REPORT
of the
COMMISSION OF EXPERTS FOR
THE LEGAL PROTECTION OF CIVILIAN POPULATIONS
AND VICTIMS OF WAR FROM THE DANGERS
OF AERIAL WARFARE AND BLIND WEAPONS

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GENEVA
April 1954
A Commission of experts, convened by the International Committee of the Red Cross, met at Geneva from April 6th to 13th, 1954, for the purpose of considering the legal protection of the civilian population and victims of war from the dangers of aerial warfare and blind weapons. The experts, comprising specialists in international law, military science, medicine, military history, and civil defence, were invited by the International Committee of the Red Cross in their personal and private capacities and accordingly expressed their personal views and not those of the governments of their countries.

The following persons participated in the discussions of the Commission:

Major Richard R. Baxter  
Judge Advocate General's Office  
Department of the Army  
Washington D.C. (USA)

Professor Maurice Bourquin  
Professor at the University of Geneva and at the Graduate Institute of International Studies  
Geneva - Brussels (Belgium)

Mr. Georges Cahen-Salvador  
President of Section to the "Conseil d'Etat"  
Paris (France)

Professor  
Erik Johannes Sakari Castren  
Professor at the University of Helsinki (Finland)

Dr. Costedoat  
Medical Inspector-General  
Technical Adviser to the Ministry of Public Health  
Paris (France)

Dr. Juji Enomoto  
Lawyer  
Formerly Professor at the Navy Staff College  
Tokio (Japan)
Captain Cyril Bentham Falls  Fellow of All Souls College, sometime Chichele Professor of the History of War University of Oxford London (England)

His Excellency Y.D. Gundevia  Ambassador of India in Switzerland Berne - New Delhi (India)

Dr. Radmilo Jovanovic  General in the Yugoslav Armed Forces Belgrade (Yugoslavia)

Professor Giorgio La Pira  Mayor of Florence Former Senator Florence (Italy)

Dr. M.W. Mouton  Captain in the Royal Netherlands Navy Wassenaar (Netherlands)

Mr. Hans Rumpf  Formerly Major-General in charge of Fire Services Elmshorn (Federal German Republic)

Major-General Aug. E.D. Tobiesen  Head of the Civil Defence Services Oslo (Norway)

Dr. Masao Tsuzuki  Professor emeritus of the University of Tokyo, ex-titular Professor of Surgery of the Faculty of Medicine Tokyo (Japan)

Mr. Raymund T. Yingling  Legal Adviser's Office State Department Washington D.C. (USA)

Major R.J.E.M. van Zinnicq-Bergmann  Court Marshal of H.M. the Queen Royal Netherlands Airforce Wassenaar (Netherlands)

In calling together this conference, the International Committee of the Red Cross had been inspired by the consideration that, while it had been possible to give expression to the imperative requirements of humanity as far as certain aspects of warfare were concerned, the rules in force have become in sufficient and at times inadequate to govern aerial bombardment or the use of blind weapons, which are responsible for widespread and indiscriminate killing of defenceless persons.
I.- General Survey of the problem

The views of the experts were first solicited on the general approach which should be taken to this problem. The Commission was of the view that fundamental considerations of humanity require that some legal restraints be placed on the aerial bombardment of civilian populations. Military requirements might even in some cases have to yield to the wider principle that defenceless persons must be safeguarded against unnecessary suffering and suffering out of proportion to the military advantage to be gained. It was recognized, however, that modern warfare has made the protection of civilian populations extremely difficult. Not only have new and more destructive weapons been developed, but the distinction between the civilian population and the military forces has been made less clear by the emergence of total war.

It was agreed that the control of the most destructive weapons which have been devised, such as atomic and hydrogen bombs, lends itself to a political rather than a juridical solution. Nevertheless, it was considered desirable that any principles which might be formulated should be of application not only to conventional weapons but also to those which are in the process of development. Several of the experts pointed out that it is difficult, if not impossible, to place limitations upon the use of weapons which nations consider to be particularly efficacious or essential to their national security.

Prior to the consideration of those principles which should be applicable to the employment of aerial bombardment and blind weapons, the views of technical experts in the fields of military science, medicine, and civil defence were presented to the Commission. The military experts were generally of the view that the use of atomic weapons for tactical and strategic purposes is virtually inevitable in future hostilities, if the use of these weapons is not excluded by an international agreement of a political character. One of the experts called attention to the fact that a future world conflict would probably begin with a heavy atomic attack, possibly followed by a "broken-back" period, in which the belligerents might be able to carry on hostilities with those limited resources which had survived the initial attack. The Commission benefited greatly from a description of the medical effects of the atomic bombs which had been dropped at Hiroshima and Nagasaki.

Attention was also drawn by several of the military participants to the difficulties of identifying targets, especially in view of the speed and height of flight of bombing planes. These considerations, when considered in conjunction with the necessity of obliterating military objectives, have led to the development of target-area bombing and the use of incendiary bombs. Differing views were, however, expressed on the efficacy of aerial bombardment in destroying a nation's capacity for war.
Experts in civil defence called attention to the advantages and disadvantages of the establishment of safety zones for protecting the civilian population. In particular, it was pointed out that the establishment of such zones would entail great expense and might even be impossible in densely populated countries, or in countries in which means of transport are not well developed and economic resources are limited. The evacuation of portions of the civilian population to such zones would be extremely difficult if undertaken in short notice and under war-time conditions, when transport is limited and lines of communication are devoted to military use. It was suggested that if attention was concentrated on the exclusion of certain areas from bombardment, there was a danger that this emphasis might create the impression that indiscriminate bombing of all other areas would be wholly justified. On the other hand, the Commission was advised by representatives of the International Committee of the Red Cross that it had been possible to establish such zones in recent hostilities of a somewhat limited character (such as those in Jerusalem).

Further suggestions were made that it might be possible to provide accommodation for elements of the civilian population on islands, in neutral territories, in neutralized zones, in international zones, in special shelters, and by evacuation to other continents. The last of these measures would, however, involve the difficulty of transporting large numbers of persons over great distances at a time when all means of transport are urgently required for military purposes.

The members unanimously agreed that emphasis should be placed on practical measures to give effect to the provisions of Article 14 of the Geneva Convention relative to the Protection of Civilian Persons in Time of War of August 12, 1949. They therefore hoped that the measures contemplated by the Geneva Conventions of August 12, 1949, in particular the establishment of safety, sanitary and neutralized zones might diminish the possible threats to civilian populations.

II.- Prohibition of attacks directed against the civilian population especially those involving the terrorization of the civilian population.

The Commission agreed upon the general principle that all air attacks against the civilian population as such, that is civilians not participating in hostilities, and in particular attacks of terrorization, are prohibited. This formulation is meant to express the principle only in a general sense and might have to be worded differently to meet the exigencies of an international agreement. The opinion was advanced that the concept of the civilian population should be so defined as to limit this formula to those members of the civilian population who play no direct or indirect role in the war effort.
A prohibition of the terrorization of the civilian population was laid down in Article 22 of Part II of the Report of the Commission of Jurists at the Hague in 1923. Although agreeing upon this principle, several members wished to make observations on this point. Doubt was expressed that terror attacks achieved their result on the morale of the population. It was said on the other hand that in the last war no bombardments were undertaken with the sole purpose of terrorizing the population and that those attacks which were alleged to be terror attacks had, apart from this object, the purpose of destroying military objectives. Some members were therefore inclined to prohibit only attacks intended exclusively to terrorize the population. Some doubt arose as to the desirability of adding that the prohibition was limited to attacks intended to terrorize the population, as this intent was difficult to prove and no belligerent would admit to this purpose. On the other hand, several experts pointed out that evidence of such intent could always be found after the war by hearing those who had participated in the planning of the attack or by consulting military documents.

The Commission unanimously agreed that it should be stipulated that acts contrary to any rule which might be framed would constitute a breach of the laws of war and of the laws of humanity.

III.- Limitation of aerial attacks to military objectives.

This limitation constitutes a further attempt to protect the civilian population and runs parallel to the first principle. If a definition could be given to the notion of military objectives, governments could organize the evacuation of certain parts of the civilian population from the neighbourhood of these objectives. In the attempt to phrase a general principle which could be unanimously accepted by all members certain observations had to be considered. Attacks on military objectives should be limited to those the destruction of which would constitute a definite military advantage and on the condition that the loss of life of the civilian population was not out of proportion to that military advantage. The opinion was expressed by certain members that in some instances civilians may be military objectives. These persons may comprise those who participate in or conduct hostilities, including the ministers directly concerned with the conduct of the war, as well as scientists engaged in the development of new weapons.

Factories producing articles which are used for the war effort in general would clearly be considered as military objectives. Attention was drawn to the fact that in modern warfare the number of articles and materials of military value has grown considerably, as can be judged by the increase in items mentioned on the contraband lists of the last war as compared with those of
the First World War. Very few articles, and therefore very few factories producing those articles, could be considered as immune. It is true that a limitation of military objectives could be found by destroying only the so-called key industries, such as factories producing ball bearings, or oil refineries, the destruction of which would result in a general break-down of war production.

The difficulty, however, was to locate such industries and this led to the practice of destroying every factory. It was also said that limitation to military objectives was impossible when atom or hydrogen bombs were used. Furthermore, camouflage of factories leads to carpet bombing of areas where factories are known to exist. It was admitted that in attempting to achieve the essential aim of protecting the civilian population, military exigencies should be kept in mind. It was useless to devise rules which would be unacceptable to governments.

Attention was drawn to the danger for the civilian population if dams or dikes were to be destroyed. The catastrophic effects of the resulting inundations would be doubled if the water were contaminated with radioactive material, which would have a long-lasting effect.

Finally the position of merchant ships as military objectives was discussed. It was agreed that merchant ships under convoy are not immune, but in the case of merchant ships proceeding singly, the humanitarian principle of saving the lives of the crew before destroying the ship is still valid. Of course, neutral merchant ships not under belligerent convoy should not be destroyed at all, unless this should become necessary in exceptional circumstances and then only when the safety of the crew is assured. However, the difficulties of adhering to this principle were pointed out, since most belligerent merchant ships are armed and in practice not inclined to run any risks when a plane of the adverse party is approaching. In that respect the idea was advanced that armed merchant ships are not immune. An unarmed merchant ship or an armed one not using its weapons should, however, be directed to a port for investigation of its cargo.

The following general principles were unanimously agreed to:

(1) that aerial attacks should be limited to military objectives;

(2) that the safety and hospital zones and other installations, when established according to the Geneva Conventions of 1949, and the buildings listed in Article 27 of the Hague Regulations of 1907, with the exception of scientific establishments working in the interest of national defence, should under no circumstances be considered as military objectives.

No general agreement was possible on the definition of military objectives. The following draft was proposed:
By military objectives should be understood objectives the destruction of which presents obvious military advantage. The Commission is of the opinion that a judicious enumeration of the main military objectives has been established in Article 24, Part 2, of the Report of the Commission of Jurists of 1923.

This enumeration was, according to certain members, not complete and did not comply with modern conditions. It was suggested, for instance, that mines, certain ports, hydro-electric power stations, pipe-lines, ministries of national defence, oil refineries, etc. should be added to the list. On the other hand, attention was drawn to the danger that a modern enumeration would become so large that hardly any installations or buildings would be left which were not military objectives. It was also said that reference to Article 24 of the Report of Jurists of 1923 was not advisable, as governments had not been willing to accept that text. Some members regretted that the dwellings of civilians were not included in paragraph (2) above. Others insisted on the addition of dams and the major maritime and fluvial dikes to this list.

IV.- Prohibition of aerial attacks on undefended towns.

Article 25 of the Regulations annexed to Convention No IV of The Hague of 1907 provides that the attack or bombardment "by whatever means" of undefended towns, villages, dwellings, or buildings is prohibited. This provision was drafted at a time when bombardment was still confined to that by artillery, but was amended in 1907 so as to take account of aerial bombardment. It was pointed out that this provision might to-day refer either to cities without means of defence which are about to fall into the hands of the enemy or to cities behind the lines which contain no military objectives.

The Commission was of the view that a city or town which is undefended and also contains no military objectives should not be attacked. It was not possible to reach agreement on the present validity of Article 25 of the Hague Regulations. Some experts were of the view that the principle of humanity to which this article gives expression is as valid in these days as it was in 1907. Others expressed the opinion that the changed circumstances of modern warfare, especially the development of aircraft, made Article 25 obsolete or that it offered in itself a protection of trifling importance to civilian populations, since all cities and towns protected by an army in the field, by air forces, or by anti-aircraft artillery, must now be considered defended.

It was suggested that a firmer and more precise protection might be given to certain elements of the civilian population through the establishment of "hospital and safety zones and
localities", as envisaged by Article 14 of the Geneva Convention relative to the Protection of Civilian Persons in Time of War, of August 12, 1949. Certain other experts considered that supplementary methods of protecting groups of civilians might be necessary and that the concept of open cities might usefully be extended to making certain neutralized cities refuge for civilians, especially women, children, and the aged. Those who adopted this position alluded to the several instances during the Second World War in which cities declared to be open had been spared. On the other hand, others considered that the notion of open cities had fallen into desuetude in recent years, that cities declared to be open had not always been granted immunity from bombardment, and that it would in any case be undesirable to enlarge the number of categories of protected areas. Cities which had been agreed to be "open" by the opposing belligerents might more properly be considered to be "safety zones" within the meaning of Article 14 of the Geneva Civilians Convention of 1949.

This difference of opinion reflected a fundamental conflict between the view that open cities should be the result of agreement between belligerents and the position that open cities might be unilaterally established by action of the belligerent concerned. Attention was called to the difficulty of defining military objectives, the absence of which might be a sufficient basis for giving a city an open status. Difficulties of a similar nature might be occasioned if it became necessary to determine whether the presence of anti-aircraft artillery for defensive purposes only, civil defence organizations, or railway communications would be a sufficient basis for denying a city an open status exempting it from bombardment. In any event, means of control, such as international supervision, might be necessary to assure that such cities and areas preserved a position of absolute neutrality.

V. Precautions to be taken when attacking military objectives.

Attention was first directed to the effects of explosions of atom bombs and hydrogen bombs. According to official reports, explosions of these weapons cause a certain amount of radioactive material to be widely dispersed. A part of this material falls to earth and has a contaminating effect of long duration not only on human beings but also on land and water, especially if hydrogen bombs with a cobalt casing were exploded. Apart from these considerations another point was raised, namely the dispersion of radioactive material as such, which consists of invisible dust, or sand, the effects of which would be unpredictable. The effects of those ashes which recently fell on a number
of Japanese fishermen, who happened to be at a considerable distance from the point of explosion, have given humanity a clear warning of the future. The experts benefited by the medical report issued to them by one of the members of the Commission. It has been made clear that atomic weapons extend their effect not only in place but also in time because of the fact that the radioactive material remains active for a long time and might even affect future generations through the influence it has on pregnant women.

The question was raised whether the Protocol of Geneva of 1925 prohibits, or should prohibit, the use of atomic weapons or radioactive substances for warfare. Some members were of the opinion that this Protocol does prohibit these types of warfare, and it was suggested that, in case of doubt, an advisory opinion of the International Court of Justice should be sought on the interpretation of the Protocol in this regard. It seemed desirable to the Commission that it should not attempt to solve this question during the course of this conference.

It was decided to ask the opinion of the members on three points:

(1) The value of certain articles of the Hague Regulations as far as air warfare is concerned.

Although the Hague Regulations deal generally with land warfare, all members agreed that the principle laid down in Article 23 (e), prohibiting the employment of "arms, projectiles, or material calculated to cause unnecessary suffering" is of a general character and applicable to air warfare in general and to all weapons.

