violated universally accepted rules of customary international law. The closing of vast areas of the Pacific Ocean to shipping and aircraft cannot be reconciled with freedom of navigation on the high seas and in the air space above the high seas. No police power can be found to justify fencing off from the maritime and air traffic of other nations hundreds of thousands of square miles of open sea and air space. When the testing State declared hundreds of thousands of square miles of the open sea as a 'prohibited area' it, in effect reserved that vast area of the high seas for its own and exclusive use; it in effect appropriated the area and exercised dominion over it. In other words, it subjected a part of the high seas

62. Schwarzenberger, *International Law*, 1957, Vol. I, p. 632.

to its sovereignty; navigation, fishing, flying over the high seas—indeed, all the freedoms of the open seas—became impossible in that area. The rule of prohibition of exercise of sovereignty or jurisdiction in any part of the open sea was, therefore, infringed and the four freedoms belonging to other States were interfered with. It is of the essence of the freedom of the seas that the rights of all States are common; the sea must remain common and open to all nations, and no given State is entitled to proscribe its use to other States.

The nuclear tests carried out in the Marshall Islands interfered not only with freedom of navigation but also with freedom of fishing in the Pacific Ocean. In Chapter I it was shown that the contamination of the water and fish of the Pacific Ocean as a result of the nuclear tests seriously impaired and interrupted the right of Japanese fishermen to fish on the high seas and had harmful effects on the fishing industry of Japan. It is a fundamental principle of international law that all States have the right for their nationals to engage in fishing on the high seas and no State may be prevented from exercising this right to fish on the high seas in time of peace. It is submitted, therefore, that the contamination of the fish in the Pacific Ocean and the consequent hardship caused to the fishing industry in Japan is a clear violation of the fundamental right of fisheries on the high seas. The nuclear tests in the Pacific therefore interfered with freedom of navigation and freedom of fishing and violated universally accepted rules of customary international law. It is established beyond doubt that the interference with freedom of navigation and freedom of fishing and the damage to the fishing industry of Japan were caused by the nuclear tests carried out in the Marshall Islands and the carrying out of these tests were voluntary acts performed by the armed forces of the testing States, which would come under the category of an executive organ of the State. These acts were directly responsible for the damage caused to the nationals of Japan and to Japan's fishing industry. In Japan, in 1954, the fish, the rain, the drinking water, the vegetables, the dust on roofs and in houses all became radioactive; they were made so by the nuclear tests carried out in the Marshall Islands. It is clear therefore that there was an act in violation of international law which was imputable to a State and that this act resulted in damage to another State. As all these requisites are present, there would appear to be a clear commission of an international tort, and the testing State is therefore

legally responsible to Japan for the consequences of its illegal action.

It is submitted, therefore, that an international tort was committed as a result of the thermonuclear experiments in the Pacific Ocean and that there is State responsibility for the damage caused by these tests. On the basis of these principles, it is also submitted that the carrying out of nuclear tests by the Soviet Union may amount to the commission of an international tort. In Chapter I it was noted that the nuclear tests recently carried out by the Soviet Union in Central Asia and the Arctic have resulted in radioactive fall-out on Japan, India and other neighbouring States. It is submitted, therefore, that if the harmful effects of these tests can be proved by scientific evidence, there would appear to be a clear commission of an international tort by the Soviet Union. The principles of tortious liability in the case of such an international tort may be based on the principle of absolute liability for dangerous substances or things which is universally recognised as a general principle of law by all civilised nations. The liability in such a case must be regarded as absolute liability in accordance with the principles laid down in such cases, such as *Rylands v. Fletcher*, in which Blackburn J. enunciated the classical exposition of the doctrine in the following words :

> A person who for his own purposes brings on his land and collects and keeps there anything likely to do mischief if it escapes, must keep it in at his peril, and, if he does not do so, is *prima facie* answerable for all the damage which is the natural consequence of its escape.[63]

The equivalent of this case in international law is the *Trail Smelter Arbitration* between the United States and Canada in which the Tribunal held Canada liable on the ground that

> Under the principles of international law, as well as the law of the United States, no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.[64]

63. Winfield: *Textbook of the Law of Tort*, p. 585.
64. Annual Digest, 1938-40 Case No. 104.

The Tribunal clearly regarded the general principle of the duty of a State to protect other States from injurious acts from within its jurisdiction, which it traced back to the *Alabama Claims Arbitration*,[65] as of wider application. It is submitted that injury caused by atomic raidation as a result of nuclear tests is as much a ground of liability as injury caused by noxious fumes and that on the basis of this principle the testing State would appear to have committed an abuse of rights by availing itself of its rights "in an arbitrary manner in such a way as to inflict injury upon another State."[66] State responsibility therefore arises as a result of this abuse of rights enjoyed by virtue of international law and the State which has committed the wrongful act has a duty to make reparation for the injury caused.

The Government of the United States took prompt action after the Pacific tests in 1954 and tendered the sum of two million dollars to the Government of Japan, but it offered this sum of money to the Government of Japan *ex gratia* and 'without any reference to the question of legal liability.' The Government of Japan accepted the sum of two million dollars "in full settlement of any and all claims against the United States or its agents, nationals or juridical entities." It is submitted, however, that the payment of compensation does not finally settle the question if the State concerned continues testing such weapons as in the case of the United States which resumed its test series in the Pacific in 1962. If the carrying out of such tests amounts to the commission of an international tort, no further tests should be carried out. Although no international tribunal has given a judgment on the question of whether a State may continue to persist in a conduct for which it is liable for damages, and although the question may be in doubt until the matter is clarified by at least an advisory opinion of the International Court, it is apparent that no State would regard payment of compensation each time a nuclear test takes place as an equitable solution to the problems arising from the damage caused by such explosions. In the *Trail Smelter Arbitration*, the United States contended that "a State may not continue activity which inflicts compensable injury."[67] If the carrying out of nuclear tests amounts to an illegal act, the payment

65. Moore, *History & Digest of International Arbitrations*, 1898, pp. 495-682.

66. Refer commencement of this Chapter for an analysis of the principles underlying the theory of abuse of rights in international law.

