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I

The technical limitations of photography in 1863 spared Abraham Lincoln the daily exhortations of "Just one more, Mr. President", but it would have been an intensely interesting archive for this generation to be able to see the expressive face of the great President -- for instance, just as he had delivered his address at Gettysburg. The ubiquitous camera no longer spares our Presidents. There is a flashlight photograph of President Eisenhower taken within a few moments after he had resumed his seat in the great assembly hall of the United Nations and just as the prolonged applause had begun -- applause which is almost unknown in that august chamber -- and which was the precursor of the world-wide acclaim that greeted his historic address. The picture is a very moving one. It is the face of a man who had succeeded in communicating his profoundest convictions to his hearers while they were responding spontaneously and with obvious feeling. What may well be a great moment in the history of the world is recorded and epitomized in that photograph.

By now a great deal has been said about the December 8th address. It was not a hastily put together speech. It is true that the invitation to appear before the General Assembly of the United Nations was only received while the President was in Bermuda and it presented an appropriate, indeed, an ideal forum for the occasion. But the speech itself had been long in composition and even longer in the President's mind. Every paragraph, every word in it had been weighed and considered by him. He had written and rewritten it and could have delivered it had he cared to do so without benefit of manuscript.

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Like other great addresses, it was not long -- only some 3,000 words. Edward Everett's oration at Gettysburg on the famous day in 1863 took upwards of an hour to deliver and is forgotten. President Eisenhower's brief speech had two major purposes. One was to tell the world in the new language of the atomic age of what humanity faced if it could not escape another war. The other purpose was to propose an alternative to the headlong race of nations toward that precipice.



The first part was roughly two-thirds of the speech. It measured phrases which could not be misunderstood, the President described the force of the new weapons with which science and engineering had stocked the military arsenals of at least three nations. He said that he sought that day to speak in a language which he would have preferred never to use, -- the new language of atomic warfare. "Atomic bombs," he said, "today are more than 25 times as powerful as the weapons with which the atomic age dawned, while hydrogen weapons are in the ranges of millions of tons of TNT equivalent." He continued, "Today, the United States' stockpile of atomic weapons, which, of course, increases daily, exceeds by many times the explosive equivalent of the total of all bombs and all shells that came from every plane and every gun in every theatre of war in all the years of World War II."

But so profound was the effect of the latter part of the address -- so great the yearning of the world for some light in the gathering gloom of an atomic armament race -- so welcome any hope for reducing the threat of atomic destruction by any amount or means -- that there was surprisingly little note of the content of the first part of the address. It was, in fact, overshadowed in both news and editorial reaction.

The current series of weapons tests at our Pacific Proving Ground, however, has effectively dramatized the earlier part of the speech. I hope it has reminded many who had almost forgotten the fact, that the Soviets tested a thermonuclear device in August of last year. A little examination of the calendar also reveals that had we not begun our researches when we did, we might now be in a position of weapon inferiority to the Soviet Union -- a condition with consequences of disastrous weight for the future of the presently free world.

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I would like to speak to you tonight about both parts of that address, retrospectively about why we made A-bombs, why we decided to make H-bombs and, if the time permits, about what, in my humble judgment, lies ahead. It is an extensive catalog and I know that I can only treat each part briefly.

II



To begin with, we in the United States undertook to make the atomic bomb because we had good reason to believe that the Germans were working on it. It was clear that we had no recourse but to see that we were not outstripped in armament, especially by a nation as irresponsibly and beligerently led as Hitler Germany. After we made the bomb, we used it. We used it to bring the war with Japan to an abrupt close and then rested on our military and scientific achievements.

The next step, our offer to share our monopoly with the world -- despite its lack of success -- was one of the most satisfactory and proud pages of American history. It was satisfactory because its motivation was altogether meritorious. The blame for our failure to exercise this blight on the lives of our generation must be placed by history squarely where it belongs, on the heads and hands of the men in the Kremlin. In cynical but effective fashion, they used every diplomatic stratagem to delay, confuse, and destroy the proposal. In this they succeeded. It now appears that it may well have been because they had atomic weapon plans of their own.

The failure, therefore, of the Baruch proposals left the United States with no alternative but to press forward with the development of its atomic arsenal, and this too was done.

The Soviet achievement of atomic weapon capability eventuated sooner than most had expected -- much sooner. Our intelligence arrangements, fortunately inaugurated in time, enabled us to know almost as quickly as the Russian high command and months before the Russian people learned, that a test had been made. We announced it on September 23, 1949.

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The Soviets conducted further tests in the autumn of 1951 and again last summer. That last series began with a very large explosion in which we were able to say that a thermonuclear reaction had occurred, that is, the fusion of nuclei of light elements.