A similar conclusion was reached as to Article 23 (g).

No such general conclusion was possible in the case of Article 26. Some members were of the opinion that warning before attack would constitute a sacrifice of the element of surprise. It was, however, pointed out that this objection already existed in 1907 as regards artillery attacks. Although in recent wars such warnings have been given, even in the case of air attacks, the motives were not always in accordance with Article 26, but this practice might have had another reason, namely the disturbance of the war effort of the enemy.

(2) The possibility and desirability of passive precautions, i.e. precautions on the side of the party who is attacked.

Such precautions would mainly consist in the organization of security zones, hospital zones and neutralized zones,
as well as in civil defence in general. As has been indicated before in this report, general agreement was reached on this point.

(3) The possibility and desirability of active precautions, i.e. precautions to be taken by the attacker.

On this point no agreement was possible. One of the members indicated the possibility of prohibiting bombardment in cases in which it would be impossible to confine the destruction to the military objectives as such and the civilian population far from the target would be exposed to an evident risk. The military experts, whose views are reflected in an earlier section of this report, again alluded to the difficulty of confining bombardment to the military objective alone.

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At the conclusion of its meeting the Commission unanimously adopted the following resolution:

"This Commission of Experts having thoroughly discussed and deliberated upon the problem of the legal protection of populations and war victims from the dangers of aerial warfare and blind weapons, and having considered all the opinions expressed, particularly by the Experts connected with the armed forces,

"comes to the conclusion that if the destructive power of the weapons of war remains unlimited and their use unrestricted, selective bombing of targets in order to distinguish between persons taking part in hostilities and those not taking part in them, or between legitimate military targets and protected areas would be virtually impossible.

"The Commission is therefore definitely of the opinion that if the population is to be adequately protected the primary condition is the limitation of the destructive power and unrestricted use of the weapons of war.

"The Commission is of the opinion that it would be failing in its responsibilities to present and future generations if it did not reaffirm the general principles of humanity accepted in the past by way of laws of war or minimum humanitarian standards which belligerents would be expected to follow in case of hostilities, in order to eliminate unnecessary suffering both to persons taking part in hostilities and those not taking part in them."

* * *
The Commission was mindful throughout its deliberations that the protection of civilians is rooted not only in law but in the principles of morality themselves. The spirit in which the Commission approached its task was eloquently expressed by one of its members in the following words:

"This is an incontestable fact which is taking effect under our eyes, a fact which is undoubtedly of exceptional historical and symptomatic value: we have, so to speak, reached the historical era of towns and cities - an era the concept, aspect and name of which are all derived from the "culture of towns".

"...This era of towns and cities upon which we have embarked actually coincides, by a mysterious paradox of history, with a period when the destruction of the essential towns of today may be a matter of a few seconds!

"...I have come here to affirm the right to existence of human cities and towns - a right to which we, the generations of today, are the heirs, but to which the generations of the future are heirs to an even greater degree; a right whose historical, social, political, cultural and religious value assumes continually greater proportions as the human mind becomes more aware of the mysterious and profound significance of towns."
Documents presented by the Experts

\[ D_334 \text{ b} \]
Document submitted by Dr. Enomoto (Tokyo)
"General outline of measures taken by the Japanese Government concerning aerial bombardment."
(in English)

unnumbered
"Effects of the Bikini hydrogen bomb test upon fishery and social life", by Dr. Enomoto.
(in French and English)

\[ D_335 \]
\[ D_335 \text{ b} \]
Document submitted by Dr. Tsuzuki,
"Atomic bomb injury from medical point of view."
(in French and English)

\[ D_336 \]
\[ D_336 \text{ b} \]
"Medical effects of the Bikini ashes (A preliminary report)", by Dr. Masao Tsuzuki, M.D.
(in French and English)

\[ D_338 \]
\[ D_338 \text{ b} \]
Document submitted by Captain Cyril Falls
"The Trend of Modern Warfare"
(in French and English)

\[ D_340 \]
\[ D_340 \text{ b} \]
Paper by Dr. Costedoat on certain weapons of the future.
(in French and English)

\[ D_341 \]
Proposal by General Jovanovic
"L'activité médicale et la guerre ABC."
(In French - a translation of this document is being made)

\[ D_342 \]
Address by Professor La Pira, Mayor of Florence
(in French and English)

unnumbered
Draft resolution tabled by Dr. Costedoat
(in English and French)
COMMISSION D'EXPERTS

POUR LA PROTECTION JURIDIQUE DES POPULATIONS CIVILES ET DES VICTIMES DE LA GUERRE EN GENERAL CONTRE LES DANGERS DE LA GUERRE AERIENNE ET L'EMPLOI DES ARMES AVEUGLES

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Document présenté par M. le Professeur Enomoto (Tokio)

pour l'information de MM. les Experts

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It is my desire to present to you a general outline of the policy which Japan followed on the question of aerial warfare, as well as of her actual experiences in that field. And if what I have to present can be of any use to you in connection with the difficult tasks you now face, I shall feel more than happy.

Juji Enomoto

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GENERAL OUTLINE OF MEASURES TAKEN BY THE JAPANESE GOVERNMENT CONCERNING AERIAL BOMBARDMENT

By Juji Enomoto, formerly Professor and Secretary, Japanese Navy.

March 1954.

(1) - Japanese members of the "Commission of Jurists to consider and report upon the Revision of the Rules of Warfare" attended the meetings of the Commission at the Hague in 1923 with the idea of getting the greatest possible restrictions imposed upon air-bombing and other aerial attacks upon cities, towns and villages, and of minimizing damage to civil populations.

The instructions which those Japanese members received from the Government were as follows:

Attacks from air:

(a) General policy.

Concerning air-bombing and other methods of attack by aircraft upon cities, towns and villages, endeavor to lay down rules that shall be as restrictive as possible, and thus to minimize the damage from such attacks to civil population.
(b) The final draft beyond which Japan cannot concede:

Installations and material, wherever they may be located, that are not exclusively military in character, must not be made objects of attack from aircraft; but this shall not apply if in a combat area where there is actual fighting by the army or the navy.

(c) Provisions desired:

First proposal: - Attacks from the air shall be confined to combat areas where there is actual fighting by the army or navy.

Second proposal: - Things other than defensive installations may not be made the objects of attack from the air; but this shall not apply to combat areas where there is actual fighting by the army or navy.

Third proposal: - All attacks from the air shall be prohibited.

(d) Protection of buildings dedicated to public worship, science, charity, etc.

In bombardment by aircraft, all necessary steps must be taken by the Commander to spare as far as possible buildings dedicated to public worship, art, science or charitable purposes, historic monuments, hospitals, hospital ships and places where the sick and wounded are collected, provided such buildings, objects or places are not at the same time used for military purposes.

Such buildings, objects and places must be indicated by special marks easily visible to aircraft.

(e) Referential proposals.

(1) Duty of warning.

In places other than combat areas, duty of giving warning similar to that prescribed in Art. 6 of the Convention respecting Bombardment by Naval Forces in Time of War should be recognized. (Art. 6 reads: the Commander of an attacking naval force must, before commanding bombardment, do all in his power to warn the authorities).

(2) Night attacks from the air.

Night attacks by aircraft upon objects in cities not located within combat areas should be prohibited.

The American Proposal (Annex I), which became the basis of the discussions at the Conference, prohibited bombardment by
aircraft of cities, towns and villages not within combat area, as a general principle. As an exception, it provided that only against armed forces and important military establishments might bombardment be carried out irrespective of where they are located; and such establishments were listed. The American Proposal was very close to what Japan desired.

The British Proposal (Annex II) which also was submitted at the Conference provided merely that bombardment of military objectives was legitimate, without any concrete indication as to what might be made the objectives of such bombardment.

Because there is always the danger that application of the term "military objective" may be extended in interpretation, the Japanese members of the Commission took the position of supporting the method of clearly listing the objectives that might be bombed, as envisaged by the American proposal, instead of the formula of definition followed by the British proposal.

As a result of compromises between the Commissioners of the various countries, the Conference decided to make provision for the British proposal of defining as legitimate aerial bombardment directed at military objectives; and in later provisions to list those objectives clearly in line with the American proposal, thereby reducing the chances of the application of "military objectives" being extended through interpretation. Thus came into being what is generally known as "The Hague Rules of Aerial Warfare, 1923".

Regarding warnings of bombardments, it had been the intention of the Japanese Commissioners to advocate that outside of combat areas, warning similar to that prescribed by the Convention respecting Bombardment by Naval Forces abovementioned should be given in order to minimize damage to civil populations. However, they did not adhere to that position because the atmosphere of the Conference indicated a general feeling that in view of the very nature of air-raids, insistence upon the giving of warning as a duty would be a practical impossibility.

(2) Other conferences.

At the London Naval Disarmament Conference of 1930, it was the hope of the Japanese Delegation that after completing study of provisions limiting the use of submarines, there might be agreement on a ban against bombardment of civil populations; but that hope was not realized.

At the 1932 Geneva General Disarmament Conference also, it was the desire of the Japanese Delegation to reach agreement on rules to confine bombardment to military establishments and objects, along with the question of limiting air forces. But the
Conference was adjourned before there was a chance for the proposal to be made.

(3) Instructions to Japan's naval forces.

Instructions were issued to Japan's naval forces regarding the application of international law relative to land and sea warfare requiring strict observance in time of war. Also indicated was a criteria of conduct concerning aerial warfare which was almost identical in substance with the 1923 Hague Rules of Aerial Warfare.

(4) Criteria of action of Japanese naval air forces in the China Incident.

Since the various instructions issued to Japanese naval forces were, as a general rule, applicable in time of war, there was some doubt as to whether those instructions could properly be applied to the China Incident. In China, moreover, there were special interests belonging to foreign nationals to which special consideration had to be given. On 27 July 1937, therefore, the Japanese Navy issued a Pamphlet entitled "Criteria in Air Fighting" (Annex III) which is sent to all naval forces as instructions. This "Criteria in Air Fighting" varied little in substance from the 1923 Hague Rules of Aerial Warfare, but did take into consideration the special conditions existing in China.

This was followed, on 24 September 1937, by a Pamphlet entitled "Miscellaneous observations on Aerial Bombing" (Annex IV) which likewise was sent to all naval forces as instructions. This was intended to serve as a supplementary guide to assure strict observance of the earlier instructions, because a high officer in the Navy Ministry, noting in a pilot's report that he had bombed "what appeared to be a military target", was apprehensive that such a situation might lead to bombing of objects without definitively ascertaining their military character.

There was criticism that Japan's air forces had bombed "undefended (open) cities and towns". But the proper criterion for determining whether a bombing is legitimate or illegitimate should be whether or not the object bombed is a military objective. On that point, the report of the 1923 Hague Commission of Jurists to consider and report upon the Revision of the Rules of Warfare contains the following: "It will be noticed that for aerial bombardment the test adopted in Article 25 of the Land Warfare Regulations, that of the town etc., being defended, is abandoned. The nature of the objective or the use to which it is being put now becomes the test". Care was therefore exercised to confine bombing to strictly military objectives; and aerial attacks with cities or towns as targets were strictly avoided. The criticism abovementioned was therefore difficult for us to understand, and
especially for me who had not only attended the 1923 meeting of the Hague Commission but had also drafted the various instructions which the Navy issued to its forces.

NB - LONDON TIMES of 11 Feb. 1938 carried an article stating that Japanese naval planes were confining their targets to military objectives, and that as misses were rare, damage to civil population was small.

(5) Criteria of action of Japan's naval air forces in the last war.

In the last war the Hague Rules of Aerial Warfare constituted the criteria of action for Japan's naval air forces, all of which were required to abide strictly by them.

I appeared as a Witness for the Defense before the International Military Tribunal for the Far East and testified on the actions of the Japanese Navy (Annex V). And a part of that testimony was concerned with the question of bombing.

From my experience, I am of the belief that the Hague Rules of Aerial Warfare, if strictly observed, will have considerable effect in reducing damage from the use of ordinary bombs. But they can have little effect when incendiary bombs and special bombs of extremely great destructive force are used.

While strict adherence to the Hague Rules of Aerial Warfare appears to impose difficult restrictions upon those engaged in military operations, it is clear that the success of those operations are not necessarily precluded thereby.

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The American Proposal, for the Commission of Jurists, 1923.

VII. Bombardment

32. Bombardment includes the dropping or discharging of a projectile or of any explosive or noxious substance. Bombardment by aircraft for the purpose of injuring noncombatants, or of destroying or damaging private property not of a military character, or of terrorising the civilian population, or of enforcing contributions or requisitions, is prohibited.

33. The bombardment by aircraft of cities, towns, villages, dwellings or buildings not within the combat area is prohibited.

34. The bombardment by aircraft of enemy forces, lines of communication and transportation, military or naval establishments, depots of arms or war material, workshops, plants and factories used for the manufacture of war material, wherever situated, is not prohibited.

35. Bombardment by aircraft of neutral vessels in enemy territorial waters is prohibited except under circumstances under which attack upon such vessels by the surface warships of a belligerent is permissible.

36. In bombardment by aircraft, all necessary steps must be taken by the commander to spare as far as possible buildings dedicated to public worship, art, science, or charitable purposes, historic monuments, hospital ships, hospitals and other places where the sick and wounded are collected, provided they are not at the time used for military purposes. Such buildings, objects, and places may be indicated by marks visible to aircraft, the nature of which marks shall be notified to the opposing belligerent. The use of marks so notified to indicate other buildings, objects, or places than those specified above, is to be deemed an act of perfidy. The marks used as aforesaid shall be of uniform shape or design throughout the territory controlled by the notifying belligerent.

Article 35

Aerial bombardment is legitimate only when directed at a military objective. Its legitimacy depends, not on the fact that a town or other place is "defended", but on its constituting even temporarily a military objective.

Article 36

The commander of a bombarding aerial force is bound to take all reasonable precautions that the bombardment is confined to a military objective, and, in particular, that hospitals and other privileged buildings protected under the Geneva Convention, The Hague Rules (Article 27) and the Convention respecting Bombardment by Naval Forces in Time of War (Article 5) are spared; but he incurs no responsibility for any unavoidable damage which may result from the legitimate bombardment of a military objective in the vicinity. Such protected buildings must be indicated by signs sufficiently visible for the purpose; such signs will be in the case of buildings protected under the Geneva Convention, the red cross on a white ground, in the case of other protected buildings, a large rectangular panel divided diagonally into two painted triangular portions, one black and the other white.

A belligerent who desires to secure by night the protection for the hospitals and other privileged buildings above mentioned, must take the necessary measures to render the special signs referred to sufficiently visible.
Secretariat Secret Document No 2800
27 July, 1937.

From Secretary to Navy Minister.

To;

Headquarters of the Combined 2d and 3d Fleets.
Headquarters of the 1st, 2d and 3d Naval Air Forces.
Headquarters of the 1st and 2d Combined Naval Air Groups.
Headquarters of the 5th, 8th and 12th Naval Units.
Headquarters of the 1st and 2d Destroyer Flotillas.
Headquarters of the 1st and 2d Submarine Flotillas.
Headquarters of the 22d and 23d Naval Air Groups.

** ** ** **

CRITERIA IN AIR FIGHTING

By Juji Enomoto,
Secretary, Navy Department.
July 1937.

International rules and usages governing air fighting are not fixed. I have made these criteria by studying various existing rules and usages. Especially an effort has been made to choose the 'golden mean'. Therefore, I am sure that any action taken within the scope of these criteria will not be subject to censure from outside. These criteria being no more than a so-called standard of judgment there is of course much room for choice in accordance with the circumstances of each particular case.

I. Bombing - Objectives

Objectives which may be bombed:

Irrespective of whether the city, town or village is defended or undefended, the following objects may be bombed:
(a) Warships (including all categories of warships, and also converted cruisers).