67. 3, United Nations Reports of International Awards, p. 1965.

of compensation would not legalise or justify the constant commission of the illegal act. If the carrying out of such tests amounts to the commission of an international tort, no further tests should be carried out. If further tests are carried out with resulting damage, the question will arise as to what remedy is available to the States which have suffered damage. The typical remedy for tort is unliquidated damages. Is such a remedy feasible and appropriate in the type of case under consideration? Would something in the nature of a mandatory injunction prohibiting such tests be a more appropriate remedy? If so, could such an injunction be issued by the International Court of Justice if the matter is referred to the Court by a State or group of States? If nuclear tests continue unabated, these are some of the questions which the States affected by radioactivity will have to consider. The difficulties of the matter must not be, and are not likely to be, underestimated. What relative importance should be attached, in the development of a workable body of law on the subject, to the principles of fault and absolute liability respectively? What degree of responsibility could be imputed to the testing State for the damage caused to the neighbouring States? At what point would the principle of remoteness of damage become applicable? These are some of the questions which will have to be considered if the necessary legal action is to be taken to prohibit the carrying out of nuclear tests. The danger is not that these difficulties will be overlooked or underestimated, that they will be regarded as so appalling that they may discourage any attempt to move along constructive lines.

Nuclear tests and the United Nations Charter

It is a matter for consideration, whether it is lawful for a trustee authority to use territories, which it holds on trust from the United Nations, for the purposes of holding nuclear tests.[68] The United States has in the past used the trusteeship territory of the Marshall Islands as the main site for the testing of nuclear weapons and the injuries and hardship caused to the Marshall Islanders by these tests have been described in Chapter I of this Report.[69] It is for consideration, therefore, whether the conduct of nuclear tests in trust territory is a violation of the United Nations Charter and the Trusteeship Agreement. The chapters of the United

68. Refer Chapter I of this Report.

69. *Ibid.*

Nations Charter dealing with non-self-governing territories and the international trusteeship system are not easily reconciled with conducting hazardous nuclear experiments in the Marshall Islands. Article 73 of the Charter of the United Nations states that :

> Members of the United Nations which have or assume responsibilities for the administration of territories whose peoples have not yet attained a full measure of self-government, recognise the principle that the interests of the inhabitants of these territories are paramount, and *accept as a sacred trust, the obligation to promote to the utmost*, within the system of international peace and security established by this Charter, the well-being of the inhabitants of these territories.

Article 74 states that :

> Members of the United Nations also agree that their policy in respect of the territories to which the Charter applies, no less than in respect of their metropolitan areas, must be based on the *general principle of good-neighbourliness*, due account being taken of the interests and well-being of the rest of the world, in social, economic and commercial matters.

Article 6 of the Trusteeship Agreement describes even more specifically the responsibilities of the United States as an administering authority. Article 6(2) states that the administering authority must promote the "economic advancement and self-sufficiency of the inhabitants" by encouraging "the development of fisheries, agriculture and industries" and by protecting the inhabitants against the "loss of their lands and resources." Article 6(3) requires the administering authority to "protect the health of the inhabitants." The removal of the inhabitants of the islands of Bikini, Eniwetok, Rongelap and Uterik from their homes for the purpose of carrying out nuclear tests and the consequent injury to the health and well-being of the inhabitants of the Marshall Islands due to the effects of the nuclear tests, appear to be a clear violation of the above treaty obligations assumed by the United States.[70] The removal of the inhabitants of the islands in the so-called "danger zones" amounts to removing them from their land and homes and this is a violation of Article 73 of the Charter and Article 6 of the Trusteeship Agreement. The 137 inhabitants of the

70 Refer Chapter I of this Report for the effects of the nuclear tests on the Marshall Islanders.

island of Eniwetok were removed from their land and homes and settled on the island of Ujelong. The 167 inhabitants of Bikini Atoll were similarly removed from their land and homes and settled on the island of Kili. Bikini and Eniwetok, where the hydrogen bombs were exploded, will almost certainly never again be inhabitable by these islanders, who have therefore been permanently exiled from their land and homes by the trustee authority. The mission from the United Nations Trusteeship Council which visited the Marshall Islands in 1956 reported that the 167 inhabitants of Bikini Atoll who had been evacuated to the island of Kili, in the southernmost part of the Marshall Islands group, were experiencing great hardship as they had been deprived of the extensive lagoons abundant with fish around Bikini Atoll on which they had depended for their livelihood and food. The deprivation of the people of Bikini of their fishing grounds and the placing of these unfortunate people on the island of Kili, which does not possess lagoons abundant with fish as around Bikini, appears to be contrary to the requirements of Article 6 of the Trusteeship Agreement which provides that the administering authority should promote the economic advancement and self-sufficiency of the inhabitants by encouraging the development of fisheries and by protecting the inhabitants against loss of their natural resources.

Apart from the economic hardship caused by the removal of the islanders from their homes, the inhabitants of the islands of Rongelap and Uterik suffered injury as a result of the radioactive fall-out from the nuclear tests and developed radiation sickness. All the children of these islands who were irradiated appear to be an year behind in height and weight and a United Nations mission which visited the islands at the beginning of this year has reported that the people of Rongelap have not yet fully recovered from the effects of the tests and appear to be still seized by fear and anxiety lest the series be resumed. Article 73 of the United Nations Charter requires that in administering trust territories the trustee authority must ensure the just treatment of the people of the trust territory and protect them against abuses. It is submitted that it is very unjust and indeed a manifest abuse to explode hydrogen bombs in a trustee territory and subject the people there to the hazards of atomic radiation. Under Article 73 of the Charter the administering State has accepted as a sacred trust the obligation to promote to the utmost the

well-being of the inhabitants of these territories. The explosion of hydrogen bombs on the territory can hardly be said to be promoting the well-being of the inhabitants of the territory. On the contrary, it has in fact retarded the development of the children of the territory and subjected a large number of the people to atomic radiation and radiation sickness. It is submitted therefore that by carrying out harmful nuclear tests in the trust territory, the administering authority has violated the provisions of the Charter and committed an illegal act. It is submitted, further, that although a State may be said to have a certain measure of sovereignty over a colonial territory, the administering authority of a trust territory does not have sovereignty over such territory as it is merely looking after the territory as a trustee under the supervision of the United Nations. It is therefore not entitled to exercise any sovereign rights over the territory and does not have the right to carry out nuclear tests which harm the people of the territory. It is submitted therefore that the carrying out of dangerous nuclear tests in a trust territory is contrary to the basic principles of trusteeship and constitutes an arrogation of sovereign rights which the administering authority does not possess.