I have already referred to the cataclysmic possible consequences of this test had we been unready for its impact. Fortunately, we were prepared. When the fact that the Soviets had an atomic bomb capability was demonstrated in 1949 and with negotiations for international control and inspection deadlocked by them, President Truman took a decision. He was aware that a lead in numbers of weapons -- a quantitative superiority which we believed that we then enjoyed, even if we were sure that we could hold it -- would become of less and less importance relatively until it was meaningless. Our only hope was to maintain the status quo by having a qualitative superiority. The President gave the order to the Commission on January 31, 1950 to proceed with work on what was then generally called the "super" bomb, that is to say, a weapon employing as its chief source of energy the principle of nuclear fusion rather than of nuclear fission.



The success of American scientists and engineers in this new effort is by now well known, and we have no less an authority than Sir Winston Churchill for the considered opinion that it has been our continued possession of weapon superiority which has preserved the world from further large-scale aggression and another bath of blood.

Imagine the condition if we did not possess retaliatory power which neutralized the great Soviet manpower plus their atomic weapon potential. With that power possessed or useable by them alone, they could exert authority over small adjacent nations with the whole world eventually ending up in the maw of Communism and slavery.

The alternative, however, of "two atomic colossi doomed malevolently to eye each other indefinitely across a trembling world" which was the vivid metaphor used by the President, is likewise an unacceptable condition though to a far less degree than the consequence of submission to Communism. Because it represents an instability which could be triggered into a war of great destruction, President Eisenhower had given the subject long and concerned thought.

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Out of his deliberations came the conviction that a new factor, a new dimension, would have to be emphasized before any hope could be entertained. The answer lay in the atom itself, in its latent power to become not the master and destroyer but the servant of man.

This was the genesis of the President's proposal and its first great virtue is that it can be undertaken "without the irritations and mutual suspicions incident to any attempt to set up a completely acceptable system of worldwide inspection and control."

You will recall the heart of his proposal was that the governments principally concerned to the extent permitted by elementary prudence should begin now and continue to make joint contributions from their stockpiles of normal uranium and fissionable materials to an "International Atomic Energy Agency". He envisaged that agency as established under the aegis of the United Nations. Such details as the ratio of contribution, the procedures, etc., he felt should be discussed in "private conversations" between the contracting parties. He assured the delegates of the nations to whom he was addressing himself that any partners of the United States, acting in good faith with us, would find us not unreasonable or ungenerous.

Private conversations have ensued. There is an impression I find -- probably because these conversations are private -- that nothing is going on and that the proposal is dormant. This is not the case. The President's idea has been formulated into a concrete plan. The plan has been discussed with certain friendly governments. Just one month ago today it was handed to the Soviet Ambassador in Washington for transmittal to his government. This step followed the private conversations which had begun in January and were continued by Secretary Dulles when the Foreign Ministers met in Berlin.

Why did the members of the Soviet delegation in the audience at the United Nations, caught off their guard, applaud with all the other delegates there present? And why after the first reactions of denegation and disdain did the Soviet government at last respond? The answer to that must have been because of the impact of what followed. For the President had said:

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"The United States would seek more than the mere reduction or elimination of atomic materials for military purposes. It is not enough to take this weapon out of the hands of the soldiers. It must be put into the hands of those who will know how to strip its military casing and adapt it to the arts of peace. The United States knows that if the fearful trend of atomic military buildup can be reversed, this greatest of destructive forces can be developed into a great boon, for the benefit of all mankind. The United States knows that peaceful power from atomic energy is no dream of the future. That capability, already proved, is here -- now -- today. Who can doubt, if the entire body of the world's scientists and engineers had adequate amounts of fissionable material with which to test and develop their ideas, that this capability would rapidly be transformed into universal, efficient, and economic usage."



At this point, I am privileged to state that it is the President's intention to arrange through a national scientific organization to convene an international conference of scientists at a later date this year. This conference, which it is hoped will be largely attended and will include the outstanding men in their professions from all over the world, will be devoted to the exploration of the benign and peaceful uses of atomic energy. It will be the first time that any such body has been convoked, and its purpose, also in the words of the President, will be "to hasten the day when the fear of the atom will begin to disappear from the minds of people and the governments of the East and of the West."

III

A few moments ago I mentioned the fact that the President's proposal had been formulated into a plan. It might be useful to state something affirmative about what the proposal is and is not to give a frame of reference within which the practical potentials of a World Atomic Bank can be discussed.

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The United States proposal is not just another move in the chess game of world politics nor is it primarily a disarmament formula. It does not endanger the atomic weapons secrets of any nation that now has or may possess such secrets.

It does not involve suddenly placing trust where yesterday trust could not be reposed. Implementing the proposal requires no reliance upon impossible enforcement provisions nor does it depend on an interpretation of good faith.

It is not a prescription for technical alleviation of disease that still scourges too many parts of the world nor will it in a day -- or a year -- solve the desperate struggle for daily bread where that now exists. It will not -- on any precisely measurable timetable -- turn deserts into lush meadows nor provide the energy to lift grinding toil from the backs of those now living in underdeveloped areas.

The accumulative effect of the operation of the proposed agency will do these things:



It will accelerate the application of peaceful uses of the atom everywhere.