Military transport ships, military oil tankers and all special duty vessels being used in military service.

(b) Armed forces (exception cases that small numbers of soldiers are scattered within a city, town or village).

(c) Military works:

Works of all kinds (including trenches and log barriers, etc.)

(d) Military establishments:

Military camps, military barracks, military aircraft hangars and sheds, wireless stations and arsenals.

(e) Military supply depots:

Military supply depots (even those belonging to civilians may be bombed if there is apprehension that they should be used for a military purpose).

(f) Factories engaged in the manufacture of arms, ammunition and military supplies:

Even civilian factories belonging to the above category may be bombed. But such small plants as are engaged in the manufacture of parts under subcontracts must be excepted. Bombing, in other words, should be restricted to relatively prominent factories.

(g) Lines of communication and transportation for military purposes, and railroad tracks and harbor facilities used for the transport of military supplies.

When bombing any of the above mentioned objects, utmost attention and care should be taken not to cause damage to any things belonging to Third Powers or to Third Power nationals.

Objects which may not be bombed:

The following objects may not be bombed so long as they are not being used for military purposes:

Of course, it is necessary for such objects to be marked by signs clearly that they may be easily distinguished. In case of no signs, he cannot protest even if they are bombed; (but as there is a great apprehension that such bombing should give rise to a public controversy or to irritate public opinion, it is necessary to have care not to carry out such bombing in any cases).

But they may be bombed if they are used by the enemy's armed forces as a base or are utilized by the enemy for military actions.
(a) Places of public worship:
   Shrines, temples, churches, etc.

(b) Buildings used for arts and sciences. Schools, libraries, etc.

(c) Buildings dedicated to charitable purposes:
   Asylums for the aged, hospitals and sick rooms, quarters for the wounded and the sick, hospital ships, etc.

(d) Establishments of historical importance, historical monuments, tombs, art museums, etc.

II. Bombing of cities, towns or villages:

This item contemplates cases where the whole of a city, town or village (irrespective of whether they are defended or undefended) becomes the target.

Bombing of objects located within a city, town or village shall be governed by the criteria laid down in the above paragraph on bombing objectives.

Even in cases where the whole of a city, town or village may not be made the target of bombing, individual objects located therein may be bombed.

Bombing is permissible in the following cases:

Where large armed forces are concentrated in a city, town or village close to the area of operation of a land force (including landing party). It is unavoidable that the civilian population may be exposed to danger, but every effort should, of course, be made in such cases to minimize the danger to the civilian population.

Bombing is not permissible in the following cases:

(a) Where the purpose of bombing is merely to intimidate the civilian population, to destroy an object which is of no military character or to cause injury to non-combatants, bombing is not permissible.

(b) Where only a small force is scattered about or encamped in a city, town or village far remote from the area of operation of a land force, bombing the whole of the city, town or village is not permissible.

(c) Bombing on the ground that a requisition order or levy has been refused is not permissible.
III. Notice (Warning) of bombing:

In case of bombing, unlike naval or land warfare, notice is not necessary.

IV. Bombing shall be restricted to areas under the jurisdiction of China:

Not only International Settlements and Foreign Concessions, but even extra-Settlement areas where Third nationals have close connections interests must be avoided.
Secretariat Secret Document No. 3863

24 September, 1938.

From Secretary to Navy Minister.

Secretary to the C-in-C, the Combined Feet; the 2nd Fleet; the 3rd Fleet.

Staff Officer, the 1st Air Squadron; the 2nd Air Squadron; the 3rd Air Squadron.

Staff Officer, the 1st Combined Air Fleet; the 2nd Combined Air Fleet.

Staff Officer, the 5th Squadron; the 8th Squadron; the 12th Squadron.

Staff Officer, the 1st Destroyer Squadron; the 2nd Destroyer Squadron.

Staff Officer, the 1st Submarine Squadron; the 2nd Submarine Squadron.

Commander, the 22nd Air Corps; the 23rd Air Corps.

The attached document is being sent as reference material.
MISCELLANEOUS OBSERVATION ON AERIAL BOMBING

By Juji Enomoto,
Secretary, Navy Department.
September 1937.

(1) Prohibition on terror bombing.

Bombing which has no direct military value or significance and is intended merely to terrorize enemy nationals is prohibited.

Consequently the bombing of any objects, other than military objectives, located in cities, towns or villages far removed from areas of land fighting is not legitimate.

(2) Selection of bombing targets.

(a) Bombing must always be aimed at military objectives.

It may sometimes happen that although the bombing is directed at a military objective, damage may be caused to other objects through an unavoidable error. But such an occurrence must be excused as an unavoidable concomitant of war.

There may also be cases where, notwithstanding that the bombing has been accurately directed at a military objective, damage is caused to other objects as a natural consequence of the bombing. Since there is nothing that can be done to prevent such result, the question of responsibility therefore cannot arise.

(b) The dropping of bombs over any area under the assumption that "the military objective is probably somewhere around this place", in cases where the military objective is not clearly distinguishable, is in effect indiscriminate bombing, and hence illegitimate.

(c) There may be cases where bombing is carried out under the erroneous belief that the object selected as the target is a military objective; and if, in such case, the object bombed proves to have been something other than a military objective, the question will arise as to whether or not reasonable care was exercised in the selection of the target.

The answer to that question will depend upon all the circumstances of the case, such as the location of the object
bombed, etc. And if from such circumstances it is adjudged that the bombing was carried out with reasonable care (i.e., under such circumstances that the error could not have been avoided by a flyer engaged in a general bombing mission in the same position and under the same conditions despite the exercise of ordinary care), the bomber will not be held responsible.

(3) Bombing of land fighting areas and immediate vicinity (where bombers cooperate with land artillery and with warships cannonading defended cities, towns or villages).

(a) There may be non-combatants and non-military objects in the fighting zone in such cases; but since it is impossible in fact to distinguish them from combatants and military objects, a general or uniform bombing (i.e., indiscriminate bombing) is inevitable. But even in such cases, effort should be made to afford every protection possible to hospitals, schools (not including military schools) and libraries; and any deliberate increasing of damage to non-combatants should be avoided.

(b) Strips adjoining railways then being used for transporting troops and military supplies to the front lines, as well as areas not very far removed from combat zones, may be treated the same as battlefields.

(c) Trains and stations being used at the time for military transportation purposes are in themselves military targets, and areas immediately adjacent to such trains and stations will thereby become military targets.

(4) Bombing of areas far removed from land fighting zones.

(a) Bomb targets must be confined to military objectives (armed forces, warships, military works, military establishments, military supply depots, factories engaged in the manufacture of arms, ammunition and military supplies, and lines of communication and transportation and harbor facilities devoted to military use). (Secretariat secret Document No 2800; 27 July, 1937).

(b) Destruction of ordinary government offices and of the economic structure must be avoided (i.e., barring some special circumstances).

(c) When bombing any of the targets mentioned in (a) above, every possible effort should be made not to cause damage to non-combatants (Third Power nationals in particular) and objects entitled to special protection (such as hospitals, schools, etc.). Particular care must be exercised in case of objects that have been marked.
(d) If an object, though a legitimate military target, is not of great importance, and there is apprehension that the bombing of such object will cause great damage to non-combatants or non-military objects, it is better that such bombing be not carried out, from the humanitarian point of view.

N.B.- It is of course bad to allow sentiment or emotion to cause one to hesitate to achieve the maximum military results possible, the demands of humanity must at the same time be strictly complied with.

Even in the European War, in which combatant rights were expanded to the extreme because of the strong urge for reprisal, there were instances where the flyers who, unsuccessful in their search for military targets, returned without having unloaded their deadly missiles because of the fear that blind bombing would cause death and injury to non-combatants.

On 8 September, 1914, a non-commissioned officer of the French Air Force took off with orders to bomb Mulhouse; but as he was not able to find his objective because of clouds and mist, he returned to Belfort with all the bombs rather than risk killing or maiming non-combatants.

On 23 September, 1914, British air squadrons took off from their base to bomb Düsseldorf and Cologne. They successfully bombed the Zeppelin hangars at Düsseldorf. But as Cologne was hidden from view by clouds and mist, the bombers flew around it for an hour, and still not being able to definitely identify their objective, they came back to their base without dropping the bombs because of the fear that bombing under such circumstances would result in damage to non-combatants.

On 10 August, 1917, Italy made an announcement to the following effect:

"Bombs were not dropped by all the planes. A part of them returned to their base with their bombs because of the apprehension that owing to darkness, damage would be caused to ordinary civilians. That is the general rule in Italy; Austrian flyers, on the contrary, always resort to illegal bombing, and have even bombed residential sections along the Po and Isonzo Rivers by moonlight, etc., etc."
EFFECTS OF THE BIKINI HYDROGEN BOMB TEST, 
UPON FISHERY AND SOCIAL LIFE

by Dr. Juji Enomoto

(Data gathered from various sources at the time when the accident occurred)

Direct effects

(1) Putting out of use of the boat No. 5 FUKURYU MARU, her equipment and fishing gear, and destruction of fish cargo.

Operational loss to owner pending replacement of the above.

Loss of the crew's clothing and other personal effects they had aboard the boat.

Medical expenses of the injured crew and support of their families until complete recovery.

(2) Destruction of fish cargoes of two other boats found affected.

(3) Effect of extension of the danger area:

(a) Loss of an area very important to Japan's tuna industry.

(b) About 150 medium-size boats (around 100 tons) normally operating in this region will be unable to continue because of limited cruising radius.

(c) Larger boats which operate in grounds further south-east will require from 2 to 3 days longer each way in order to avoid passing through the new danger zone.

Indirect effects

(1) Slow movement of fish in the market and resulting loss of freshness caused drop in prices, even to a point where a few boat-owners have had to go out of business.

(2) Because the Bikini scare affected the whole nation to such an extent that the people stopped eating any kind of fish, prices of all species of fish took a big drop.

(3) Boats are being tied up in ports much longer than normally because of the time required for inspection for radioactivity, also because speedy landing of cargo was rendered impossible owing to heavy stocks in cold-storage plants and warehouses.
(4) Even after selling the fish, operators have difficulty in collecting because wholesalers and retailers have also been heavily hit.

(5) Because of the widespread disturbance to both the fishing industry and fish business, capital to meet operating expenses has become difficult to obtain. Each day's delay in departure for the fishing grounds entails heavy losses.

Other effects
Loss to those engaged in fish processing and transportation. Adverse effect on health of Japanese people due to insufficient intake of protein.
COMMISSION D'EXPERTS

POUR LA PROTECTION JURIDIQUE DES POPULATIONS CIVILES ET DES VICTIMES DE LA GUERRE EN GENERAL CONTRE LES DANGERS DE LA GUERRE AERIENNE ET L'EMPLOI DES ARMES AVEUGLES

Document présenté par le Docteur Tsuzuki pour l'information de MM. les Experts

* * * * * * *
ATOMIC BOMB INJURY FROM MEDICAL POINT OF VIEW

Masao Tsuzuki, M.D., Professor emeritus, Tokyo University

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Appendix. List of the Medical Reports which were Presented by Japanese Investigators in 1945 to 1953

* * * * *
Abstract of the contents

An explosion of an atomic bomb produces various destructive forces instantaneously and in very large quantities, causing all kinds of injuries to human bodies directly and indirectly.

It is called an "Atomic Bomb Injury". From the medical point of view, we can classify the injurious powers into the following three categories: (1) thermal energy, (2) mechanical energy and (3) radioactive energy. These powers will act, however, not separately, but combined and produce very complicated injuries.

The Hiroshima bomb exploded on 6 August 1945, at 8.15 a.m., about 600 meters high and the Nagasaki one on 9 August, at 11.00 a.m., about 500 meters high.

Injurious effects of the thermal energy

Enormous amounts of violent light and heat waves (containing a great amount of ultra violet rays) caused burn wounds on numerous persons, mainly on exposed parts of the body, within a radius of 4 Kms from the ground center (or hypocenter). The intensity of the heat, given on the ground center, was estimated over 6,000°C and in shorter than a half second. Consequently the burns which were caused by the primary heat waves, had the character of a flash burn. In the central area, however, the heat energy injured not only the superficial skin, but also the internal tissues and organs. Therefore, many fatal cases were observed.

In the district outside 2 Kms, there occurred many superficial burn cases, just as severe sun burns; because the thermal effect was weaker and shorter. The covered parts of the body were spared, of course, from burning.

Injurious effects of the mechanical energy

The blast pressure beneath the explosion center (or epicenter) was estimated 4.5 - 6.7 tons per square meter in Hiroshima and 6.7 - 10.0 tons per square meter in Nagasaki, with duration of about 0.4 seconds at both places.

By the blast effects, all wooden houses were destroyed and burned totally within a radius of 2 Kms from the ground center; totally or partially destroyed, but not burned in 2 to 4 Kms. Strong concrete buildings were escaped destruction even in the central district, but all windows were blown off with their flames and all internal furnishing were totally burned.
Many mechanical wounds were observed and it was also supposed that many severe wounded were burned to death under the collapsed houses.

Injurious effects of the radioactive energy

In the central district within a radius of 1 Km from the ground center, an enormous amount of radioactive energy was emitted to an unimaginable extent. It was said that the given energy of the radioactivity will be equivalent to the amount, emitted instantaneously by 100 million tons of radium. Among the various kinds of the given radioactivity, gamma rays and neutrons are the principal injurious factors upon the human body.

The persons who were exposed to the radioactive energy outdoors in the central district (severe cases), complained of high fever, extreme general malaise and exhaustion, accompanied by vomiting, hematemesis, hemoptysis, hemorrhhoa, hematuris, etc.

These symptoms arose from direct damage to blood and internal organs of the whole body. Many of the sufferers died of these bleeding symptoms in the course of 1 to 2 weeks, showing a continuous fever (38°C to 40°C). These persons were injured also seriously by heat and blast too, their mortality was consequently almost 100%.

The persons in the concrete building were injured slighter by the radioactive energy, even in the central district, but those in the wooden houses were injured severely.

Exposed persons who were situated around 1 Km from the ground center and protected from burn by some shade, were suffered moderately by the radioactivity (moderate cases). The moderate injured cases vomited and lost their appetite in the first days, after a free interval of around 2 to 3 weeks, they complained of fever, epilation, petechia (hemorrhagic skin spots), gingival bleeding, sore throat (tonsilitis or pharyngitis gangraenosa), diarrhoea (waterly or mucus-bloody) etc.

An onset of these symptoms was incited usually by over-work, cold, digestive disturbances etc. Many patients died with a continuous fever in about 1 to 2 weeks. The mortality was around 50%. As soon as the symptoms had broken out, the slight lacerated or burned wounds became worse and showed a purulent or necrotic tendency. If the fever curve showed a tendency toward descending by crisis or lysis after 1 to 2 weeks, the prognosis became favorable and all clinical symptoms took a turn for the better.

These radioactive injuries may be called generally an "Atomic Bomb Radiation Injury" or an "Atomic Bomb Radiation Sick-ness", in short "Atomic Bomb Disease" or "Atomic Disease".
What happens to the radiation sickness?

The blood elements are affected, first of all, especially lymphocytes and leucocytes; in the extreme cases their counts go down under 1,000 per cubic mm. The hematopoetic organs — bone marrow, spleen and lymph nodes — are also early damaged and then other internal organs — such as lung, gastrointestinal organ, liver, kidney, sexual and incretory organs etc. All are under destructive changes.

An initial bleeding arises from the primary damage to lung, gastrointestinal or kidney. The late bleeding after 2 to 3 weeks of the moderate cases is understood as a secondary one due to hemorrhagic diathesis, caused by the elimination of platelets (thrombocytes).