It is for consideration whether the carrying out of nuclear tests with its consequent hazards to the health of the peoples of the world amounts to a violation of fundamental human rights in the context of the United Nations Charter and the Universal Declaration of Human Rights. The preamble to the United Nations Charter reaffirms the faith of the peoples of the United Nations in fundamental human rights and the dignity and worth of the human person. The Statement of Purposes of the United Nations includes international cooperation in promoting and encouraging respect for human rights and fundamental freedoms. Lauterpacht in his treatise *International Law and Human Rights* expresses the view that it would be wholly inaccurate to conclude that the provisions in the Charter relating to human rights are mere declarations or principles devoid of any element of legal obligation. Any such conclusion is, in the opinion of the learned author, no more than a facile generalisation. The provisions of the Charter on the subject figure prominently in the Statement of Purposes of the United Nations and Members of the United Nations are, in the opinion of the author, under a legal obligation to act in accordance with these purposes. It is their legal duty to respect and observe fundamental human rights and freedoms.

Nuclear tests constitute a hazard to the human race. Even if the tests are carried out within the territory of the testing State, as in the case of the Soviet tests, and even if such tests may endanger immediately only the lives and health of the people of the testing State, the carrying out of such tests may still amount to a violation of fundamental human rights, as in the context of the U. N. Charter the welfare of the people of all States, including the Soviet State, is the common concern of the United Nations and the peoples of the world. Eventually the whole of human life on the globe may be affected by nuclear tests, such as the 50-megaton bomb explosion in the Soviet Arctic, and it is clear that these tests in the eastern regions of the Soviet Union have resulted in the fall of radioactive rain on neighbouring countries, such as Japan and India. The carrying out of such tests amounts to a wanton disregard for the welfare and safety of human race. It is submitted that the holding of such tests in gross disregard of the consequences to human life is illegal and is in violation of the principles of the Universal Declaration of Human Rights and the provisions of the United Nations Charter with regard to fundamental human rights and freedoms. It is to be hoped that the dictates of humanity and of public conscience, invoked by the Universal Declaration of Human Rights, will carry weight also in the realm of nuclear tests and that the humanitarian codes of international law will soon comprise the prohibition of nuclear tests.

It is also a matter for consideration whether nuclear tests may be carried out in colonial or non-self-governing territories, such as the African Sahara, in which France has carried out atomic tests and proposes to carry out further tests. Article 73 of the United Nations Charter defines non-self-governing territories as territories whose people have not yet attained a full measure of self-government. Such territories are not part of the metropolitan area of a State and a State does not possess the same measure of absolute sovereignty over such non-self-governing territories as it has over its metropolitan territory. This is so because the administering State has the responsibility to guide such territories to full self-government and independence, and therefore the form of sovereignty exercised over such territories may be called "conditional sovereignty", i.e. a sovereignty exercised under certain conditions for the time being until the territory achieves full independence and developes into

a sovereign State of its own. The sovereignty exercised over such territories is threfore merely transitory and is not absolute sovereignty. It is submitted that Articles 73 and 74 of the United Nations Charter give specific rights to non-self-governing territories and that these territories are not under the complete and absolute sovereignty of the metropolitan States. As the members of the United Nations have committed themselves to the observance of certain international standards in their relations with their colonies, it is submitted that they do not have the right to expose the peoples of these dependent territories, as well as the peoples of the neighbouring territories, to harmful radioactive fall-out by carrying out nuclear tests in such territories. In Chapter I it was shown that the nuclear tests carried out by France in the Sahara have resulted in radioactive fall-out in the neighbouring States of Ghana and the United Arab Republic. It is submitted, therefore, that if the harmful effects of these tests can be proved by scientific evidence, there would appear to be a clear commission of an international tort by France. France has carried out these four nuclear tests in defiance of a Resolution adopted by the General Assembly of the United Nations on 23 November 1959 which reads as follows :

The General Assembly,

Recognising the anxiety caused by the contemplated tests in the Sahara among all peoples, and more particularly those of Africa :

1. Expresses its grave concern over the intention of the Government of France to conduct nuclear tests.
2. Requests France to refrain from such tests.

In carrying out these tests, France not only flouted a resolution of the General Assembly of the United Nations but also ignored the agreement between the United States, Russia and Britain to suspend nuclear tests during the Geneva test-ban negotiations. It is estimated that over three hundred atmospheric or surface tests have so far been carried out in various parts of the world. Each nuclear test has added its quota of radioactive material to the land, the sea and the air, and the scientific evidence collected and set out in Chapter I of this Report has shown that the general contamination of the world by radioactive substances is already having harmful biological and genetic effects on the human race.[71] The indefinite

71. Refer 'Effects of Atomic Radiation', Chapter I.

continuation of nuclear tests will result in an increasingly dangerous pollution of the atmosphere, land and water all over the world and may seriously affect the life and health of the populations of all countries. If the nuclear powers persist in testing nuclear weapons, the States which do not indulge in these tests will have to consider the question as to whether the testing States are liable as joint tort-feasors in international law for the damage caused by these tests. Even if the tests are carried out within the territory of the testing States as in the case of the Soviet tests, and even if the tests do not cause any immediate damage to neighbouring States, every atmospheric test carried out will still have harmful effects on the rest of the world by adding its quota of harmful radioactive substances to the air, the land and the sea. This is so because every atmospheric or surface test results in the radioactive fission products being drawn into the stratosphere and these fission products gradually spread out over a large part of the world and return ultimately to the earth in the form of rain or snow. The estimates of the time for this return to happen have recently been sharply revised. Whereas in earlier official discussions on fall-out the average length of time which the radioactive particles would spend in the stratosphere was reckoned at 10 years, the actual time is now estimated by scientists to be 2 to 3 years. Consequently, the radioactive materials from the over three hundred atmospheric tests, carried out by the Soviet Union, the United States, Britain and France have already returned to the earth with their dangerous radioactive pollution. The Russian, American, British and French tests of nuclear weapons have already distributed sufficient extra radio-activity over the world to be detectable in all our bodies. No living thing can escape. Every nuclear test spreads an additional quota of radioactive elements over every part of the world and each added amount of radiation causes damage to the health of human beings all over the world. It is for consideration, therefore, whether the States which carry out these dangerous experiments with nuclear weapons may be liable as joint tortfeasors in international law. Governments accused of such world-wide contamination and injury to the life and health of peoples of the world are naturally reluctant to face the issue squarely, but now that it has been proved that nuclear tests do result in world-wide contamination, the issue can no longer be evaded. International morality demands and international law requires the immediate cessation of nuclear tests.