It will divert amounts of fissionable material from atomic bomb arsenals to uses which will benefit mankind, and these amounts will steadily increase as long as the peace is maintained.

It will foster the dissemination of information for peaceful uses to atomic scientists everywhere.

It will stimulate the acquisition of new fundamental data and theory on which all progress depends.

It will provide an opportunity for nations which are atomic have-nots, either individually or by combining with others, to acquire atomic facilities best suited to their individual needs.

It will increase man's knowledge of his own body and that of the plants and animals that nourish him and the insects and pests that threaten him, to the end that the

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healing art will be advanced and new ways found to increase the world's food supply. And man's useful life span will be prolonged.

It will encourage young and imaginative minds in many countries to seek useful careers in the new disciplines of science and engineering to the end that they may contribute to improving the economy and living standards of their respective countries.

And, perhaps, most important of all, the successful operation of the International Atomic Energy Agency will contribute mightily to focussing world attention and understanding on the potential of atomic energy to enrich the lives of all of us and thus dispel some of today's doubts and fears that its only use would be to destroy us.

Only in the last few days legislation has been introduced designed to amend the Atomic Energy Act in part to facilitate the President's plan.

Moreover, in the hearings when they take place on the measure and on possible declassification of data regarding industrial utilization of atomic energy, we will be prepared to answer satisfactorily any questions about the impairment of the security of information. I would not be here tonight if I felt that America's participation in the International Atomic Energy Agency need endanger any secrets vital to our national defense.

IV



It has been less than 12 years since the power of the atom was harnessed within a nuclear reactor. In that brief interval, the achievements in peaceful uses of its energy have been varied and important. Here in the United States these results have come along steadily and in increasing numbers despite our necessary concentration on military applications in behalf of our own defense and the defense of the free world.

There is no need here to inventory in detail the multiple applications of atomic energy which we have already found in the areas of medicine, biology, agriculture, and

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industry. We need only to note that notwithstanding, the surface has barely been scratched. Progress has also been made in other countries where the imaginations of men have been fired by the problems and the possibilities.

I do wish to emphasize a less widely known aspect of atomic progress -- the advances in new fundamental knowledge. We have seen almost a dozen new elements isolated, identified, and fitted into the periodic table. In this still young art, we have witnessed the confirmation of the principle of breeding atomic fuel. Successful application of this principle will greatly extend the use of the normal uranium which would be contributed to the International Atomic Energy Agency.

Such advances in fundamental knowledge will be one of the high purposes of the new atomic agency. It is no risky extrapolation from what we now know to prophesy that in time -- whether it be a few years or a decade or a generation -- there will come discoveries to enrich the lives of all of us fully as important as those we have already witnessed.



V

Near the end of his speech, the President said, "A special purpose (of the International Atomic Energy Agency) would be to provide abundant electrical energy in the power-starved areas of the world." There has been a very substantial recent development in this area. I would recall to you that within the last year the Atomic Energy Commission in testimony before Congressional committees felt it necessary to discount the possibility that, under foreseeable conditions, there was any prospect for the large-scale investment of private capital in the development of nuclear power until the Commission had demonstrated its economic feasibility.

Today, less than one year since that statement, we have had nine proposals from large companies and groups of companies to undertake to build and operate the first large civilian power plant. It has been awarded to one, the Duquesne Light Company of Pittsburgh, whose proposal will

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save the Government some 30 million dollars of the cost of its construction and operations. Other companies also see the possibility of getting in on the development of nuclear power even at this early and economically undemonstrated stage, and other projects are under discussion with them.

This is an important milestone in the short life history of atomic energy. Competent engineers say that fossil fuel reserves, at least those that constitute presently available sources of supply, are rapidly dwindling. In Europe and elsewhere, nuclear power is now envisaged as the most promising energy source for the future.

Here, then, lies one ready opportunity for the proposed new atomic energy agency.

To me, the kind of thinking that would be stimulated by the mobilization of scientific and engineering minds, which should result from the operation of the world bank of atomic materials, would be unlimited since it is geared to man's imagination and his resourcefulness.

VI



For the first time since the discovery of fire, we have come into possession of a force with which we can enrich our lives incalculably or, failing to make that choice, we can wreck a large part of what we have inherited from the accumulated art, heart, and spirit of the generations that preceded us.

In an effort to temper optimism, yet preserve the great faith that the President's plan deserves, I have mentioned its immediate limitations. It will not be within its scope to cure the ills of the world with a single stroke and it does not pretend to insure against future war. It would be unfortunate if it were represented as other than what it is, for that is so very much, -- an understandable, reasonable, feasible, constructive, and hopeful first step toward making atomic energy the servant of man.

My old chief, former President of the United States, Herbert Hoover, to whose Quaker convictions the possibilities

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of warfare are so fundamentally revolting, after listening to President Eisenhower's speech, said, "I pray it may be accepted by all the world." We may well join our prayers to his to ask that Divine Providence guide the hearts and minds of all men of all nations to grasp this opportunity to "shake off the inertia imposed by fear and make positive progress toward peace."