How are the atomic bomb injuries to be treated?

The atomic bomb burns and atomic bomb wounds may be treated in the same manner, as the cases caused by other forces. Great difficulties will be experienced in a mass production of the severe wounded. Most of them are affected moreover by the radioactive energy, their prognosis may be worse and their healing will be belated.

Severe radiation injuries (exposed over 600 r) are a fatal condition; the present medical science will have no effective measure for them. Moderate radiation injuries will be able to recover, if they can survive over a certain time. In the rescue program for these patients, the most important measures are, first of all, quiet and nourishment. If necessary, infusion, blood transfusion, nutritious remedies, vitamins etc are to be given.

The number of dead victims?

It was estimated that the number of dead victims in the first four months, was about 100,000 in Hiroshima and about 50,000 in Nagasaki. It was also supposed statistically that almost 75% of all dead victims had passed away on the first day of bomb explosion and the next day. Ninety percent of them died by the end of the second week.

The actual number of dead victims are increasing, thereafter, on one hand by confirming of the missing and on the other by occurrence of severe after diseases.
Recently Mr. S. Hamai, Mayor of Hiroshima City announced that the total number of the dead victims in Hiroshima should be around 270,000 to the present time.

**Classification of the atomic bomb injuries**

For convenience in understanding the pathological conditions of human bodies caused by the atomic bomb, we would like to summarize them in the following table.

**Atomic Bomb Injury (Atomic Bomb Disease)**

I. Atomic Bomb Burn
   1. Primary Burn: Flash Burn
   2. Secondary Burn: Scorch Burn, Contact Burn, Flame Burn

II. Atomic Bomb Wound
   1. Primary Wound: Blast Injury
   2. Secondary Wound: Burial Injury, Crush Injury, Fragment Injury

III. Atomic Bomb Radiation Injury (Atomic Bomb Radiation Sickness)
   1. Primary Radiation Injury:

**The clinical course of the atomic bomb injuries**

The acute symptoms stopped their destructive process in two months. The Patients who survived until this term, will be able to escape from death and to have recovery, unless some severe complications have occurred. After the third month, the course entered into the recovering stage. After three months, the terrible confusion of the so-called "Atomic Bomb Disease" had gone and become somewhat quieter.

The clinical course of the atomic bomb injuries was described as follows, while we were studying the effects in 1945-46:
Clinical Course of the Atomic Bomb Injuries

<table>
<thead>
<tr>
<th>Period</th>
<th>Term</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Period (Early Stage)</td>
<td>Immediately after the explosion to the end of II week (2 weeks)</td>
<td>Acute</td>
</tr>
<tr>
<td>Second Period (Middle Stage)</td>
<td>III to VIII week (6 weeks)</td>
<td>Subacute Complicated</td>
</tr>
<tr>
<td>Third Period (Late Stage)</td>
<td>III to IV month (8 weeks)</td>
<td>Recovering</td>
</tr>
<tr>
<td>Fourth Period (After Stage)</td>
<td>V month and on</td>
<td>Sequela</td>
</tr>
</tbody>
</table>

(established in 1946)

In advancing of our studies, we would like thereafter to establish the following three periods, including the period of the long term survey for genetics:

<table>
<thead>
<tr>
<th>Course of the Atomic Bomb Injuries</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Initial Period</td>
</tr>
<tr>
<td>1. Acute Stage</td>
</tr>
<tr>
<td>2. Chronic Stage</td>
</tr>
<tr>
<td>II. After Period</td>
</tr>
<tr>
<td>1. Sequela Stage</td>
</tr>
<tr>
<td>2. Influence Stage</td>
</tr>
<tr>
<td>III. Heredity Period</td>
</tr>
</tbody>
</table>

(established in 1950)

The problems of contamination of the bombed area is a serious one.

Considering the principles of an atomic bomb mechanism, there will be two kinds of contamination: one is due to fission fragments of the bomb and another due to induced radioactivity by neutrons.

In Nagasaki some proofs of the fission fragments were noticed and some cases of temporary leucocytosis were at the place...
concerned. Existence of the induced radioactivity in some amount was clearly observed by the physical measurements, in soil, in concrete and even in human cadavers in the central area. By the data of the physicists, some injurious effects on the human body would be conceivable at most in several days after the bombing, especially in the central area. We can say, therefore, there might be some contamination of the central area directly after the bombing. The contamination was, however, fading away practically in one to two weeks after the bombing and there were remaining thereafter no residual radioactivity, dangerous enough to produce any damage to the human body.

There is also an opinion that the induced radioactivity of phosphorus in the human bones would be the main cause of the bone marrow injury in the acute period. It is also considerable that the induced radioactivity of the elements of soil and so on, would be taken directly or indirectly in the human body and be a cause of some after diseases. The induced radioactivity is, of course, very weak, compared with the primary radiation, but we cannot neglect its long term effects.

Protective measures against the atomic bomb explosion and the rescue measures of the atomic bomb injuries are discussed, based on the results of the actual surveys.

As after effects of the atomic bomb injuries, the followings are being worthy of our attention:

(1) disturbance of scar formation after burned and mechanical wounds,

(2) disturbance due to the damage to hematopoetic as well as other internal organs,

(3) disturbance of sexual functions, and

(4) disturbance of development of children etc.

The burn scars had a tendency of thickening in several months after the bombing. After one year, their hypertrophy and keloid formation at the acme stage, about 70% of all burned scars showed striking features. There were two kinds of the scar changes:

(a) There were many cases of severe secondary burns, in which the injurious process extended deep into the subcutaneous substances. They were accompanied by purulent complication and prolonged healing. Their scars became, therefore, thicker, combined with the underlying tissues -- tendos, fascias, muscles or bones. Those scars are called "Hypertrophic Scars". In elapsing of time, the hypertrophic scars contracted gradually and turned into a contracted condition, showing some malformation or disturbance of functions, especially on eye lids, mouth lips or fingers.
(b) There was another type of burn scars. The moderate primary flash burns, which occurred around 2 Kms from the ground center, healed in most cases relatively smoothly in two to three weeks, without any specific treatment. Their scars were simple, thin and plane, just after the healing. In several months, they began to swell and became uneven, reddish. The swollen scars were itching and hyper-sensitive; sometimes paresthetic. The sufferers were agonising day and night. Those are called "True Keloid". They are purely an abnormal thickening of the skin tissue, their boundary is very clear, they are easily movable against the underlying tissues. The true keloids are seen on face, neck, shoulder, back or upper arms etc. The keloid formation of the atomic bomb burn scars is distinctly broader and thicker, in comparing with the ordinary scars, caused by other than atomic bomb. The keloid formation was most distinguish in the burn cases which occurred around 2 Kms from the ground center. The unpleasant symptoms of the keloid were lasting over one year and then the keloid condition showed gradually a regressive change. They were going into their fading period after two years.

Pathogenesis of the disturbance of the burn scars

The hypertrophic scars are due to mal-treatment and poor nutritious condition at the first emergency and to delaying of their healing, caused by radioactive energy.

The true keloids are formed purely by the pathological thickening of the skin corium. They are considered to be caused by the specific heat action (superthermal effect in a short time) and also partly by the radioactive action of the atomic bomb.

The treatment of the disturbance of the burn scars

The malformation or the disturbance of cutions due to hypertrophy and contracture may be treated by plastic and reconstructed surgery. Small keloids can be surgically removed. Large ones, such as those on a whole area of the back, are very difficult to treat. In removal or plastic surgery in the acute period, there were some recurrences; but the same treatments are going smoothly after the fading period.

Damage to blood and blood forming organs recovered almost in four months, leaving some cases of anemia and leucocytosis. Anemia was supposed to be a delaying condition of recovering of the erythrocytic system and majority of them recovered after one to one and half year. Remaining leucocytosis was a temporary regenerative phenomena in several months.
The first case of acute leukemia was reported in November 1945 among the exposed victims in Nagasaki and the second one was observed in September 1946 among the Hiroshima victims. Since then about one hundred cases of leukemia (acute and chronic) were observed in Nagasaki and Hiroshima. Their clinical as well as pathological figures are not specific. It was proved that the incidence of leukemia among the exposed persons within 2 Kms from the ground center was statistically higher. It is supposed now that the incidence of leukemia is becoming a little less, it will reach perhaps (?) its fading phase.

There are many cases of anemia among the survivors, most of them are not so severe. Several cases of refractory anemia were reported too.

Sexual organs of male and female are, as well known, very sensitive to radioactive energy. Among the survivors, there were some cases of aspermia and hypospernia, and amenorrhoea. Most of them recovered in half to one year.

The women who were in an early stage of pregnancy, took a normal course. The new born must be carefully followed up, because the relatively large dose of radioactive energy would have been acquired in their earliest fetal life. Some microcephalies were reported among the babies from mothers who were exposed within 1200 meters from the ground center.

Disturbance of development of children will occur in the influence stage of the after period. Effects on the development of the exposed children are now under the survey, in the physical and mental meaning.

It is already experimentally proven both in botany and zoology that there is a possibility of producing a malformation of descendants, when the sexual cells are affected in some degree by radioactive energy. The question as to whether this fact is applicable to the human beings or not, will be made clear by further observation.

Chronic Atomic Bomb Disease

There are many atomic bomb survivors in Hiroshima and Nagasaki, who were injured to some extent, recovered fortunately and are now living apparently healthy. Among these persons, there are still many who are easily tired, losing every interest, suffering very often from cold or gastro-intestinal disturbances. They are complaining of their abnormal physical condition and grumbling over decline of their mental efficiency. Routine medical examination on blood, urine and others, shows no pathological data.
They are, however, somewhat abnormal, observed as one individual. From the various point of view, they are supposed to have some effect in their vital powers, caused by the injurious effects of the radioactivity of the primary as well as the secondary origin. They are suffering, for this reason, from a general after disease of the atomic bombing: against a certain stress they may respond in some different degree and manner from the healthy unexposed person. They are rather in an incubation stage of the atomic bomb disease or chronic atomic bomb disease. Consequently they should be carefully observed for some period and be given some suitable guardianship.

In conclusion, it is desirable that our scientific knowledge, based on the actual study of the Atomic Bomb effects, should promote the human benefit in the very near future, when the Atomic Energy would be applied in a peaceful purpose.
MEDICAL EFFECTS OF THE BIKINI-ASHES

(A preliminary report)

Tsuzuki, Masao, M.D.
Tokyo University
Medical Effects of the Bikini-Ashes
(A preliminary report)

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On March 1st, 1954, an enormous powerful explosion occurred in the Bikini area of the Southern Pacific Ocean. One small Japanese fishing ship - the Fifth Fukuryu-maru - located about at 90 miles from the explosion center and was covered by the falling ashes, which were supposed to be produced by the explosion. All fishermen were injured and returned to their mother port - Yaizu in Shizuoka Prefecture. They are now treated in Tokyo.

All fishermen were suffering from the acute radiation sickness and few of them are at the present time in a critical stage. A preliminary report will be here presented, based on the data which had been obtained until March 31st, 1954.

1. Injured condition of the Japanese fishermen.

The Japanese fishing ship is called the "Fifth Fukuryu-maru, about 100 tonnage, made of wood and in three months she was fishing in the Southern Pacific. Early in the morning of March 1st, 1954, at 3 o'clock, while the fishermen were laying down their fishing nets, they saw a red light far beyond the sea horizon in the West direction. After several minutes, they heard a dull sound and also they recognized twice rather sharp explosions like sound in three minutes. They were fishing tunas and sharps in 3 hours. Then fleecy clouds were spread over them and white ashes were falling on the ship. The ashes covered the sea surface and also on the deck of the ship. The deck looked white as if it were covered by frost. After few hours they finished their fishing and sailed on their way back, owing to a lack of fuel oil. In three days, some of the fishermen noticed that their faces, their necks and their hands became reddish and swollen. Some of them had itching feeling or small vesicles. Some crew complained of feeling nausea, when they were working in the engine room or resting in a crew's quarter. In 5 to 6 days their faces changed into darker red colour. They were ordered to wash their bodies in bath, it was of course, faulty, because they had not enough supply of water in such a small ship. Their return course took 2 weeks and they reached their port (Yaizu) on March 14th. After their arrival, they were consulted by a doctor in the Yaizu Hospital and two of them who were suffering
from the burn injury of their faces and hands, were proposed to go to Tokyo University Hospital and to be examined by me. They arrived in the evening of March 15th and were admitted in the Tokyo University Hospital. Others were remaining in Yaizu. Some went home, some were walking through the streets and others in the ship. All of them had no distinct symptom and felt quite healthy.

In the late evening of March 15th, I was called by telephone and told a preliminary report of two cases by a resident doctor in the Hospital. I was so much stricken at that time, because the fishermen should be affected by fission fragments, they might be injured by external radiation as well as internal radiation.

2. Clinical Observations.

Two fishermen showed almost same condition. Their faces and necks were dark-reddish-brown here and their small vesicles were observed. Some of them were already broken and became erosion or ulcer. Their auricles were swollen edematically and mucous secretion from the ear. They had no fever, good appetite. Radioactivity of these fishermen were tested and positive proof was confirmed. Hairs of their head showed a strongest activity. All over their bodies it was radioactive. Blood counts were $492 \times 10^4$ red and 7,400 white in the first case, $452 \times 10^4$ red and 6,200 white in the second case.

These two cases were observed in few days and complete medical examinations were done. In parallel with the surveys, we cut off all the hairs of their heads and washed out their bodies, taking off all their clothes, in order to reduce even the radioactivity of the outs surface of the bodies. There was no sign which indicated the internal existence of the radioactivity, when I saw at first the fishermen. The visible sign was limited in a subacute form of dermatitis. I was afraid, however, that there might be some internal affection.

3. Radioactivity of the ship.

The fishing ship was surveyed on March 17th by the physical, chemical and radiological experts of the Tokyo University. We found an enormous amount of radioactivity in our surprise. For instances, the radioactivity on the boat deck was 110 milliroentgen per hour (including beta and gamma-rays) and that of the crews' quarter 80 milliroentgen per hour. Those
activities are really 4 to 6 times of the international maximal permissible dose in a living place.

Radioactivity of the ship are now of course going down daily, in one week it came down in about a half. We can imagine how it would be strong at the beginning.

4. Radio-chemical analysis of the ashes.

About one gram of white ashes was brought to Tokyo University by the fisherman who came to us at first. It was divided in two parts: one for a radio-chemical analysis and another for a radio-medical study.

By the radiochemical analysis which was performed in the chemical Dept. (Prof. Kenjiro Kimura) Tokyo Univ. School of Science it was found that a main component of the ashes was calcium carbonate without any activity. It may be particles from a coral island. By the thorough analysis the following fission products were detected.