CHAPTER III

Nuclear tests and the Freedom of the Seas
Two opposing views

The compatibility of nuclear tests on the high seas in time of peace with the principle of the freedom of the seas has been the subject of considerable controversy among international lawyers. There appear to be two opposing views on this vital question. On the one hand, it is argued by writers such as Jenks[1], Margolis[2], and Shigerdi Oda[3], that nuclear tests are incompatible with the principle of the freedom of the seas and its corollaries of freedom of navigation and freedom of fishing. The American writer, Margolis is of the opinion that "the establishment of a 400,000 square mile warning area" by the United States in the Pacific during the Marshall Island tests "cannot be reconciled with freedom of navigation on the high seas and in the air space above the seas." He is also of the view that "the interference with the interests of other nations in fishing on the high seas caused by the hydrogen bomb tests" is a violation of the international law rule of freedom of fisheries" and "incurs the responsibility of the United States for resulting damage." The English jurist, Jenks, is of the opinion that "in the case of tests on the high seas in time of peace it appears reasonable to postulate a legal obligation to give advance warning of any future tests" and concludes that "where injury to the person or property of nationals of other States arises directly from such tests and there has been no unreasonable disregard of a proper warning, liability for such injury must be regarded as a legal obligation."

On the other hand, it is argued, by Myres S. McDougal,[4] the American jurist, that "the extent to which the bomb tests have actually interfered with commercial navigation, in spite of the size of the area affected, is virtually nil" and "furthermore, the amount of interference with fishing caused by the existence of the warning

1. Jenks, *The Common Law of Mankind*, 1958, pp. 360-62.
2. Margolis: "The Hydrogen Bomb Experiments & International Law," *Yale Law Journal*, April 1955, pp. 627-47.
3. Shigerdi Oda, Die Friedensworte, 53, 1956, pp. 126-35.
4. *Studies in World Public Order*, (1960), pp. 763-843. " The Hydrogen Bomb Tests in Perspective: Lawful Measures for Security," Myres S. McDougal & Robert A. Schlei. Refer also *The Public Order of the Oceans: A Contemporary International Law of the Sea* (1962), pp. 761-72, Myres S. McDougal and William T. Burke.

zones appear to have been slight." In the view of this writer, nuclear tests are not incompatible with the principle of the freedom of the seas but are, in his view, "reasonable measures necessary in the present state of international relations for the protection of international peace and security." In his opinion,

> The only national policy for proponents of human dignity today is to demand, and to demand from a strength which ensures respect, not merely spurious or naive legalisms and not merely freedom for navigation and fishing and the narrowly conceived and unrealistically isolated welfare of a few scattered peoples, but workable prescriptions and institutions for global disarmament.

The object of this Chapter is to examine the question of the compatibility of nuclear tests on the high seas in time of peace with the principle of the freedom of the seas and to ascertain whether such tests interfere with freedom of navigation and freedom of fishing on the high seas and thus violate a fundamental rule of customary international law. In order to achieve this object, it will be necessary to examine the history and recent developments in the law of the sea, with particular reference to the United Nations Conference on the Law of the Sea. The rules of customary and conventional international law applicable to the regime of the high seas will be discussed and these rules will be applied to the given situation in order to determine whether nuclear tests on the high seas interfere with freedom of navigation and freedom of fishing on the open sea.

An examination of the conventions adopted by the United Nations Conference on the Law of the Sea

'International Law had its origin in the attempt to set up some law which would be respected and observed upon the seas, where no nation had the right of dominion and where lay the free highways of the world'.[5] In ancient times navigation on the high seas was free to everybody and the Roman jurist, Ulpian, has described the sea as 'open to everybody by nature.' During the latter part of the Middle Ages, however, the rising maritime nations began to

5. Woodrow Wilson, President of the United States in an Address before the Joint Session of Congress on 2 April 1917; 55 *Congress Records* 103 (1917).

claim sovereignty over extensive areas of the high seas.[6] Portugal claimed sovereignty over the Atlantic and Indian Oceans, Spain over the Pacific Ocean, and the Italian Republic over various parts of the Mediterranean. After the discovery of America and India, Spain and Portugal attempted to enforce their claims by forcibly excluding foreign vessels from the oceans over which they claimed sovereignty. Such exorbitant claims were naturally ignored by rising maritime powers, such as Britain, Holland and France, whose ships forced their way into the Pacific and Indian Oceans in spite of strenuous opposition from Portugal and Spain.[7] The resulting conflict and controversy indirectly influenced the growth of international law. In order to uphold the right of the Dutch to navigation and commerce in the Indian Ocean, the Dutch jurist, Hugo Grotius, wrote in 1609 his famous treatise *Mare Liberum*, in which he contended that the high seas do not form part of the territory of any State as it cannot actually be taken into possession by occupation and that consequently it is by nature free from the sovereignty of any State and belongs equally to all nations.[8] Although Grotius' conception of the freedom of the open sea encountered wide opposition at that time, the growth of maritime communications and international trade in the eighteenth century soon rendered obsolete the medieval theory that States could appropriate vast areas of the high seas to themselves. The principle of the freedom of the high seas was advocated by most writers on international law in the eighteenth century, such as Bynkershoek, Vattel, Martens and Azuni, and by the beginning of the nineteenth century it came to be universally accepted as a rule of international law in both theory and practice.

In the modern times, the principle of the freedom of the open sea implies that the high sea, outside territorial waters, "is not, and never can be, under the sovereignty of any State whatever." Since, therefore, the open sea is not the territory of any State, no State has the right to exercise its legislation, administration, jurisdiction or police over parts of the open sea. Since, further, the open sea can never be under the sovereignty of any State, no State has the right to

6. An analysis of the development of the Law of the Sea during the early period may be found in Hall, *International Law* (1924) pp. 170-180 and in Gidel, De Droit International Public De La Mer (1932), pp. 129-33.

7. Refer Smith, *Law & Custom of the Sea* (1950) pp. 43-44.

8. Grotius' treatise was first translated into English in 1916 and bore the title, "The Freedom of the Seas or the Right Which Belongs to the Dutch to take part in the East Indian Trade."

acquire parts of the open sea through occupation, for, as far as the acquisition of territory is concerned, the open sea is what Roman Law calls *res extra commercium*.[9] The real basis of the doctrine today is to be found in the practical necessity for freedom of communication and commerce between States in which the sea constitutes an international highway. Thus although the open sea is not the territory of any State, it is an object of the Law of Nations. Customary international law contains rules which guarantee a certain legal order on the open sea and important international conventions have been concluded with the object of establishing legal order on the high seas. The four international conventions on the Law of the Sea, adopted by the 1958 United Nations Conference on the Law of the Sea, represent the most comprehensive codification of international law that has been achieved since the Hague Peace Conferences on the Laws of War, and are full of promise for the further progressive development and codification of international law by the United Nations and regional organizations.

