PUBLICATION OF THE "SMYTH REPORT"

by

Henry DeWolf Smyth

GOVERNOR FROM THE UNITED STATES ON THE BOARD OF GOVERNORS OF IAEA

It is difficult to imagine any society so primitive, any tyranny so absolute as to be entirely free from concern for "public opinion". To be sure, the "public" may be a small coterie of powerful individuals surrounding the ruler, or a rioting mob of starving peasants. Yet the question of what to tell and how to tell it must inevitably arise. Nor can the two questions be entirely separated.

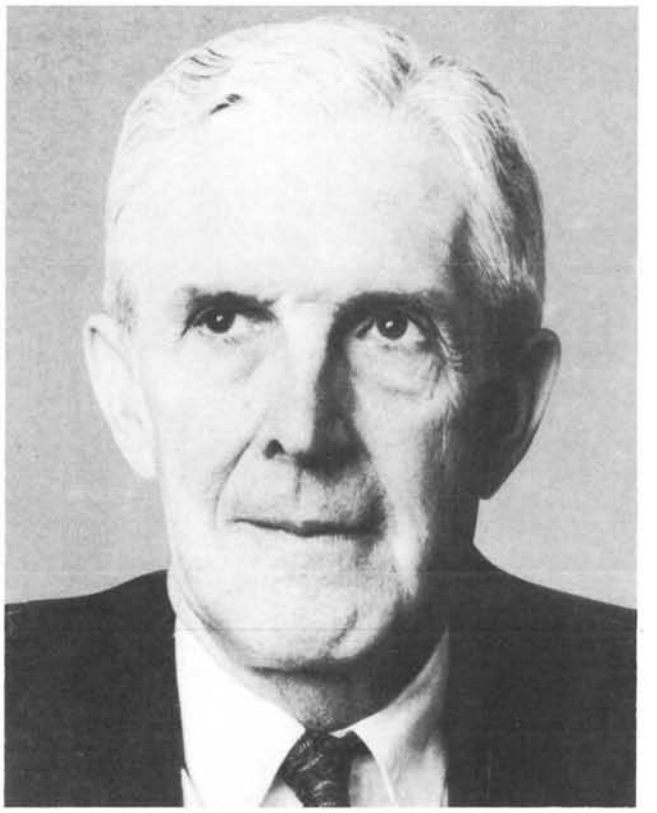
In the city states of ancient Greece, which we sometimes consider the cradle of democracy, communication could be largely by word of mouth. The free citizens of Athens (only some 50 000 in its heyday) could be kept fully informed. In larger states it was impossible to communicate rapidly with most of the citizens. The invention of printing brought a great change in this situation and made direct communication possible throughout states of unlimited size. There was of course a time lag which was greatly reduced by the invention of the telegraph and practically eliminated by radio broadcasting. Technically there is now no problem. The people of a country can be kept currently informed. The only question remaining is what they should be told.

It is a basic tenet of those who believe in democracy that the people should be told the truth as fully and promptly as possible. In a vigorous and vital democracy the strength of the nation can be measured by the response of the people to bad news as well as good. Winston Churchill understood this very well in his "blood, sweat and tears" speech.

Yet surely the one essential element of success in a democratic government is pragmatic compromise. When delicate negotiations are under way, when a desperate war is being waged, there will always be information that must be kept secret.

Many categories of information fall clearly in the "keep secret" class, or in the "reveal completely" class. But at the end of the Second World War there was an accumulation of information developed for war use but of possible value in peace about which decisions needed to be made. Even more important, such a transformation in military technology as the discovery of atomic bombs was certain to affect major political decisions of concern both to statesmen and the public at large.

Before the end of the Second World War several of those responsible for the atomic bomb project in the United States recognized the importance of rendering a report on the whole project. In part this might



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be necessary to justify the expenditure of public funds on this project, but it was considered far more important to make clear the enormous change in world political views demanded by the discovery of atomic bombs.

Curiously enough, the desirability of an extensive report was also recognized by those responsible for maintaining secrecy. Their argument was that the number of people involved was so great and the discoveries so spectacular that complete secrecy would be impossible. They concluded that a fairly extensive official disclosure would establish a limit which could be used to prevent any further unofficial unevaluated release of information. I believe events proved that this was a correct judgment. However, it is interesting that the idea of official extensive disclosure was supported both by those wishing to give maximum information and by those wishing to give minimum information.

Doubtless the desirability of a public report on the atomic bomb occurred to many people working on the project. I remember discussing it with A.H. Compton and shortly afterward with Dr. Conant in the fall of 1943 when I was at the Metallurgical Laboratory at the University of Chicago. The idea was discussed later with Dr. Bush and General Groves, and in March of 1944 I was asked to undertake the preparation of such a report. During the whole period of preparation it was uncertain whether the report would ever be published at all. Initially it was decided to make the report very complete in draft. Then as the preparation went forward criteria were drawn up as to what should and what should not be included. These criteria were incorporated in orders issued to me. The final draft was then carefully reviewed paragraph by paragraph by Dr. R.C. Tolman to make certain that everything included was justified by the orders. Various other clearances were obtained as described in the book "The New World" by Anderson and Hewlett.

The final decision as to the release of the report was made by President Truman on the recommendation of Secretary Stimson, Dr. Bush, General Groves and others in August 1945, just after the bombs had been dropped on Hiroshima and Nagasaki.