Fission Products Detected in "Bikini Ash"
by Prof. K. Kimura, Prof. E. Minami and their Associates
(March 18-24, 1954)

<table>
<thead>
<tr>
<th>Element</th>
<th>Nuclide</th>
<th>Half-Life</th>
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<tbody>
<tr>
<td>Strontium</td>
<td>Sr-89</td>
<td>53d</td>
</tr>
<tr>
<td>Yttrium</td>
<td>Y-91</td>
<td>61d</td>
</tr>
<tr>
<td>Zirconium</td>
<td>Zr-95</td>
<td>63d</td>
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<td>Niobium</td>
<td>Nb-95</td>
<td>90h</td>
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<tr>
<td>Niobium</td>
<td>Nb-95m</td>
<td>35d</td>
</tr>
<tr>
<td>Ruthenium</td>
<td>Ru-103</td>
<td>39.8d</td>
</tr>
<tr>
<td>Ruthenium</td>
<td>Ru-106</td>
<td>1.0y</td>
</tr>
<tr>
<td>Rhodium</td>
<td>Rh-106</td>
<td>30s</td>
</tr>
<tr>
<td>Antimony</td>
<td>3b-127</td>
<td>93h</td>
</tr>
<tr>
<td>Tellurium</td>
<td>Te-132</td>
<td>77.7h</td>
</tr>
<tr>
<td>Iodine</td>
<td>I-131</td>
<td>8.141d</td>
</tr>
<tr>
<td>Iodine</td>
<td>I-132</td>
<td>2.4h</td>
</tr>
<tr>
<td>Barium</td>
<td>Ba-140</td>
<td>12.8d</td>
</tr>
<tr>
<td>Lanthanum</td>
<td>La-140</td>
<td>40.0n</td>
</tr>
<tr>
<td>Cerium</td>
<td>Ce-141</td>
<td>33.1d</td>
</tr>
<tr>
<td>or Ce-144</td>
<td></td>
<td>282d</td>
</tr>
</tbody>
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N.B. a large component of the radioactivity will be based on Barium 140.
Radio-medical studies were done in the Radiological Dept. (Prof. Masanori Nakaidzumi), Tokyo University Medical School. The decay of the total radioactivity of the ashes was estimated in a half life of 7.5 days.

A series of the animal experiments (mise) is now going. By internal application of the ashes per os, a great part of the ashes goes through their alimentary tracts and a small part to resorbed and depositing in their bones. By subcutaneous injection of the solution of the ashes, a great part deposits in the bones and is excreted into the large intestine.

The fate of the deposit in the bone is now followed further.

5. Pathogenesis of the acute radiation sickness.

All other fishermen, who were hospitalized in the local hospital, were transported to Tokyo on March 29th; 7 fishermen who are supposed rather in the severe condition, are admitted in the Tokyo University Hospital and other 16 men are taken in the Tokyo First National Hospital. All are now under careful medical observation and receiving a suitable treatment.

The injured condition of the fishermen has been diagnosed as the "Acute Radiation Sickness". The cause of their sickness should be supposed as follows:

1. by an external exposure to the radioactivity of the ashes, which are adhering on their skin (mainly by beta-rays).

2. by an external exposure to the penetrating radioactivity of the ashes, which are sticking to their clothes and ship etc. (mainly by gamma-rays).

3. by an internal exposure to the radioactivity of the fission products, which will be taken into their bodies through their skin, respiratory and digestive passages (mainly beta-and gamma-rays).

Urine analysis of the fishermen who came at first to Tokyo, proved an existence of the radioactivity. For that reason, the internal exposure will be considerable. Almost all of the external dermatitis are now healed; few of them, however, show an ulcerated, some how necrotic.
6. **Prognosis and treatment of the injured fishermen.**

Hematological studies tell us that 8 men show a leucopenia under 4,000 and a corresponding anemia.

Four fishermen had white counts under 3,000 on March 29th (3,000, 2,700, 1,800 and 1,500). Two men whose white counts are 1,800 and 1,500, are tested a number of their bone marrow cells: $1.2 \times 10^7$ and $1.6 \times 10^4$ respectively. The thrombocytes reduce also in their number.

These severe cases are now complaining of general malaise, lack of appetite, fever and some tendencies of hemorrhagic diathesis.

According to these clinical findings, we cannot expect their favorable prognosis. They are now a critical stage.

Our treatments are at the present time, on one hand keeping them in an absolute quiet and good nourishment, on the other hand a powerful blood transfusion and antibiotic measure.

waiting for a further information from the Tokyo University

Dr. M. Tsuzuki

Geneva, April 5th 1954
OBSERVATIONS OF CAPTAIN CYRIL FALLS

The Trend of Modern Warfare

It may be worth while to expand one of my verbal interventions in the Commission of Experts. This was a summary of factors in the efficacy of blind weapons, but as a written study will not occupy time in the Sessions of the Commission I may now allow myself to go outside those limits.

In my opinion the present century has witnessed a degradation in the waging of war. This degradation has undone much of the humanization of European war of the eighteenth and nineteenth centuries. In the former century jurists and soldiers alike achieved real success in this field. The temper of the century was cool and sceptical. It recognized that to push force to its utmost limits might be a mistake. Consciously or not, it looked forward to the kind of peace which was desirable, and governed - or tended to govern - its warlike actions by that consideration. It is true that it introduced pedantry which Napoleon scattered to the winds. The fact remains that eighteenth-century wars did not endanger civilization, as had the Thirty Years' War, and lightened the sufferings of the civil population by comparison with earlier wars.

The nineteenth century carried on the taste. It was marked by the beneficent work of Geneva and the Hague. One may say that the eighteenth century's contribution of restraint to the humanization of war was succeeded by the nineteenth century's contribution of humanity and pity. Both contributions achieved important results, whereas efforts to end war altogether achieved none.

The change which has taken place in the twentieth century is only too obvious. It is most commonly attributed, first, to the invention of the aircraft, which renders it possible to strike at the hostile nation over the heads of the older forces of sea and land, and secondly, to the subsequent deadly inventions of modern science. In truth these may be considered the chief causes, but they are far from being the only ones.
Among the others is a reckless attitude on the part of States which, in the First and Second World Wars, accepted immense risks for the sake of goals which at best could not be worth the losses certain to be incurred in attaining them. Another is the growth of totalitarianism and the undue expansion of the power of the State even where it does not consider itself to be totalitarian. Yet another is a blunting of the finer instincts which may be due to a weakening of religious feelings. Thus in the Second World War looting occurred and in some cases prisoners of war were badly treated by troops of nations whose forces had not indulged in looting or ill-treated their prisoners in the First World War. These things at least cannot be laid to the account of the aircraft or the much-abused scientist. They are signs of lack of moderation, blunting of scruples.

The most important of the secondary reasons for the degradation is, however, the new phase of which we saw the beginnings in 1870, the mobilization for war of all the males of fighting age. This was not brought about by the aircraft and only to a slight degree by modern science. It was brought about by the railways which enabled the mass to be moved, fed, and supplied with munitions.

This mobilization of the fighting males has led to what is in the strictest sense called "total war". Increasingly the resources of the State have become devoted to the maintenance of these large fighting forces. This being so, nations desire to strike at nations, and not only at their fighting forces. At the same time the science of flight and other sciences have afforded them the means to do so. All the equipment produced by these sciences itself makes immense demands upon the man-power - and woman-power - and thus greatly increases the demands of war upon the resources of nations - and the tendency to strike at these resources.

This state of affairs made it inevitable from the first that the Second World War would involve the lives of civilians to an extent not hitherto dreamt of in modern times. The circumstances of the war were also largely responsible for developments. The loss of her foothold on the European Continent as the result of the defeat of France made it impossible for my country to strike at Germany for the time being - and obviously for some time to come - except through the medium of air forces. It possessed no aircraft suitable for the task at the moment, but it had suitable aircraft in its building programme. It gave a high priority to these. It went still further whereas it had begun the war with affirmations that it would regard the term "military objective" in a very restrictive sense, it issued at an early stage a secret instruction that the first objective of the bombers should be the morale of German workers.
The early results of this policy were disastrous. We suffered grave reverses in the submarine warfare, particularly in the Atlantic. Our ships were sunk for lack of air cover. Our armies were shepherded into camps for prisoners of war for lack of air support. We endured some of the worst disasters in our military history. The intervention of the United States Air Forces and the growth of our own gradually altered this state of affairs. There were sufficient aircraft of all types for all purposes. The oceans could be made reasonably safe; the land armies could be afforded overwhelming tactical support.

Yet the British air doctrine was maintained. That of the United States, which had begun by favouring selective attack by day bombers, came in the latter stages to approximate more closely to the British, as was shown in the American attacks on Tokyo and finally by the dropping of the two atomic bombs on Hiroshima and Nagasaki.

Since then another factor has been introduced which would increase the "total" element in any future world war. It is total opposition, opposition of principles, ideals, political and economic aims. There still exist nations which are neutral by choice of policy or yearn for political or military neutrality. There can hardly be a civilized nation which remains neutral with regard to ideals. The world is cleft in two by ideology. This involves deeper passions, and they in their turn involve a further blunting of scruples, a further impatience with restrictions. Here is a form of opposition more deadly than ever.

The value of "area" or "blind" bombing in the Second World War was to my mind less than its cost and the effort it involved warranted. Cold statistics show that its effect on German war industry was far smaller than was claimed and popularly believed at the time. German war industry did not drop seriously till victory of the land forces in the west and in the east was already assured.

Yet the advocates of mass bombing were not dismayed by these revelations. They replied to them by proclaiming that if they had had their way the war could have been ended much more quickly. They did not stop to ask whether, if they had been allotted all the resources they demanded and these had been withdrawn from armies, navies, and tactical air forces, they would have had the fuel for their bombing attacks. They demanded a bigger share.

And now they could argue that the improvement in weapons of mass destruction justified their claim. They could also assert that, while it was reasonable to suppose that the allied armies
ranged against Germany in the later stages of the Second World War could defeat her, it could not be supposed that the West could now defeat the Russians in warfare which took place mainly on land. It must be either "victory by air power", or defeat, if another war should come.

These arguments have been listened to. They have become to a certain extent military principles in the United Kingdom and the United States. It is true that neither country has been so ill advised as to reduce its naval forces to the extent that the wilder spirits have advocated; but the propaganda to this end is still going on. Both countries are reducing their armies. In the case of armies I will not deny flatly that no reduction ought to be made. I desire, however, to insist on the importance of the tendency here revealed. The phrase "new look" which has been applied to both American and British military policy this year, though it recalls the delightful visions of Dior, means in sum increased reliance upon the atomic bomb.

The British public generally has not realized this and its implications. The quicker-thinking French public has, Read the pronouncements of the leading French opponents of E.D.C., especially perhaps M. Moch. The theme is that the American matriarchy wants to withdraw its "boys" from Europe and leave the French and a new German army to do such fighting as there is, while the United States drops the bombs.

In interventions in the Committee of Experts I tried to envisage in the briefest terms the nature of a war between the two great opposing forces. I will repeat these sketches here.

One might expect a phase of blow and counter-blow, attack and reprisal, with the full weight of the new weapons. These blows would certainly reduce one side or the other to virtual impotence. They might to a large extent have that effect on both sides. In the first case the war might be ended quickly by the wiping out of a government and the major industries of the nation it controlled, if that nation were one of the two giants. Yet just possibly in this case and almost certainly in the second - virtual impotence of both sides - what has been called a "broken-backed war" would continue with such weapons and resources as were available. I passed over in sentence the unspeakable miseries and horrors which would fall upon civilian populations in such a case. They beggar imagination.

Normally, the victor would be the side which attained the best results from its new weapons of mass destruction. Yet I also envisaged one possible alternative. It might be that the side which suffered most from the bombing of its territories yet had sufficient forces and military resources in material of all kinds
pushed forward in advance of these territories to overrun the most important territories of its enemy before the bombing of the home bases affected those forces.

But there is no need of abstractions in my argument. It could apply only to Russia. If the Russian armies moved forward before the first bomb was dropped, it is within the bounds of credibility that they might be able to overrun the whole of western Europe because they had enough resources in their military "pipe-line" to enable them to dispense for the necessary time with a further flow from the rear. In such a case, even if the United States had had the better of the exchange of atomic blows and largely crippled Russia, she would find herself faced with a pretty problem as to what to do next.

All these alternatives are horrible to contemplate. The most one can say in favour of the quick ending is that it would be slightly less horrible than the others.

Having reached this stage, I venture with the greatest diffidence to put forward a few suggestions about the policy of the International Committee of the Red Cross. I am a military student and a historian. I am not a jurist, and am only an amateur student of the laws and usages of war. I am still less a scientist, and am hardly even an amateur student of the science of nuclear fission or kindred sciences. I cannot pretend to be precise in dealing with a subject which becomes increasingly imprecise. And I am not so conceited as to hope, or try, to teach their business to men who know it much better than I do.

It may be right and proper to cite the laws and usages of war even when they are drawn from codes or regulations which are in part obsolete or have been completely disregarded. For example, the brief but pregnant Art. 22, Chapter I, Section II of the Hague Convention of 1907, "The right of belligerents to adopt means of injuring the enemy is not unlimited", is not only valid but worthy of frequent repetition. In certain cases it might be useful to cite earlier pronouncements, even of an individual, Grotius, for example.

Yet I feel that it is always advisable to go to the most modern sources available. If a convention or series of recommendations contains regulations or recommendations obviously obsolete, this factor will in the public mind and perhaps even in that of governments, as it were, taint other clauses in the same document, even though sound in themselves. Jurists do not write for each other but for readers whom they desire to influence and instruct. Humanitarians do not appeal to humanitarians but to the inhumane, or at least those who may be inclined to disregard the dictates of humanity. Therefore the reactions—the foibles,
if you will - of the hearers of both jurists and humanitarians should be borne in mind.

Secondly, the object of "saving something from the wreck" is one which it is worth while to seek. Palliatives must not be dispised. (What hope has there ever been of producing anything better than palliatives to the rigours of war ?) Because a formula does not cover all eventualities is not a reason for discarding it. It may indeed be better to leave it somewhat unfurnished than to over-load it, because every impracticable element introduced into it weakens the whole.

Thirdly, much as I admire and respect the jurists and the clarity of their conceptions, it seems to me that the appeal to humanity must not only have its place, but the first place. The appeal to the conscience of nations is rendered far more difficult nowadays than it was in the nineteenth century because of the deep ideological cleavage of which I have spoken, which makes one side fear that if it hearkens to this appeal the other side may be the sole gainer. This terrible dilemma was vividly illustrated when we discussed the question of undefended towns and security zones, and one of my colleagues pointed out that, if the establishment of these were proclaimed in advance, the announcement might serve as an invitation to a hostile power to use these areas for the landing of airborne divisions or at least parachute units. Such considerations, while they may inspire prudence in the case of certain appeals to conscience or even debar them altogether, should not prevent them from being made as a matter of principle.

Even where an appeal is rejected, we need not necessarily conclude that it has been useless. The pronouncements and even the suggestions of the Red Cross are, owing to its prestige, as it were engraved once they have been uttered. Neglect or rejection does not obliterate them. They continue to assault the conscience even if it has been hardened. Their force has sometimes revived when it has seemed to be extinct.

These last remarks may appear platitudes to members of the International Committee of the Red Cross. They may, however, have a little value because they come from a student of war who, it is to be expected, will regard these problems from the practical point of view. He believes, in fact, that the humanitarian point of view may to some extent prove to be the practical also.
Paper by Dr. COSTEDOAT

on certain weapons of the future

Dr. Costedoat:

You spoke of precautions which should be taken against bombing, and among such preparatory measures you mentioned the giving of warning to the inhabitants before bombing takes place. This idea is hardly consistent with realities, as no one making an attack is likely to be willing to forfeit the advantage of surprise. You then spoke of the respecting of civilian hospitals; that is one of the great advances marked in the Geneva Convention. But these civilian hospitals must be kept away from military objectives; for attacking forces will hardly agree that the fact of having left a hospital within or close to a military objective is sufficient to protect that military objective from all attacks from the air. It would be best to place the hospitals at a very considerable distance from military objectives, for it must not be forgotten that the radius of destruction of the Hiroshima bomb was itself four kilometres, and that this bomb already appears to be out of date. According to a United Press despatch of 8th April, 1954, which was published this morning, the President of the Atomic Energy Commission of the United States Senate announced that the mass production of hydrogen bombs was to be begun. The radius of destruction of this bomb is said to be as much as 12 kilometres. It should also be remembered that it is difficult to bomb a military objective with great precision. If an aircraft releases its eight bombs simultaneously, in a tenth of a second, from a height of 12,000 metres, 95 per cent of them will fall within a zone of from 600 to 900 metres square, but others will fall outside that zone. With the best electronic bomb sights, and selected bombers with the best of intentions, and the complete self-control necessary to release the missiles within a space of a quarter of a second, the bombs will be dispersed in accordance with well-established rules. Only one quarter of them will fall into a zone of from 200 to 300 metres square when dropped from a height of 12,000 metres. All these details will be found in the "Revue du génie militaire français" of September, 1953.