The International Law Commission in its Draft Articles presented to the U. N. Conference laid down the fundamental rule of international law that "the high seas being open to all nations, no State may validly purport to subject any part of them to its sovereignty." The Commission laid down, further, that "freedom of the high seas comprises, *inter alia* :

1. Freedom of navigation ;
2. Freedom of fishing ;
3. Freedom to lay submarine cables and pipelines ;
4. Freedom to fly over the high seas." (Article 27).

"Every State has the right to sail ships under its flag on the high seas" (Article 28) and "all States have the right for their nationals to engage in fishing on the high seas" (Article 29). These fundamental principles of the Law of the Sea were incorporated in the conventions adopted by the United Nations Conference on the Law of the Sea.

The second of the four conventions, adopted by the 1958 United Nations Conference on the Law of the Sea, deals with the Regime of the High Seas and is a declaration of the established rules of inter-

9. Oppenheim, *International Law* (1957), Vol. I, p. 589.

national law relating to the high seas. As the object of this Chapter is *to examine the question of the compatibility of nuclear tests on the high seas with the principle of the freedom of the high seas*, it is necessary to examine the relevant provisions of this convention in some detail as the convention is a codification of the established rules of international law relating to the high seas in time of peace.

The convention states by way of definition, in Article 1, that the term "high seas" means all parts of the sea that are not included in the territorial sea or in the internal waters of a State. Article 2 of the convention on the high seas adopts the principles laid down in the Commission's draft and states that "the high seas being open to all nations, no State may validly purport to subject any part of them to its sovereignty. Freedom of the high seas is exercised under the conditions laid down by these articles and by other rules of international law. It comprises, *inter alia*, both for coastal and non-coastal States: (1) Freedom of navigation; (2) Freedom of fishing; (3) Freedom to lay submarine cables and pipe lines; (4) Freedom to fly over the high seas. These freedoms, and others which are recognised by general principles of international law, shall be exercised by all States with reasonable regard to the interests of other States in their exercise of the freedom of the high seas."

Agreement on the last paragraph of this Article was not easily reached because of its bearing on the issue of nuclear tests. Due to the absence of agreement on this issue, the Conference did not incorporate in the convention any express pronouncement on the freedom to undertake nuclear tests on the high seas. It is clear, however, that the principle generally accepted in international law and incorporated in Article 2, namely that the high seas are open to all nations, governs the regulation of the question. As the International Law Commision clearly stated in its Commentary to this Article, 'no state may subject any part of the high seas to its sovereignty' and "*States are bound to refrain from any acts which might adversely affect the use of the high seas by nationals of other States*" it follows from the above Article that the high seas cannot be under the sovereignty of any State and that no State has a right to exercise jurisdiction over any such a stretch of water. The sea must remain common to all nations in order to fulfil its main mission of an international highway.

The convention lays down, in Article 4, the universally accepted rule of international law that "every State, whether coastal or otherwise has the right to sail ships under its flag on the high seas." The convention then goes on to state, in Articles 5 and 6, that each State shall fix the conditions for the grant of its nationality to ships, for the registration of the ships in its territory, and for the right to fly its flag. Nevertheless, for purposes of recognition of the national character of the ship by other States, there must exist genuine link between the State and the ship. In particular, the State must effectively exercise its jurisdiction and control in administrative and technical matters over the ships flying its flag. Ships may sail under the flag of one State only and may not change the flag during a voyage or while in a port of call, save in the case of a real transfer of ownership or change of registry.

These provisions settle another disputed question of modern times, namely the question of the ship's flag, but this matter is not relevant to the question under consideration. What is relevant is the fact that the convention has laid down clearly that every State has the right to sail ships under its flag on the high seas. Freedom of navigation on the high seas is open to the ships of all States and therefore no State is permitted to commit any acts on the high seas which might adversely affect the use of the high seas as a highway by the ships of any other State. It is in the interest of free intercourse and communication between States that the principle of the freedom of the open sea has become universally recognised and will always be upheld.

Under Article 24 of the convention, States are required to "draw up regulations to prevent pollution of the seas by the discharge of oil from ships or pipelines or resulting from the exploitation and exploration of the seabed and its sub-soil" and Article 25 lays down that "every State shall take measures to prevent pollution of the seas from the dumping of radioactive waste, taking into account any standards and regulations which may be formulated by the competent international organisations." States are also required, by Article 25, to "cooperate with the competent international organisations in taking measures for the prevention of pollution of the seas or air space above, resulting from any activities with radioactive materials or other harmful agents."

In the past, concern over the problem of pollution of the high seas has been restricted almost exclusively to pollution from the discharge of oil by ships. A new source of pollution of the sea is the dumping of radio-active waste. The Conference decided that the dumping of radioactive waste, which may be particularly dangerous for fish and fish eaters, should be put on the same footing as pollution by oil. Article 25 accordingly lays down that every State should take measures to prevent pollution of the seas from radioactive waste. The Conference also considered the question of the pollution of the sea or air space above resulting from experiments or activities with radioactive materials or other harmful agents. With regard to this matter, it was finally decided that in view of the many-sidedness of the subject and the difficulties besetting any attempt to impose a general prohibition, the convention should merely provide for an obligation upon States to co-operate in drawing up regulations with a view to obviating the grave dangers involved. Article 25 accordingly provides that all States should co-operate with the competent international organisations in taking measures for the prevention of pollution of the seas or air space above, resulting from any activities or experiments with radioactive materials. It is clear, therefore, that no State should indulge in such activities with radioactive materials because the indulgence in such activity would amount to lack of cooperation with the measures being taken by the international community to prevent pollution of the seas or air space from atomic radiation. Indeed such activity would amount to open defiance and violation of this provision which lays down that all States should cooperate in measures designed to eliminate such dangers.

The Convention lays down, in Articles 26, 27, 28 and 29 that all States are entitled to lay telegraph, telephone, or high-voltage power cables and pipe-lines on the bed of the high seas. Subject to its right to take reasonable measures for the exploration of the continental shelf and the exploitation of its natural resources, the coastal State may not impede the laying or maintenance of such cables or pipe-lines. Due regard must be paid to cables or pipe-lines already in position on the seabed when fresh cables are laid. Every State must pass legislation to provide that the breaking or injury, by a ship flying its flag or by a person subject to its jurisdiction, of a submarine cable, done wilfully or through culpable negligence, shall be

a punishable offence. The legislation must also provide that if persons subject to the State's jurisdiction when laying a cable or pipe-line cause a break or injury to another cable or pipe-line, they should bear the cost of the repairs.