However pleasing it may be to me to have this official report commonly known as the "Smyth Report", it is also somewhat embarrassing. During the period of preparation it was never certain that any author's name would appear. Furthermore, the rather cumbersome title of the official version was intended as a sub-title; the title itself was to be "Atomic Bombs", but for reasons of secrecy this simple and revealing title was omitted in the preparation of the litho-printed version and the intention of adding it with a rubber stamp at the last moment was never carried out.

Any person of conscience must occasionally review decisions in which he has been involved and wonder whether they were right or wrong. Naturally I have done this frequently over the sixteen years since my report was published, but I have never before made any comment in print. Since this fall marks the twentieth anniversary of the first nuclear chain reaction, and since by chance four books* have been published in the last few months dealing with the development of atomic energy, it is an appropriate time for such comment.

Before the United States atomic bomb project got under way in 1940, the scientific world knew the basic principles on which the project was based. It was known that neutrons caused fission in uranium, with the release of enormous amounts of energy. It was known that the neutrons initiating fission reproduced themselves in the process, and that therefore a multiplying chain reaction might occur with explosive force. It was known that the uranium-235 isotope was more readily fissionable than the more common U^{238} isotope. The principles of all the isotope separation processes later used were understood. It was even anticipated that plutonium would be formed by neutron absorption in U^{238} and would have fission properties similar to U^{235}.

It was not known whether this knowledge could be applied to produce a nuclear bomb which would be of practical military value. The answer to this question was revealed to the world in the bombing of Hiroshima on 6 August 1945.

This was the great disclosure, an atomic bomb could be made.

Granted this disclosure, granted world-wide knowledge of the basic principles, there was no doubt that any great industrial country with competent scientific and engineering talent could eventually make atomic bombs. It was only a question of time.

Therefore the possibility of keeping atomic weapons forever exclusively in the possession of the United States simply did not exist. Determination of what should or should not be published depended on balancing the advantage of thorough public understanding of the military, peacetime, and political implications of atomic energy against the possible speed with which other countries might make weapons. Furthermore, the importance of this speed factor depended on political judgment of the attitude of other countries toward the United States in the post-war period.

Another factor which could not be taken into account in 1945 is relevant to the judgment now as to whether too much was revealed. Any doubt of the wisdom of issuing the report was removed from my mind by the revelation of the activities of various spies in the project.

In fact, I believe it is quite impossible to estimate how much the development of atomic weapons in other countries depended on published information from the United States, or on secret intelligence reports. Probably neither source was of major significance compared to the knowledge of basic principles, and the certainty that success could be achieved. In any case, an enormous engineering and industrial effort had to be made. As of 1962 it does not seem very important whether success in other countries might have been delayed a few months, or even a year or two by continued secrecy, had that in fact proved possible. No official information on the hydrogen bomb ever was released by the USA. Nevertheless, the USSR achieved success with great rapidity.

* *"Now It Can Be Told" by Leslie R. Groves*
"Men and Decisions" by Lewis L. Strauss
"L'aventure atomique" by Bertrand Goldschmidt
"The New World" by Richard G. Hewlett and Oscar E. Anderson, Jr.

No one should be under the impression that the official report was a blueprint for making a weapon. As examples of the many major secrets not disclosed I might mention the nature of the diffusion barriers at Oak Ridge and anomalous xenon absorption cross section which very nearly prevented the operation of the entire Hanford plutonium production plant. Such information is of enormous value to men trying to build atomic weapons, but of little importance to an understanding of the general range, scope and potentiality of the project as a whole.

To appreciate the great advantages to the United States and to the world at large resulting from the extensive description of the atomic bomb project, one must review subsequent events and consider how they might have been altered if complete secrecy had been attempted.

In the years immediately following the war, public discussion of the atomic bomb and the problems it raised was intensive and widespread. The first major issue was a domestic one, civilian control of future development. This discussion culminated in the passage of the McMahon Act setting up a civilian Atomic Energy Commission. It is difficult to see how this discussion could have occurred if less information had been available. Even as it was, probably only the dramatic nature of the central facts made people absorb what information was available so that decisions were made legislatively after open argument rather than by executive fiat. Yet I doubt if anyone now feels that the atomic energy programme, even for weapons development, would have progressed better as a completely secret project under military direction.

A second major activity of this period was the attempt to establish international control of atomic weapons. While the Baruch Plan was defeated, the world-wide discussion which it stimulated was certainly useful and could not have occurred without a basis of solid information. The discussion of all phases of atomic weapons, weapons tests, fall-out and the political implications of these discoveries has continued on the basis of a great deal of additional information that has been revealed in the last fifteen years. To one who believes that the hope of peace in the modern world depends on an informed and alert public, the information available seems nearer to the minimum necessary than to the maximum desirable.

The peaceful uses of nuclear fission are in two general categories, radioactive isotopes and power. Though of small direct commercial importance, the use of radioactive isotopes in research, in therapy and in industry has become very important. Nuclear power has proven more expensive than had been hoped, but gives the world an energy reserve of great future importance. It seems likely that nuclear power plants will make significant additions to the world's sources of energy in the next decade. Insofar as the official report may have hastened these developments, its publication is surely to be commended.

In summary, I believe that those who made the final decision on the publication of my report did a great service both to the United States and to the world.