I now come to the question of the prohibition of projectiles calculated to cause unnecessary harm. You have seen the Note which I drafted for your information before coming to Geneva, and data concerning the use of radioactive ashes, described as "radioactive weapons" and not as "atomic weapons", is to be found in the following documents:
"Smith Report" (Atomic Energy for military purposes, Princeton 1945, Page 427);

"Acta Physica Atomica 1948", article by Professor Thirring, Professor at the University of Vienna;

Article by Professor Ridenoua, Illinois University, in the "Bulletin of Atomic Scientists", July 1950;

Report of the United States Secretary of State for Defense ("Bulletin of Atomic Scientists", June 1950);

and in "Effects of atomic weapons", the standard book on the subject, published by the United States Government in 1950; (a translation into French by Colonel Genaud of the French Army Medical Service has been published by Dunod, Paris).

The idea is for aircraft, in particular, to scatter vast quantities of radioactive ashes mixed with sand. The mixture has been called "death sand". The operation would not be an easy one, and would be dangerous for those who carry it out, but it would make it possible to contaminate a given area. A milligram of plutonium in the body has fatal results. The ashes are invisible and weigh nothing, and their effect is persistent; they are, moreover, comparatively easy to use, provided the attacking forces are protected. In the eyes of the public this weapon is a mysterious one and it therefore arouses terror. The danger from these ashes, which are prepared in atomic batteries, is extremely great. They have not yet been used, but their use has been contemplated and only this morning I found the following passage in "Le Monde" of 9th April 1954:

"The Swedish review in contact with the armed forces is also studying "radiological weapons", radioactive by-products of the manufacture of atomic weapons. According to it, the United States and the USSR are on an equal level in this field, and possess "several hundred kilograms" of radioactive ashes. It will only be necessary to give infinitesimal quantities of the ashes to secret agents, for the drinking water supply of towns to be immediately contaminated". (translation)

This article provides support for the proposal before you, which says that in the remarkable work accomplished under the auspices of the Red Cross, war gases and the bacteriological weapon have been prohibited. The radioactive weapons are a new conception and have not yet been brought into practical use. The draft Convention should be taken up and considered afresh so far as its application to this weapon is concerned.

The "Bulletin of atomic scientists" of April, 1950, tells us that four scientists, whose names are given, explained their views on the hydrogen bomb in a broadcast lecture from
Chicago University. Mr. Szilard's idea was criticized in the October, 1950, number of the "Bulletin of Atomic Scientists" by Mr. Arnold, who said that the action of the normal atomic bomb could be increased tenfold or a hundredfold by using it to split atoms of heavy hydrogen. But if a cobalt sheath were added the whole population of the world could be wiped out. When the United States first made the atom bomb, it was said that their object was to find a powerful explosive. The existence of radioactive effects was no doubt noted, but it was the burns and fires which counted most. The idea of enclosing the bomb in a cobalt sheath has not yet been realized in practice, it is true, but the possibility of its realization should be envisaged.

The "Figaro" of 9th April, 1954, published a Reuter despatch (dated 8th April) under the heading, "The cobalt bomb can now be made". William Lawrence, New York Times correspondent, stated that a new chemical process, which had revolutionized the production of "H" bombs, would also enable cobalt bombs to be made successfully in future. The cobalt bomb, he explained, was really an H bomb, the main difference between this - the most formidable of all the bombs - and the ordinary H bomb lying in the material of which the shell surrounding the active elements was made. A cobalt sheath was used to enclose the fissile substances, instead of a steel shell, the latter only becoming moderately radioactive when transformed into a cloud of vapour.

It is most important for the Red Cross to think of all this. I believe that something well worth while may be accomplished in this direction.

Finally, you have raised the question of the combined use of high explosive and incendiary bombs. To use high explosive bombs in order to prevent fire brigades from arriving in time would be criminal, but technical experts say that high explosive bombs open the way for the use of incendiaries. There are also delayed-action bombs; it is most desirable for them to be abolished. Lastly, there are self-propelled missiles; we should not forget that Pesnemünde where they were formerly made is in the Soviet sector, and that many German scientists formerly concerned with these questions are, on the other hand, now in the United States. It is true that these self-propelled missiles (which you call blind weapons) lack accuracy. This weapon is certainly a little less accurate than other weapons, since when the Germans bombarded London from a range of 350 kilometres, the bombs fell up to 7 kilometres from the target. But can it be safely asserted that self-propelled missiles, inaccurate as they were in the beginning, will always remain inaccurate.
L'activité médicale doit servir à guérir, à prévenir et à préserver des maux en général et en particulier ceux de la guerre.

C'est la mission toute naturelle et fondamentale de la médecine et c'est en même temps le devoir impératif des médecins et de tout le personnel sanitaire, surtout de ceux des forces armées de chaque pays.

Ce caractère hautement humanitaire de la pratique médicale lui a valu des privilèges de grande importance, prévus par les Conventions de Genève (Chapitre IV de la 1ère Convention en particulier). C'est en vertu de ces stipulations que les Services de Santé sont mis, pour ainsi dire, hors de combat et qu'une protection complète est assurée à ses membres dans l'exercice de leurs fonctions, ainsi que la protection de leur personne même. Mais la médecine, comme toute science, peut être utilisée dans des buts agressifs et criminels, pour nuire aux hommes, pour leur causer des maux et des souffrances. Cette façon de se servir de la médecine doit être considérée comme contraire à sa mission naturelle, comme une aberration de son but fondamental.

Or, mettre la science médicale au service de la guerre A.B.C. représente un cas particulier, un exemple flagrant de son utilisation injustifiée et de son aberration.

Il en résulte que la participation du personnel médical - militaire ou civil - à la préparation et à l'exécution de la guerre A.B.C., doit être considérée comme incompatible avec la nature de la vocation médicale. Une exception s'impose en ce qui concerne les membres du personnel sanitaire dont l'activité dans ce domaine se limite aux travaux de prévention, de protection et du traitement, ce qui est tout à fait conforme au caractère naturel (humanitaire) de la mission médicale.

La Commission d'Experts considère, en conséquence, que le personnel du Service de Santé de chaque pays qui mettrait sa science et son art à la préparation et à l'exécution de la guerre A.B.C., commettrait par ce fait un acte qui est en opposition formelle avec le but et la nature fondamentale de la médecine, qui sont uniquement d'aider, de guérir, de préserver et non de nuire et de tuer.
La Commission d'Experts émet le voeu que ces personnes en question, ayant commis une infraction grave au fondement de leur science et aux principes des Conventions de Genève, perdent de ce fait droit au statut et aux privilèges qui sont réservés par les dites Conventions au personnel des Services de Santé, militaires et civils. Il est même recommandable que ces personnes soient rayées du cadre de l'ordre professionnel de leur pays respectif.
ADDRESS TO THE EXPERTS

by Professor L. A. PIRA

Mayor of Florence

Mr. President and Gentlemen,

When you, Sir, were kind enough to invite me to this meeting of the ICRC, I was at first uncertain what to reply, whether to go or not.

"What qualification have I", I thought, "to justify my taking part in a Committee of experts engaged on a task which falls so exactly within the technical fields of international law, social assistance and war?" But all my doubts fled when you, Your Excellency, were good enough to remind me that I was Mayor of a town, Florence, which certainly has a high place, an essential place in the whole structure of man's civilization, and yet bears the signs of wounds which can never close, inflicted uselessly on it, and with it on the whole human civilization, during the Second World War.

Your reminder, Your Excellency, taken in conjunction with the work this Committee was undertaking, on the one hand, and with the recent experiments in destruction, on the other, could not but make me reflect on what is undoubtedly the most striking problem of our times: the question of the historical value of towns and cities, and their destiny, and the related question of the historical responsibilities which are linked with that value and that destiny.

Your reminder, Your Excellency, had the effect on me which may be described technically as "putting oneself in the picture". I saw again, in my mind's eye, my sweet, serene and harmonious Florence; I saw again, almost at a single glance, all the beautiful and historic cities and towns of Tuscany and Italy; I turned in thought to the incomparable cities of Europe, with their cathedrals and monuments of inestimable value, veritable reflections of eternity. I passed in imagination from the cities and towns of Europe to those - equally precious - of all the other continents - America, Asia, Australia and Africa - and, seized with sudden horror, asked myself whether it was really conceivable that this real "wealth of nations", these essential structures of human civilization, in which the historical and creative genius of man - and, in a certain sense, the same historical and creative genius of God - had found expression, could be wiped off the face of the earth?
And yet this possibility of the total obliteration of human cities from the face of the earth will undoubtedly exist from now on; a few hydrogen bombs dropped at certain points in the world could reduce the earth to a desert ... transivi et ecce non erat!

The words of the Gospel: "... but in those days, after that tribulation, the sun shall be darkened, and the moon shall not give her light, and the stars of heaven shall fall, and the Powers that are in heaven, shall be shaken" (St. Mark 14, 24-25), which some critics have regarded as religious exaggerations, today become theorems of nuclear physics, science and military practice.

After this process of "putting myself in the picture", there was only one decision I could make - namely to come.

But in what capacity? Certainly not as an expert on technical problems of international law, and not even as an technical expert on medical or welfare matters, or on military affairs. No! I would come as the mayor responsible, in a certain sense, for one of the world's essential cities, and also, in a way, tacitly representing and responsible for all the towns and cities on earth, great and small, historic or historically unimportant, of artistic value or not, in all continents and all over the face of the earth!

It is in that capacity, Your Excellency and Gentlemen, that my presence is justified.

So I have come; but to say what? To bring what message? The answer is clear: my sweet, serene, harmonious Florence, created, in a manner of speaking, both by man and by God, to be, like a beacon on a mountain-top, a light and a comfort to passing men - Florence, I say, does not wish to be destroyed!

This will to life is affirmed not only by Florence but, thanks to a mission tacitly entrusted to the Mayor of Florence, by all the towns and cities on earth - those which are capitals, I repeat, and those which are not, great cities and small towns, historic towns and those of no historical importance, of artistic value or not, one and all of them proclaim in one voice their inviolable right to existence. No one has the right to destroy them, no matter what the reason.

Allow me, Mr. President and Gentlemen, a few short reflections. When I say that all towns on earth, faced with the real danger of a death sentence, unanimously proclaim their inviolable right to existence, I am not using rhetoric or nominalistic symbols; or in other words I am not using words or figures of speech which are not based on solid reality. No, I am using words and figures of speech to express a reality which is no less concrete for the fact that it is not clearly perceptible.
Towns have a life of their own; they have their own being, mysterious and profound; they have their own face, their own soul, one might say, and their own destiny. They are not haphazard piles of stones. They are mysterious dwelling-places of man and, in a fashion, the mysterious dwelling-place of God: gloria Domini insta videbitur.

It is not for nothing that in the final haven to which men have directed their steps through history, we find, on the shores of eternity, the square structures and precious walls of a joyful city, the City of God! Ierusalem quae aedificatur ut civitas cuius participatio eius in idipsum, in the words of the Psalmist.

The revelations of the Old and New Testaments, and in general of all the greatest religious traditions of mankind, assure us that the guardian angels watch not only over individual men, but also over individual towns.

Our disregard for these fundamental values which give invisible but real substance and destiny to the affairs of men, has made us lose the sense of the mystery of towns and cities; and yet this mystery exists, and today indeed - at this critical point in the history of humanity - it is manifesting itself by signs which become more marked each day and remind each and all of us of our responsibilities.

Mr. President and Gentlemen, it is an undoubted fact which is taking place under our eyes, a fact which is undoubtedly of exceptional historical and symptomatic value: we have, so to speak, reached the historical era of towns and cities, an era whose whole conception, aspect and name is based on the "culture of towns".

There is no point in citing the literature which indicates this essential fact; for it does not only embrace the literature dealing with towns (in this connection I will only cite Mumfort's work), but includes historical, political, metaphysical and even mystical literature; and there is a whole series of indications which show themselves in a thousand different fashions in what might be termed the "biographies" of towns; let us just think of the living leaven which animates and links the small towns of Europe, of the growing interest shown in the "biographies" of the more important towns (I have just read the story of "Holy Moscow" up to the XIXth century), and, lastly, of the currents of thought among young people, which are, precisely, tending towards the recognition of the cultural and political value of towns. (In my own country, Italy, the young people's review "Terza Generazione" (Third Generation) is striving for the recognition of these values, which will reanimate existing conceptions of political thinking).
All this is undeniably true. The culture of towns, the metaphysics of towns, has become, so to speak, the new focal point around which the whole of human thought is centred. It is the new standard for measuring values. Current history — and future history to an even greater extent — will make continually greater use of this "yardstick" which is destined to restore a measure of humanity to the whole scale of values, so upset today.

This era of towns and cities upon which we have embarked actually coincides, by a mysterious paradox of history, with a period when the destruction of the essential towns of today may be a matter of a few seconds. This is no longer a question of fantasy, but takes its place among the things which are in fact possible: within the space of a few hours human civilization could be deprived entirely of Rome, Florence, Geneva, Paris, London, Moscow, New York and other towns!

Everyone is wondering what would become of a world of men bereft of these essential centres, these irreplaceable sources of life, these fountains of light and civilization?

That is the essential problem of today — a problem which can also be precisely stated from the legal point of view, as follows:

Have States the right to destroy towns, to kill these "living units" (real miniature worlds on their own, in which the essential values of past history are concentrated, and veritable centres from which the values of history itself are radiated) — units which are woven into the whole fabric of human society and human civilization?

The reply, in our opinion, is No!

The generations alive today have no right to destroy the wealth which has been given to them to pass on to future generations!

They have inherited this property from past generations, of whom they may be regarded in law as the fiduciaries, the heritage being destined to pass ultimately to the generations of the future.

We are faced with a case which the Romans termed a fidicommissum — that is to say a family trust intended to perpetuate the ownership of a given property by a certain family.

Ne domus alien aretur, sed ut in familia relinqueretur as Papinius said, thus defining with incisive clarity the legal position of the States and generations of today in regard to the towns and cities which they have inherited from past generations. Ne domus alien aretur, sed ut in familia relinqueretur!
No one has the right to destroy them! They must be protected, kept intact and passed on! They do not belong to us, but to others, and we are strictly bound by the law: neminen laedere suum unicuique tribuere.

* * *

May I define as follows the legal pattern which justifies my presence here: I have come here to affirm the right to existence of human cities and towns - a right to which we, the generations of today, are the heirs, but to which the generations of the future are heirs to an even greater degree; a right whose historical, social, political, cultural and religious value assumes continually greater proportions as the human mind becomes more aware of the mysterious and profound significance of towns.

Each town is like a city on a hilltop, a beacon intended to illuminate the path of history.

No one can pass a death sentence on a town without committing an irreparable crime against the whole human race!

And so, Mr. President and Gentlemen, almost, one might say, as procurator of all the towns and cities over which hangs the terrible menace of such a sentence, I request that the right to existence of towns and cities should be formally and unanimously recognized by the States which have the power to violate it; and I also ask, in the name of future generations, that the property intended for them should not be destroyed: nec civitas destruatur.

And in order that this purpose may be achieved, I propose for the moment that places and areas essential for the very existence of the civilization of man, should be recognized by the States concerned, and that they should as a consequence be freed a priori from the deadly threat of war.