Articles 1, 2, 4 and 24 to 29 are the only provisions of the Convention on the High Seas which are strictly relevant to the subject under consideration. Articles 1, 2 and 4 have a special bearing on the question as they lay down the fundamental principles underlying the law of the sea. The remainder of the articles of this convention deal with the immunity of warships and other government ships, penal jurisdiction in matters of collision, the duty of ships to render assistance, slave trade, piracy and other matters which are not relevant to the question under consideration. The importance of the convention, as a whole, lies in the fact that it is a declaration of the established rules of international law relating to the high seas and is a codification of the customary rules of international law on the subject.

The third convention adopted by the 1958 United Nations Conference on the Law of the Sea is concerned with fishing and the conservation of the living resources of the high seas. The International Law Commission, in its deliberations, became convinced that the claims by various States to a broad territorial sea were evidence not so much of their desire to secure exclusive fishing rights, as of their anxiety to prevent existing fish stocks from becoming exhausted through wasteful and predatory exploitation of fisheries by foreign fishing fleets in adjacent waters. As such, the Commission hoped that it might be able to inhibit the trend towards the extension of territorial sea by making provision for measures whereby fishing in adjacent waters would be subject to some form of regulation or control by the coastal State, without it being necessary to go as far as to designate those waters as part of the State's territorial sea. The relevant rules, submitted to the Conference, were contained in Articles 50 to 59 of the Commission's Draft Articles. The convention adopted by the Conference recognises the special interest of the coastal State in the maintenance of the productivity of fisheries in an area of the high seas adjoining its territorial sea and contains provisions for protecting the living resources of the high seas. The convention also contains elaborate provisions for the peaceful settle-

ment of fishing disputes. A few of the provisions are relevant to the subject under consideration because fishing on the high seas is open to the nationals of all States and nuclear tests carried out on islands in the seas may seriously interfere with the right of fishing on the open sea.

In Article 1, the convention lays down the general principle that all States have the right for their nationals to engage in fishing on the high seas, subject to their treaty obligations and to the provisions contained in this convention regarding the conservation of living resources and the interests and rights of the coastal State. This Article re-affirms the fundamental principle of international law that all States have a right for their nationals to fish on the high seas. The convention requires States to enter into negotiations with a view to laying down by agreement measures necessary for the conservation of the living resources of the high seas and recognises the special interest of coastal State in the maintenance of the productivity of the living resources in the area of the high seas contiguous to its territorial sea. The convention prescribes the procedure to be adopted for the settlement of disputes arising between States and lays down provisions for the regulation of fisheries conducted by means of equipment embedded in the floor of the sea in areas of the high seas adjacent to the territorial sea of a State. The technical details of these provisions are not of direct interest to us, but the general principles underlying the convention are relevant to the subject under consideration. All States have the right for their nationals to engage in fishing on the high seas, and therefore no State may be prevented from exercising this right to fish on the high seas in time of peace. All States must cooperate in measures necessary for the conservation of the living resources of the seas, and therefore no State may carry out any action which might damage or adversely affect the living resources of the sea. Fisheries in the open sea are open to the vessels of all nations and no State may by unilateral action prevent the nationals of other States from enjoying the living resources of the high seas.

The Conference also adopted two other conventions on the Territorial Sea and on the Continental Shelf, but as the provisions of these conventions have no special bearing on the subject under consideration, it is not proposed to deal with them in detail. Both United

Nations Conferences on the Law of the Sea, held in 1958 and 1960, failed to reach any agreement on the controversial question of the breadth of the territorial sea. The 1958 Conference, however, did succeed in drawing up a convention which dealt broadly with most of the other aspects of the territorial sea and with the contiguous zone. This convention, which was adopted by the Conference, deals with the questions of jurisdiction in the territorial sea, the delimitation of the territorial sea (without stating the maximum limit), the right of innocent passage and the question of the contiguous zone. The provisions relating to the contiguous zone may be noted as they may have some bearing on the subject under consideration.

International law accords States the right to exercise preventive or protective control for certain purposes over a belt of the high seas contiguous to their territorial sea. This power of control, however, does not change the legal status of the waters over which it is exercised, which remain a part of the high seas and are not subject to the sovereignty of the coastal State. The coastal State can exercise over the contiguous zone only such rights as are conferred on it by the convention adopted at the Geneva Conference. The convention defines the contiguous zone as a zone of the high seas contiguous to the territorial sea of the coastal State and states that the coastal state may exercise in this zone the control necessary to (a) prevent infringement of its customs, fiscal, immigration or sanitary regulations within its territory or territorial sea, and (b) punish infringement of the above regulations committed within its territory or territorial sea. The convention lays down that the contiguous zone may not extend beyond twelve miles from the base line from which the breadth of the territorial sea is measured.

This recognition of the contiguous zone clears up another disputed question of international law. States have in the past claimed contiguous zones of varying length for different purposes. Now the limit of this zone is fixed at twelve miles and the rights of control are clearly defined. It is significant that the convention does not recognise special security rights in the contiguous zone, nor does the convention recognise any exclusive right of the coastal State to engage in fishing in the contiguous zone. Since the contiguous zone is part of the high seas, however, the rules adopted by the Conference for the conservation of the living resources of the sea would apply to it.

No country is, of course, obliged to claim any contiguous zone and there are still some, such as the United Kingdom, which do not; nor, if it does so, is it obliged to claim the maximum distance permissible. What the above provision makes quite clear is not only that this maximum is twelve miles measured from the coast, or from straight baselines where permissible, but that it includes, and is not additional to, the territorial sea. The legal status of the contiguous zone is also made quite clear. The contiguous zone is not merely a separate and different zone from the territorial sea; it is part of the high seas and its basic juridical status is that of the high seas. It is control and not jurisdiction that may be exercised over the contiguous zone. These rules may have some bearing on the disputed question as to whether States may establish 'danger zones' on the high seas when carrying out nuclear tests. The particular purposes for which a contiguous zone may be established are clearly defined by Article 24 of the convention. Such zone may be established only for the purpose of enforcement of "customs, fiscal, immigration and sanitary regulations." It is significant that the convention does not recognize special security rights in the contiguous zone. Proposals to include 'security rights', successful at the Committee stage, were not adopted at the final plenary stage of the Conference. The International Law Commission had equally rejected such inclusion in its draft, "on the ground that the extreme vagueness of the term 'security' would open the way for abuses", and that "the granting of such rights was not necessary." A State may not, therefore, legitimately establish a contiguous zone merely for reasons of 'security'.