May I thank you, Mr. President and Gentlemen, for the steps you will take to translate the proposal I have made into legal and technical terms. The problem, as you see, is really the magna quaestio of today. By finding a solution, we shall save the whole of mankind from certain destruction.

May God give you his help in a work so decisive for the well-being of humanity.
DRAFT RESOLUTION

tabled by General Costedoat

The Commission of Experts for the Legal Protection of Civilian Populations from the Dangers of Aerial Warfare, convened in Geneva on April 6th, 1954 by the International Committee of the Red Cross,

Considering that the direct use for military purposes of radioactive substances intended to contaminate persons, the ground, water, the air, food, or objects is closely akin to that of the poisonous war gases and means of bacteriological attack, the use of which as a weapon of war was renounced by the majority of States in a solemn declaration signed at Geneva on June, 17th, 1925,

Considering that by reason of their extremely toxic nature, radioactive substances are much more dangerous still, that it is difficult to restrict their action to military objectives alone, or even to spare non-belligerent nations, that they endanger the descendants of women affected by them, and that certain of these substances may persist for years after the close of hostilities,

But excluding entirely everything relating to atomic bomb or thermo-nuclear explosions, since the United Nations Organization is already dealing with the problem,

Proposes that the prohibition of the use in war of asphyxiating, poisonous or other gases and of bacteriological methods of warfare, which was the subject of the Protocol signed on June 17th, 1925 at Geneva, be extended to the dissemination of radioactive substances for military purposes.
Press Release No. 505 b bis

MEETING OF EXPERTS AT THE I.C.R.C.

This morning, April 6, saw the opening at the head-quarters of the International Committee of the Red Cross in Geneva and under its auspices of a private meeting of persons well-known for their profound and extensive knowledge of law, military practice or civilian defence. These personalities have been invited by the ICRC to take part in their personal and private capacity in a Commission of Experts, the object of which is to study the legal protection, in time of war, of civilian populations and victims of war in general against the danger of bombardments and the use of blind weapons.

The International Committee has, indeed, for some time now viewed with concern the effect which the development of aerial warfare, and the appearance on the scene of blind weapons, might have on the practical application of the humanitarian Conventions. In April 1950 it had already drawn the attention of Governments to this serious problem.

The prescribed aim of the present meeting is, therefore, to ascertain, by a preliminary study, the restrictive rules, inspired in particular by the essential laws of humanity, which apply or should be applied to aerial bombardments which are liable to affect non-combatants.

The Commission includes American, Belgian, British, Dutch, Finnish, French, Indian, Italian, Japanese, Norwegian and Yugoslav personalities as well as from the Federal Republic of Germany. The International Committee has also made representations, but so far without success, in order to secure the participation of experts from the German Democratic Republic, Poland and the USSR.
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A MEETING OF EXPERTS AT THE ICRC HEADQUARTERS

The Commission of Experts which opened on April 6, 1954, at the headquarters of the International Committee of the Red Cross, came to an end on April 13. It will be recalled that the Experts, who were invited in their private and personal capacity, were to be consulted by the ICRC on the question of the legal protection of the civilian population and war victims in general from the dangers of aerial warfare and blind weapons.

The Experts have supplied information and particularly authoritative opinions which will be of great value to the ICRC when pursuing its work in this field. On the conclusion of their deliberations the Experts made the following unanimous declaration:

This Commission of Experts having thoroughly discussed and deliberated upon the problem of the legal protection of populations and war victims from the dangers of aerial warfare and blind weapons, and having considered all the opinions expressed, particularly by the Experts connected with the armed forces,

comes to the conclusion that if the destructive power of the weapons of war remains unlimited and their use unrestricted, selective bombing of targets in order to distinguish between persons taking part in hostilities and those not taking part in them, or between legitimate military targets and protected areas would be virtually impossible.

The Commission is therefore definitely of the opinion that if the population is to be adequately protected the primary condition is the limitation of the destructive power and unrestricted use of the weapons of war.

The Commission is of the opinion that it would be failing in its responsibilities to present and future generations if it did not reaffirm the general principles of humanity accepted in the past by way of laws of war or minimum humanitarian standards which belligerents would be expected to follow in case of hostilities, in order to eliminate unnecessary suffering both to persons taking part in hostilities and those not taking part in them.
Commission of Experts
for the legal protection of civilian populations
and victims of war from the dangers
of aerial warfare and blind weapons

(Geneva, April 6th - 13th, 1954)

SUMMARY
of the opinions expressed by the Experts

GENEVA
Mai 1954
The opinions expressed by the Experts have been grouped following the order of the questions exposed in the Commentary on the provisional agenda handed to them before the meeting opened. It is therefore advisable to refer to this document in order to have a full and complete picture of the problems examined. The number of the corresponding page in the commentary, on the provisional agenda, referring to the problem examined, figures in brackets after each sub-tittle hereunder.

* *

Lack of adequate legal protection. (page 1)

The Commission was of the view that fundamental considerations of humanity require that some legal restraints be placed on the aerial bombardment of civilian populations. Military requirements might even, in some cases, have to yield to the wider principle that defenceless persons must be safeguarded against unnecessary suffering and suffering out of proportion to the military advantage to be gained. It was recognized, however, that modern warfare has made the protection of civilian populations extremely difficult. Not only have new and more destructive weapons been developed, but the distinction between the civilian population and the military forces has been made less clear by the emergence of total war.

One of the experts stressed that it was in the sphere of aerial warfare that the need for legal restraints is felt most acutely. The prohibitions and restrictions agreed to in the past by various Powers in the course of the Peace Conferences at The Hague have lost their full significance or have even led to contradictory practices and nothing has replaced them. The rules governing war on land should certainly be revised but failing anything better they are, relatively speaking, adequate. With regard to naval warfare, revision would meet with special difficulty owing to the various practices followed by different Powers. It was therefore on a limitation of aerial warfare that all efforts should at this time be concentrated.
Another expert showed that in his opinion the question of the validity of the rules laid down in 1907, specially in The Hague Conventions, can also be questioned in view of the development of modern weapons and the technic of war. In his opinion, however, the fundamental principles upon which The Hague Regulations are founded remain entirely valid. It was therefore necessary in this field to distinguish most clearly between principles and what may be referred to as rules of application.

Absence of restrictive rules as an element favouring the maintenance of peace. (page 2)

The Commission did not discuss this particular point as such. However, in the course of discussion, certain experts alluded to it and expressed the hope that the immense destruction caused by modern weapons might decide Powers to refrain from having recourse to arms.

Is it possible to establish rules in view of technical developments in the design of arms? (page 2)

It was agreed that the control of the most destructive weapons which have been devised, such as atomic and hydrogen bombs, lends itself to a political rather than a juridical solution. Nevertheless, it was considered desirable that any principles which might be formulated should be of application not only to conventional weapons but also to those which are in the process of development. Several of the experts pointed out that it is difficult, if not impossible, to place limitations upon the use of weapons which nations consider to be particularly efficacious or essential to their national security.

Prior to the consideration of those principles which should be applicable to the employment of aerial bombardment and blind weapons, the views of technical experts in the fields of military science, medicine, and civil defence were presented to the Commission. The military experts were generally of the view that the use of atomic weapons for tactical and strategic purposes is virtually inevitable in future hostilities, if the use of these weapons is not excluded by an international agreement of a political character. One of the experts called attention to the fact that a future world conflict would probably begin with a heavy atomic attack, possibly followed by a "broken-back" period, in which the belligerents might be able to carry on hostilities with those limited resources which had survived the initial attack. The Commission benefited greatly from a description of the medical
effects of the atomic bombs which had been dropped at Hiroshima and Nagasaki.

Is it possible to prohibit completely all bombing from the air?

The experts did not pronounce themselves on this particular point but their various remarks on the subject tended to show that absolute prohibition is out of question. In so far as the limiting of bombardments to the sphere of operations was concerned, various experts declared that in modern warfare the conception of a "front line" no longer existed. Secondly, it was no longer possible to distinguish between "spheres of operations" and the "rear".

In so far as the nature of bombardments was concerned, attention was first directed to the effects of explosions of atom bombs and hydrogen bombs. According to official reports, explosions of these weapons cause a certain amount of radioactive material to be widely dispersed. A part of this material falls to earth and has a contaminating effect of long duration not only on human beings but also on land and water, especially if hydrogen bombs with a cobalt casing were exploded. Apart from these considerations another point was raised, namely the dispersion of radioactive material as such, which consists of invisible dust, or sand, the effects of which would be unpredictable. The effects of those ashes which recently fell on a number of Japanese fishermen, who happened to be at a considerable distance from the point of explosion, have given humanity a clear warning of the future. The experts benefited by the medical report issued to them by one of the members of the Commission. It has been made clear that atomic weapons extend their effect not only in place but also in time because of the fact that the radioactive material remains active for a long time and might even affect future generations through the influence it has on pregnant women.

The question was raised whether the Protocol of Geneva of 1925 prohibits, or should prohibit, the use of atomic weapons or radioactive substances for warfare. Some experts were of the opinion that this Protocol does prohibit these types of warfare, and it was suggested that, in case of doubt, an advisory opinion of the International Court of Justice should be sought on the interpretation of the Protocol in this regard. It seemed desirable to the Commission that it should not attempt to solve this question during the course of this conference.
Military value of indiscriminate bombing. (page 3)

Various experts underlined that bombardments have greater military value if they are directed against precise objectives and especially against important industrial plants. The indiscriminate bombardment of a whole zone certainly has not the same value. The problem which arises is therefore to gauge whether the military effort required for the carrying out of a more or less indiscriminate bombardment corresponds to a superior military advantage or at least to an equivalent one. On this particular point, one of the experts said that in his opinion the military value of indiscriminate bombardment during the Second World War was in no way comparable to the expenses incurred and the efforts required.

Definition of "bombing from the air". (page 4)

The experts did not pronounce themselves precisely on this question of terminology. The dominant idea here was that the study undertaken would have to cover not only the projectiles and other objects dropped by flying machines, but also to self-propelled projectiles and weapons and even to those projectiles launched by long range artillery and that it was thus more a consideration not of what weapons were resorted to but of how they were employed. It was suggested that the expression "aerial attack" would be more adequate and give better coverage to the point in question.

Prohibition of the bombardment of undefended localities. (page 5)

Article 25 of the Regulations annexed to Convention No IV of The Hague of 1907 provides that the attack or bombardment "by whatever means" of undefended towns, villages, dwellings, or buildings is prohibited. This provision was drafted at a time when bombardment was still confined to that by artillery, but was amended in 1907 so as to take account of aerial bombardment. It was pointed out that this provision might to-day refer either to cities without means of defence which are about to fall into the hands of the enemy or to cities behind the lines which contain no military objectives.

The Commission was of the view that a city or town which is undefended and also contains no military objectives should not be attacked. It was not possible to reach agreement on the present validity of Article 25 of the Hague Regulations. Some experts were of the view that the principle of humanity to which this article gives expression is as valid in these days as it was in 1907.
Others expressed the opinion that the changed circumstances of modern warfare, especially the development of aircraft, made Article 25 obsolete or that it offered in itself a protection of trifling importance to civilian populations, since all cities and towns protected by an army in the field, by air forces, or by anti-aircraft artillery, must now be considered defended.

It was suggested that a firmer and more precise protection might be given to certain elements of the civilian population through the establishment of "hospital and safety zones and localities", as envisaged by Article 14 of the Geneva Convention relative to the Protection of Civilian Persons in Time of War, of August 12, 1949. Certain other experts considered that supplementary methods of protecting groups of civilians might be necessary and that the concept of open cities might usefully be extended to making certain neutralized cities refuges for civilians, especially women, children, and the aged. Those who adopted this position alluded to the several instances during the Second World War in which cities declared to be open had been spared. On the other hand, others considered that the notion of open cities had fallen into desuetude in recent years, that cities declared to be open had not always been granted immunity from bombardment, and that it would in any case be undesirable to enlarge the number of categories of protected areas. Cities which had been agreed to be "open" by the opposing belligerents might more properly be considered to be "safety zones" within the meaning of Article 14 of the Geneva Civilians Convention of 1949.

This difference of opinion reflected a fundamental conflict between the view that open cities should be the result of agreement between belligerents and the position that open cities might be unilaterally established by action of the belligerent concerned. Attention was called to the difficulty of defining military objectives, the absence of which might be a sufficient basis for giving a city an open status. Difficulties of a similar nature might be occasioned if it became necessary to determine whether the presence of anti-aircraft artillery for defensive purposes only, civil defence organizations, or railway communications would be a sufficient basis for denying a city an open status exempting it from bombardment. In any event, means of control, such as international supervision, might be necessary to assure that such cities and areas preserved a position of absolute neutrality.
Prior warning to the Authorities before commencing a bombardment. (page 5)

It was not possible to reach a general conclusion concerning such prior warning foreseen in Article 26 of The Hague Regulations of 1907. Some experts were of the opinion that warning before attack would constitute a sacrifice of the element of surprise. It was, however, pointed out that this objection already existed in 1907 as regards artillery attacks. Although in recent wars such warnings have been given, even in the case of air attacks, the motives were not always in accordance with Article 26, but this practice might have had another reason, namely the disturbance of the war effort of the enemy.

Obligation to respect hospitals. (page 6)

Various experts stressed the necessity of placing civilian or military hospitals outside cities and towns and at a safe distance from any military objective. This line of conduct would appear to have already been adopted by a number of States. Other experts, on the other hand, underlined the grave difficulties inherent in such a solution: access, communications, revictualling, technical exploitation, overheads, etc., etc.

One of the experts recalled that hospitals should be signalled as visibly as possible; in his opinion, during the Second World War, the markings were not sufficiently clear and could not be precisely picked out at a distance. If such a state of affairs could be rectified, it would certainly be possible to avoid certain destructions. He suggested that white balloons with a red cross should be flown above hospitals in order to identify them.

Prohibition of the use of arms, projectiles or material calculated to cause unnecessary suffering. (page 7)

Although the Hague Regulations deal generally with land warfare, all members agreed that the principle laid down in Article 23 (e), prohibiting the employment of "arms, projectiles, or material calculated to cause unnecessary suffering" is of a general character and applicable to all weapons.

A similar conclusion was reached as to Article 23 (g), prohibiting the destruction of enemy property except in cases of absolute military necessity.
This problem is very similar to that of limiting bombardments. (See page 3 above).

One of the experts drew the Commission's attention to the massive destruction caused by incendiary bombs and suggested that the Commission should examine whether it would be possible to restrict their use. On this point, another expert indicated that 75% of the damage caused by aerial attack on his country was due to incendiary bombs.

On the subject of delayed-fusible bombs, one of the experts declared that in his opinion the military value of the use of such projectiles was doubtful and that it would perhaps be possible to get them prohibited.

Prohibition of any act of war aimed at the civilian population. (page 8)

The Commission agreed upon the general principle that all air attacks against the civilian population as such, that is civilians not participating in hostilities, and in particular attacks of terrorization, are prohibited. This formulation is meant to express the principle only in a general sense and might have to be worded differently to meet the exigencies of an international agreement. The opinion was advanced that the concept of the civilian population should be so defined as to limit this formula to those members of the civilian population who play no direct or indirect role in the war effort.

The opinion was expressed by certain experts that in some instances civilians may be military objectives. These persons may comprise those who participate in or conduct hostilities, including the ministers directly concerned with the conduct of the war, as well as scientists engaged in the development of new weapons.