The fourth and last convention adopted by the United Nations Conference deals with the continental shelf, a new conception of maritime law which has become of great importance in recent years since the discovery of vast oil-fields below the bed of the sea at a considerable distance from the shores of the coastal State. The International Law Commission made a detailed study of the question and adopted, at its eighth session, draft articles which formulated the rules of international law relating to the continental shelf. The Commission accepted the principle that the coastal State may exercise control and jurisdiction over the continental shelf, with the proviso that such control and jurisdiction shall be exercised solely for the purpose of exploiting its resources ; and it rejected any claim

to sovereignty or jurisdiction over the superjacent waters. If a right over the waters above the sea-bed of the continental shelf was attributed to the coastal State, that State could appropriate marine areas extending hundreds of miles from the coast. The Commission considered it its duty to reject categorically such an infringement of the principle of the 'mare liberum.' In the words of the Special Rapporteur, J.A.P. Francois,

> "The Commission's draft is based on the principle of recognising the sovereign rights of the coastal State over the continental shelf, for the purposes of exploring and exploiting its natural resources. As a counterpart to this principle the further principle is laid down that rights of the coastal State over the continental shelf do not affect the legal status of superjacent waters as high seas, or that of the air space above those waters. In this manner the Commission thought it could reconcile the interests of the coastal State in the exploitation of the sea-bed and sub-soil of the continental shelf with the interest which the community of States has in preserving the principle of the freedom of the seas."

The principles formulated by the Commission formed the basis of the Convention on the Continental Shelf adopted by the Conference which lays down that "the rights of the coastal State over the continental shelf do not affect the legal status of the superjacent waters as high seas, or that of the air space above these waters." It is expressly laid down that "the exploration of the continental shelf and the exploitation of its natural resources must not result in any unjustifiable interference with navigation, fishing or the conservation of the living resources of the sea." The convention accordingly re-affirms the fundamental principle of the freedom of the high seas for navigation, fishing and flying over the seas for the ships and aircraft of all nations. The articles on the continental shelf are intended as laying down the regime of the continental shelf, only as subject to and within the orbit of the paramount principle of the freedom of the open sea. No modification of or exceptions to that principle are admissible in international law and no State has any right to interfere with the freedom of navigation and freedom of fishing on the high seas. Although 'general' and 'special' police powers over portions of the sea have come to be exercised by States

or groups of States for the repression of piracy, self-defence, hot pursuit, slave trade prohibition, conservation of fisheries and other purposes, the exercise of these rights is subject to and within the orbit of the paramount principle of the freedom of the high seas and its four corollaries which are the fundamental rules governing all relations between States on the high seas. No State has the right to exercise its legislation, administration or jurisdiction over parts of the open sea and all States have the right of navigation and fishing on the high seas. These principles are clearly laid down in the Geneva Conventions on the Law of the Sea which are a declaration of the universally accepted rules of international law relating to the sea.

Problems of international law arising from the testing of nuclear weapons on the high seas

On the basis of the facts set out in Chapter 1 and the principles of international law enunciated in this Chapter it is for consideration whether nuclear tests, if carried out in areas of the high seas, can be said to interfere with the right of navigation and fishing on the high seas and thus violate a fundamental rule of customary international law. Considerable controversy has arisen among international lawyers on the question of the compatibility of nuclear tests on the high seas with the principle of the freedom of the seas. The views of the various writers on this question were briefly stated at commencement of this chapter. Very strong views on this question have been expressed by the American Professors Myres S. McDougal and William T. Burke in their recently published work on the law of the sea, entitled *The Public Order of the Oceans*.[10] In this treatise, the learned Professors have contended that nuclear tests are not incompatible with the principle of the freedom of the seas and have reached the following conclusions :

> "Nuclear weapons testing necessarily displaces free movement in the air and sea for thousands of square miles in the vicinity, and this activity has understandably occasioned much controversy about limits on free navigation. Several States and writers have declared such use impermissible and have advanced in support of these contentions, conceptions of freedom of the seas incorporating absolute prohibitions upon

10. Myres S. McDougal and William T. Burke—*The Public Order of the Oceans: A Contemporary International Law of the Sea*. Yale University Press, 1962.

> any kind of interference with the classical uses of the sea, navigation and fishing. It is scarcely necessary to demonstrate again the manifold inadequacies which attend such misconceptions. It should suffice to note that they are quite unsatisfactory representation of the permissible exclusive authority established by the historic practice of States and ignore completely that the most relevant standard prescribed by customary international law is that of reasonableness. Fair assessment of the relevant factors would indicate to the impartial observer that the exclusive use attendant upon weapons testing fully comports with the reasonableness criterion. For the United States, all such tests have been carried out in parts of the sea far removed from populations of any appreciable magnitude. The test areas selected have offered minimum interference with navigation and flight. No international sea routes are located in the danger zone, and only a slight deviation in flight plan was necessary for the twice-weekly flights across the zone. Japanese fishing operations were affected by United States tests in 1954 but only for a limited period of time. In contrast to these minimal effects upon inclusive use, the interest at stake for the United States is easily seen to be of the greatest significance for its security and for that of a good part of the world. Finally, it is pertinent to note that no practicable alternative was available to the United States for the kind of experimentation that had to be carried out with these devices."[11]

The conclusions reached by McDougal and Burke appear to be based on an interpretation of Article 2 of the Convention on the Regime of the High Seas, adopted by the Geneva Conference on the Law of the Sea in 1958. The American writers allege that "it is not to be inferred that this widespread acceptance of the general doctrine prescribing freedom of access for navigation absolutely prohibits any activity or authority which may interfere with such freedom, [12] and claim that "activities involving exclusive use that temporarily displace free access to non-contiguous areas of the high seas,"[13] are " recognised by the general community

11. *Ibid.*, pp. 771-72
12. *Ibid.*, p. 768
13. *Ibid.*

to be consistent with international law."[14] Such activities are defined as "essentially military in nature"[15] and are said to include "naval manoeuvres and operations and the recent carrying out of nuclear weapons' tests in the sea."[16] In the view of these writers, such activities form an exception to the universally accepted rule of freedom of navigation on the high seas, and it is claimed that "exclusive use" of regions of the high seas for such purposes is "in accord with international law."[17]

It is submitted that these arguments are unsound in law and it is proposed to refute them *seriatim*. The views expressed by McDougal and Burke on the legality of nuclear tests in *The Public Order of the Oceans* are similar to those previously expressed by Myres McDougal in an article entitled "The Hydrogen Bomb Tests and the International Law of the Sea," published in the *American Journal of International Law*.[18] The conclusions drawn by McDougal in this article were strongly criticised by Gilbert Gidel, the eminent French jurist, in an article entitled "Explosions Nucleaires Experimentales et Liberte de la Haute Mer", in which Gidel maintained that nuclear tests on the high seas were incompatible with the principle of the freedom of the open sea.[19] In this article, Gidel very strongly condemned the carrying out of such tests in regions of the high seas and maintained that all such arguments set forth by writers trying to justify the legality of these tests were incorrect. Similar views have been expressed by other writers, such as Georges Fischer,[20] E. Margolis[21] and Shigerdi Oda,[22] who have maintained that such tests are incompatible with the principle of the freedom of the seas and its corollaries of freedom of navigation and freedom of fishing.