Prohibition of terror bombing. (page 10)

A prohibition of the terrorization of the civilian population was laid down in Article 22 of Part II of the Report of the Commission of Jurists at the Hague in 1923. Although agreeing upon this principle, several experts wished to make observations on this point. Doubt was expressed that terror attacks achieved their result on the morale of the population. It was said on the other hand that in the last war no bombardments were undertaken with the sole purpose of terrorizing the population and that these
attacks which were alleged to be terror attacks had, apart from this object, the purpose of destroying military objectives. Some experts were therefore inclined to prohibit only attacks intended exclusively to terrorize the population. Some doubt arose as to the desirability of adding that the prohibition was limited to attacks intended to terrorize the population, as this intent was difficult to prove and no belligerent would admit to this purpose. On the other hand, several experts pointed out that evidence of such intent could always be found after the war by hearing those who had participated in the planning of the attack or by consulting military documents.

Limitation of aerial attacks to military objectives. (page 10)

This limitation constitutes a further attempt to protect the civilian population and runs parallel to the first principle. If a definition could be given to the notion of military objectives, governments could organize the evacuation of certain parts of the civilian population from the neighbourhood of these objectives. In the attempt to phrase a general principle which could be unanimously accepted by all the experts certain observations had to be considered.

Factories producing articles which are used for the war effort in general would clearly be considered as military objectives. Attention was drawn to the fact that in modern warfare the number of articles and materials of military value has grown considerably, as can be judged by the increase in items mentioned on the contraband lists of the last war as compared with those of the First World War. Very few articles, and therefore very few factories producing those articles, could be considered as immune. It is true that a limitation of military objectives could be found by destroying only the so-called key industries, such as factories producing ball bearings, or oil refineries, the destruction of which would result in a general break-down of war production.

The difficulty, however, was to locate such industries and this led to the practice of destroying every factory. It was also said that limitation to military objectives was impossible when atom or hydrogen bombs were used. Furthermore, camouflage of factories leads to carpet bombing of areas where factories are known to exist. It was admitted that in attempting to achieve the essential aim of protecting the civilian population, military exigencies should be kept in mind. It was useless to devise rules which would be unacceptable to governments.

Attention was drawn to the danger for the civilian population if dams or dikes were to be destroyed. The catastrophic effects of the resulting inundations would be doubled if the water
were contaminated with radioactive material, which would have a long-lasting effect.

The following general principle was unanimously agreed to:

That aerial attacks should be limited to military objectives. No general agreement was possible on the definition of military objectives. The following draft was proposed:

By military objectives should be understood objectives the destruction of which presents obvious military advantage. The Commission is of the opinion that a judicious enumeration of the main military objectives has been established in Article 24, Part II, of the Report of the Commission of Jurists of 1923.

This enumeration was, according to certain experts, not complete and did not comply with modern conditions. It was suggested, for instance, that mines, certain ports, hydro-electric power stations, pipe-lines, ministries of national defence, oil refineries, etc., should be added to the list. On the other hand, attention was drawn to the danger that a modern enumeration would become so large that hardly any installations or buildings would be left which were not military objectives. It was also said that reference to Article 24 of the Report of Jurists of 1923 was not advisable, as governments had not been willing to accept that text.

Conditions for a legitimate attack on a military objective.
(page 12)

Attacks on military objectives should be limited to those the destruction of which would constitute a definite military advantage and on the condition that the loss of life of the civilian population was not out of proportion to that military advantage.

Attention was also drawn by several of the military participants to the difficulties of identifying targets, especially in view of the speed and height of flight of bombing planes. These considerations, when considered in conjunction with the necessity of obliterating military objectives, have led to the development of target-area bombing and the use of incendiary bombs. Differing views were, however, expressed on the efficacy of aerial bombardment in destroying a nation's capacity for war.

With regard to the identification of military objectives prior to attack, various experts recalled the very great difficulties which this presents especially owing to camouflage. It is of
course understood that the military authorities have no interest in dropping bombs on buildings of no military value. However, following on the natural dispersion of projectiles these authorities sometimes esteem it necessary to destroy a relatively large surface in order to hit an objective. One of the experts stressed on this point that any rule drawn up should bear in mind planes flying at 1,200 kilometers an hour, dropping their bombs from a height of 12,000 meters. (See above page 6).

Precautions to be taken when bombing a military objective. (page 12)

The Commission studied two types of precaution:

(1) The possibility and desirability of passive precautions, i.e. precautions on the side of the party who is attacked.

Such precautions would mainly consist in the organization of security zones, hospital zones and neutralized zones, as well as in civil defence in general, together with designation. General agreement was reached on this point.

(2) The possibility and desirability of active precautions, i.e. precautions to be taken by the attacker.

On this point no agreement was possible. One of the experts indicated the possibility of prohibiting bombardment in cases in which it would be impossible to confine the destruction to the military objectives as such and the civilian population far from the target would be exposed to an evident risk. The military experts, whose views are reflected in an earlier section of this report, again alluded to the difficulty of confining bombardment to the military objective alone. (See also page 9 above).

Specially protected installations. (page 14)

The Commission accepted the following principle unanimously:

that the safety and hospital zones and other installations, when established according to the Geneva Conventions of 1949, and the buildings listed in Article 27 of the Hague Regulations of 1907, with the exception of scientific...
establishments working in the interest of national defence, should under no circumstances be considered as military objectives. (1)

Some members regretted that the dwellings of civilians were not included in the paragraph above. Others insisted on the addition of dams and the major maritime and fluvial dikes to this list.

Protection of certain types of ships against bombing from the air. (page 15)

The position of merchant ships as military objectives was discussed. It was agreed that merchant ships under convoy are not immune, but in the case of merchant ships proceeding singly, the humanitarian principle of saving the lives of the crew before destroying the ship is still valid. Of course, neutral merchant ships not under belligerent convoy should not be destroyed at all, unless this should become necessary in exceptional circumstances and then only when the safety of the crew is assured. However, the difficulties of adhering to this principle were pointed out, since most belligerent merchant ships are armed and in practice not inclined to run any risks when a plane of the adverse party is approaching. In that respect the idea was advanced that armed merchant ships are not immune. An unarmed merchant ship or an armed one not using its weapons should, however, be directed to a port for investigation of its cargo.

(1) The installations whose protection is foreseen in the 1949 Geneva Conventions are in particular: military and civil hospitals, convoys of sick and wounded, prisoner of war and civilian internee camps.

Article 27 of The Hague Regulations of 1907 mentions on the other hand buildings serving as churches, theatres, hospitals, historical monuments or housing scientific and charitable organisations, or for the collecting of the sick and wounded.
The problem of reprisals. (page 16)

The Commission, for lack of time, was not able to study this question. However, various experts have given their opinions on the matter in writing after the meeting.

One of the experts states firstly that the Geneva Conventions of 1949 prohibit reprisals against those persons protected by them. Without hoping to be able to go as far in the sphere of aerial attack, he nevertheless suggests a limitation of the right of recourse to reprisals, taking as a guide the principles laid down by the Oxford Manual: reprisals must be proportionate to the rights violated; they may only be resorted to on orders from the Commander-in-chief and they must be carried out in accordance with the spirit of humanitarian principles. A preliminary control should be established and in most cases the punishment of the guilty parties should suffice.

In another expert's opinion, one cannot speak of genuine reprisals when mentioning aerial attacks. Such attacks always have as their objective a precise target. If it has been affirmed from time to time that such attacks constituted reprisals, this was in order to veil the illegal or particularly cruel character of such an attack whose execution had been decided upon for very different reasons. Efforts should therefore tend towards a limitation of attack from the air in general.

Hospital and security zones.

This question did not figure as such on the Agenda drawn up by the ICRC, since it did not enter directly within the sphere of the legal protection of the civilian population; as a matter of fact, the establishment of such zones depends principally upon the national authorities' consent, though their respect of course depends upon the enemy.

Experts in civil defence called attention to the advantages and disadvantages of the establishment of safety zones for protecting the civilian population. In particular, it was pointed out that the establishment of such zones would entail great expense and might even be impossible in densely populated countries, or in countries in which means of transport are not well developed and economic resources are limited. The evacuation of portions of the civilian population to such zones would be extremely difficult if undertaken at short notice and under war-time conditions, when transport is limited and lines of communication are devoted to military use. It was suggested that if attention was concentrated on the exclusion of certain areas from bombardment, there was a danger that this emphasis might create the impression that indiscriminate bombing of all other areas would be wholly justified.
On the other hand, the Commission was advised by representatives of the International Committee of the Red Cross that it had been possible to establish such zones in recent hostilities of a somewhat limited character (such as those in Jerusalem).

The experts unanimously agreed that emphasis should be placed on practical measures to give effect to the provisions of Article 14 of the Geneva Convention relative to the Protection of Civilian Persons in Time of War of August 12, 1949. They therefore hoped that the measures contemplated by the Geneva Conventions of August 12, 1949, in particular the establishment of safety, sanitary and neutralized zones might diminish the possible threats to civilian populations.

Control. (page 18)

The experts did not have sufficient time in order to go into the detail of this particular problem, though they touched upon it on numerous occasions. It is a fact that many of the rules defined should, in order to be applied satisfactorily, be supplemented by a neutral control. With regard to the sanctions to be applied, the Commission unanimously agreed that it should be stipulated that acts contrary to any rule which might be framed would constitute a breach of the laws of war and of the laws of humanity.

The new weapons.

The ICRC in studying an eventual limitation of aerial bombardments took as a premise that if restrictions can be established they must apply to all forms of aerial attack irrespective of the weapons employed. It was however soon clear, - and the ICRC for its part was convinced of this from the outset - that when having recourse to some of these new weapons it is impossible to respect any kind of restrictive regulation. The Commission received precise information upon this subject with regard to the effects of atom bombs, hydrogen bombs, and radioactive substances. One of the elements to be retained is that the effect of these arms not only makes itself felt in space but also in time, dangerous radioactivity subsisting in some cases over a number of years.

These considerations palpably influenced the experts' discussions. Whilst reaffirming and laying down certain principles which could serve as a basis for the restriction of aerial attacks, the experts were aware that these principles could not be respected in cases where such arms were resorted to. Some of the experts felt that these weapons, which by their very nature
cannot differentiate in any fashion between military and other objectives, should be condemned as illegal. Others were of the opinion that formal prohibition against the recourse to such arms is the primary necessity, but that this is a political question upon which it was difficult to express an opinion.

That is why at the conclusion of its meeting, the Commission unanimously adopted the following resolution:

"This Commission of Experts having throughly discussed and deliberated upon the problem of the legal protection of populations and war victims from the dangers of aerial warfare and blind weapons, and having considered all the opinions expressed, particularly by the Experts connected with the armed forces,

"comes to the conclusion that if the destructive power of the weapons of war remains unlimited and their use unrestricted, selective bombing of targets in order to distinguish between persons taking part in hostilities and those not taking part in them, or between legitimate military targets and protected areas would be virtually impossible.

"The Commission is therefore definitely of the opinion that if the population is to be adequately protected the primary condition is the limitation of the destructive power and unrestricted use of the weapons of war.

"The Commission is of the opinion that it would be failing in its responsibilities to present and future generations if it did not reaffirm the general principles of humanity accepted in the past by way of laws of war or minimum humanitarian standards which belligerents would be expected to follow in case of hostilities, in order to eliminate unnecessary suffering both to persons taking part in hostilities and those not taking part in them".
To the Central Committees  
of National Red Cross  
(Red Crescent, Red Lion and Sun) Societies.

Ladies and Gentlemen,

The question of the legal protection of the civilian population and victims of war against the dangers of aerial warfare and the use of blind weapons has engaged the attention of the International Committee of the Red Cross for many years. It had occasion to explain certain aspects of this important question at the XVIIth and XVIIIth International Red Cross Conferences, when it proposed a number of resolutions which were adopted unanimously.

In the hope of being able to contribute towards the satisfactory solution of the problem, the International Committee pursued its efforts in this field, and in Geneva, from 6 to 13 April, convened a meeting of 16 experts who have given it opinions which will be extremely valuable. The experts, who were invited in their personal and private capacity, decided that their discussions would be private, with the exception of two press releases which you may have seen and which we are enclosing (see annex).

With the agreement of the experts, the International Committee proposes to supply National Red Cross Societies in the near future with detailed particulars of the opinions expressed. A communication on the subject will accordingly be sent to your Society as soon as the experts have finally approved the reports of their deliberations.

Yours sincerely,

F. Siordet  
Vice-President
COMITÉ INTERNATIONAL
DE LA
CROIX-ROUGE

Geneva, May 14th, 1954

The legal protection of civilian populations
and victims of war from the dangers of aerial
warfare and blind weapons

To the Central Committee
of the National Societies of the Red Cross
(Red Crescent, Red Lion and Sun)

Ladies and Gentlemen,

The International Committee of the Red Cross in Geneva
informed you, by letter on April 23rd. 1954, that it would shortly
furnish you with more complete and detailed information regarding
the opinions expressed by the group of Experts which met at the
International Committee's headquarters in Geneva, from the 6th to
the 13th of April 1954. This meeting takes its place in the long
series of studies and investigations which the International
Committee has devoted to this problem. Without going into the de-
tail of the initiatives pursued concerning the problem of aero-
chemical warfare, between the two world wars, the appeal addressed
in 1950 to the States parties to the Geneva Conventions concerning
the use of atomic and blind weapons, should nevertheless be men-
tioned as well as the various resolutions submitted on this sub-
ject upon the occasion of the XVIIth and XVIIIth International
Red Cross Conferences.

The International Committee prepared substantial docu-
mentation for the use of the Experts taking part in this meeting.
Firstly a collection of texts and documents relating to the problems to be discussed. Secondly, a commentary on the provisional agenda which gives in a summarized form the main elements of the problems upon which the International Committee wished to have the Experts opinion. These two particular publications are enclosed hereunder.

The Experts, who were chosen in view of their profound knowledge of the law, their familiarity with military affairs and their feeling for humanitarian problems, were invited in their purely personal and private capacities. They were sixteen in number and their names will be found on the enclosed list. Before the designation of a number of them, the International Committee was happy to have been able to benefit from the assistance and advice of the national Societies of their countries.

The International Committee is happy today to submit herewith to the national Societies of the Red Cross, a document which summarizes the Experts opinions. When editing this document the Committee followed the order of the questions set out in the commentary on the provisional agenda mentioned above. You are therefore advised to read this commentary in the first place in order to have a clear view of the whole question.

Though the Experts held long meetings, both in the morning and the afternoon, as things turned out the time at the Commission's disposal proved to be too short in order to discuss all the questions on the agenda; certain subjects could not be debated as fully or as profoundly as the International Committee and the Experts themselves would have wished. Furthermore, the Experts examined certain questions which were not expressly foreseen on the provisional agenda. The private character of this meeting, together with the purely personal nature of the opinions expressed, enabled the Experts to speak in all freedom and without reserve. These particular circumstances have rendered this consultation of even greater value.

Whilst submitting the results of this meeting to national Societies, the International Committee here wishes to render homage to these Experts who replied to its invitation and to thank them publicly for the valuable assistance which they so kindly gave it. The Experts faced the situation squarely and realistically as they should and their conclusions with regard to the possibilities offered of giving efficient legal protection to the civilian population are not always exactly encouraging. Their opinions will nevertheless be extremely valuable to the International Committee which intends to pursue its activities in this domain whilst reserving its full liberty of judgment. Furthermore,
it is obvious that its character as a purely humanitarian institution obliges the International Committee to envisage these problems also from their other aspects.

The International Committee would now be happy to receive from the national Societies, any comments or remarks which the present communication may inspire. Additional copies of the enclosed documents are at the disposal of national Societies, should they wish to submit them for information to the competent authorities of their various countries.

The International Committee of the Red Cross avails itself of this opportunity to thank the Central Committees of the national Societies in advance for the interest they will take in this important matter and the assistance they may wish to render, and remain

Yours sincerely,

F. Siordet
Vice President