14. *Ibid.*
15. *Ibid.*
16. *Ibid.*
17. *Ibid.*, p. 769.
18. "The Hydrogen Bomb Tests & the International Law of the Sea" , 49 *American Journal of International Law*, (1955). Refer also M.S. McDougal and N. A. Schlei, *Studies in World Public Order* (1960) pp. 763-843.
19. "Explosions Nucleaires Experimentales et Liberte de la Haute Mer", *Festschrift fur Jean Spiropoulos*, 173, (1957).
20. *L' Engergie Atomique et les Etats-Unis*, (1957), pp. 366-95.
21. "The Hydrogen Bomb Experiments & International Law", *Yale Law Journal* (April 1955), pp. 629-47.
22. "The Hydrogen Bomb Tests & International Law", 53 *Dis Friedenswarte* (1956), pp. 126-35.

Article 2 of the Geneva Convention on the High Seas states :

"The high seas being open to all nations, no State may validly purport to subject any part of them to its sovereignty. Freedom of the high seas is exercised under the conditions laid down by these articles and by the other rules of international law. It comprises, *inter alia*, both for coastal and non-coastal States :

1. Freedom of navigation ;
2. Freedom of fishing ;
3. Freedom to lay submarine cables and pipelines ;
4. Freedom to fly over the high seas.

These freedoms and others, which are recognised by the general principles of international law, shall be exercised by all States with reasonable regard to the interests of other States in their exercise of the freedom of the high seas."

The Geneva Conference did not incorporate in the Convention on the High Seas any express pronouncement on the question of nuclear tests on the high seas, but it is clear that the principle generally accepted in international law and incorporated in Article 2, namely, that the high seas are open to all nations, governs the regulation of the question. As the International Law Commission clearly stated in paragraph 1 of its Commentary to this Article : "The principle generally accepted in international law, that the high seas are open to all nations, governs the whole regulation of the subject. No State may subject any part of the high seas to its sovereignty ; hence no State may exercise jurisdiction over any such stretch of water. States are bound to refrain from any acts which might adversely affect the use of the high seas by nationals of other States."[23] With regard to the question of nuclear tests, the Commentary states in paragraph 3 that "in this connexion the general principle enunciated in the third sentence of paragraph 1 of this Commentary is applicable."[24] The Commentary also states that " in addition, the Commission draws attention to Article 48, paragraphs 2 and 3, of these Articles."[25] These Articles deal with

23. *Report of the International Law Commission*, 1956, p. 24.
24. Ibid. p. 24.
25. Ibid.

the question of the pollution of the high seas resulting from experiments or activities with radioactive materials or other harmful agents.

It is clear, therefore, that in the opinion of the International Law Commission the general principle that "States are bound to refrain from any acts which might adversely affect the use of the high seas by nationals of other States" is applicable to the question of nuclear tests on the high seas and governs the regulation of the subject. In the book entitled *The Public Order of the Oceans*, McDougal and Burke claim that "although this 'general principle' smacks of absolutism, statements of Commission members and other passages in the Comment seem to make this appearance deceptive."[26] In fact the matter was clarified in the Sixth Committee of the U.N. General Assembly when the subject was raised by the representatives of India, Tunisia, Rumania and Czechoslovakia. In reply to questions raised by these delegates, the Special Rapporteur of the International Law Commission, Mr. J.P.A. Francois, stated that "in point of fact, the Commission had set down the general principle whereby States were required to abstain from all acts which might adversely affect the use of the high seas by nationals of other States" and concluded that "it would be necessary to judge in each particular case whether the testing of nuclear weapons was admissible or not on the basis of that principle."[27] The Commission had, therefore, formulated a general principle on the basis of which such tests were to be judged.

This general principle was included in the Commentary to Article 2 because some Members of the Commission had expressed the view that "freedom of the high seas does not extend to any such utilisation of the high seas as is likely to be harmful to any part of mankind." Introducing a draft proposal to this effect, Dr. Radhabinod Pal said that "the first question to be considered was whether there should be any statement of principle at all" and he agreed with the Special Rapporteur that the Commission should give a ruling one way or the other. He stated that "the Commission could not ignore the fact that in recent years powerful weapons of mass destruction had been invented and tested on the high seas" and said

26. McDougal and Burke, *op. cit.*, p. 761.
27. *Official Records of the General Assembly*, Sixth Committee, Eleventh Session (1956), p. 113.

that "although political considerations were involved some provisions should be inserted in the draft prohibiting the use of the high seas, which were *res communis*, in a manner which might be injurious to mankind."[28] Speaking on this proposal, another Member of the Commission, Mr. Jaroslav Zourek, said that "the Commission must distinguish clearly between scientific experiments and tests of weapons of mass destruction", and maintained that "experiments on the high seas with atomic or hydrogen bombs must be considered as a violation of the principle of the freedom of the high seas." In his view, "the principle stated in the Commentary on Article 2 that 'States are bound to refrain from any acts which might adversely affect the use of the high seas by nationals of other states' was the generally accepted corollary to the freedom of the seas" and there was no necessity to introduce "the concept of reasonableness." In this connection, he stated that "even those who wished to introduce the criterion of reasonableness must admit that if account were taken on the one hand of the interests of native populations, of the rights of all users of the high seas and, with regard to the living resources of the high seas, the rights of all mankind, and on the other hand of the interests of those who carried out experiments with weapons destined to destroy humanity, the answer to the question raised could only be that given by existing international law." In his opinion, "experiments with atomic weapons, unlike naval exercises, could not be controlled" and "in the interests of mankind the real solution was to prohibit all tests of that nature."[29]

The discussions in the International Law Commission, the Draft Articles and Commentaries drawn up by the Commission and the Convention on the High Seas finally adopted by the Geneva Conference accordingly re-affirm the fundamental pricinciple of the freedom of the high seas for navigation, fishing and flying over the seas for aircraft of all nations. No modifications of or exceptions to this principle appear to be accepted by the International Law Commission. Although 'general' and 'special' police powers over portions of the sea have come to be exercised by States or groups of States for the purposes of suppression of piracy, self-defence, naval

28. *Yearbook of the International Law Commission*, 1956, Vol. 1, pp. 11-12.
29. *Ibid.*